Environmental Statement

Castejón Combined Cycle Plant 2021

/ May 2022

IBERDROLA

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Iberdrola’s contribution to the Sustainable Development Goals (SDGs)

As a result of the ongoing dialogue with its Stakeholders and aware of the undeniable economic, social and environmental repercussion of all its activities, IBERDROLA has a sustainable development strategy aligned with the group's implementation of a project to create sustainable value, taking its Purpose and Values, and respect for Human Rights as primary references. It therefore promotes initiatives that contribute to bringing about a fairer, more equitable and healthier society, and achieving the SDGs in particular, especially those related to affordable and clean energy (SDG 7) and fighting climate change (SDG 13), through specific lines of work focused on universal access (SDG 7.1), increasing the share of renewable energy (SDG 7.2) and developing means of improving energy efficiency (SDG 7.3). It does this by promoting innovation (SDG 9), developing education (SDG 4), protecting biodiversity (SDG 15), gender equality (SDG 5) in particular, and reducing inequalities (SDG 10) in general, mainly by protecting disadvantaged groups.

IBERDROLA defends the role of the SDGs and the 2030 Agenda as a global social contract, because to meet global challenges like climate change and pandemics, global agreements and solutions are needed.

Chronologically, **IBERDROLA** has linked its business and sustainability strategy to the Sustainable Development Goals (SDG) since they were defined in 2015. In 2018, it approved a reform to its corporate governance system with the main purpose of formalising Iberdrola group's commitment to the SDGs, highlighting the group's contribution to achieving them with the social dividend generated by its business activity.

The SDGs therefore inspire or are included as a fundamental element in the following areas:

- Corporate By-laws.
- Purpose and values of Iberdrola group and Code of ethics.
- Environmental policies.
- Social commitment policies.

  Policies and regulations related to Corporate Governance.

It is important to note that the company's commitment to contributing toward the SDGs is overseen by governing bodies. Thus, the Sustainable Development Committee of the Board of Directors has powers which include "Monitoring the group's contribution to achieving the SDGs".

On the other hand, given the transversal nature of the SDGs within the group, **IBERDROLA** has a global SDG Advisory Committee, which is a multidisciplinary team that meets every three or four months to review the actions being taken by Iberdrola and to analyse their alignment with the SDGs, in addition to proposing and promoting new challenges and actions that can help achieve the targets set.

IBERDROLA focuses its efforts on the SDGs where its contribution is most relevant: the supply of affordable and non-polluting energy (goal 7) and climate action (goal 13).

Goal 7: Affordable and clean energy

Ensure access to affordable, reliable, sustainable and modern energy for all

- Objective: Reach 16,000,000 beneficiaries in 2030. There were more than 9.6 million at the end of 2021.
- World leader in renewables: There was more than 38,000 MW of installed renewable capacity at the end of 2021.

Goal 13: Climate action

Take urgent action to combat climate change and its impacts

- IBERDROLA has set itself the following environmental objectives:
  - Be carbon-neutral before 2050 and reduce emission intensity to 50 g CO2/kWh worldwide in 2030 (scope 1).
  - Reduce greenhouse gas (GHG) emissions of absolute scope 1, 2 and 3, approved by the Science Based Target initiative.

2

Iberdrola Generación Térmica, S.L.U.

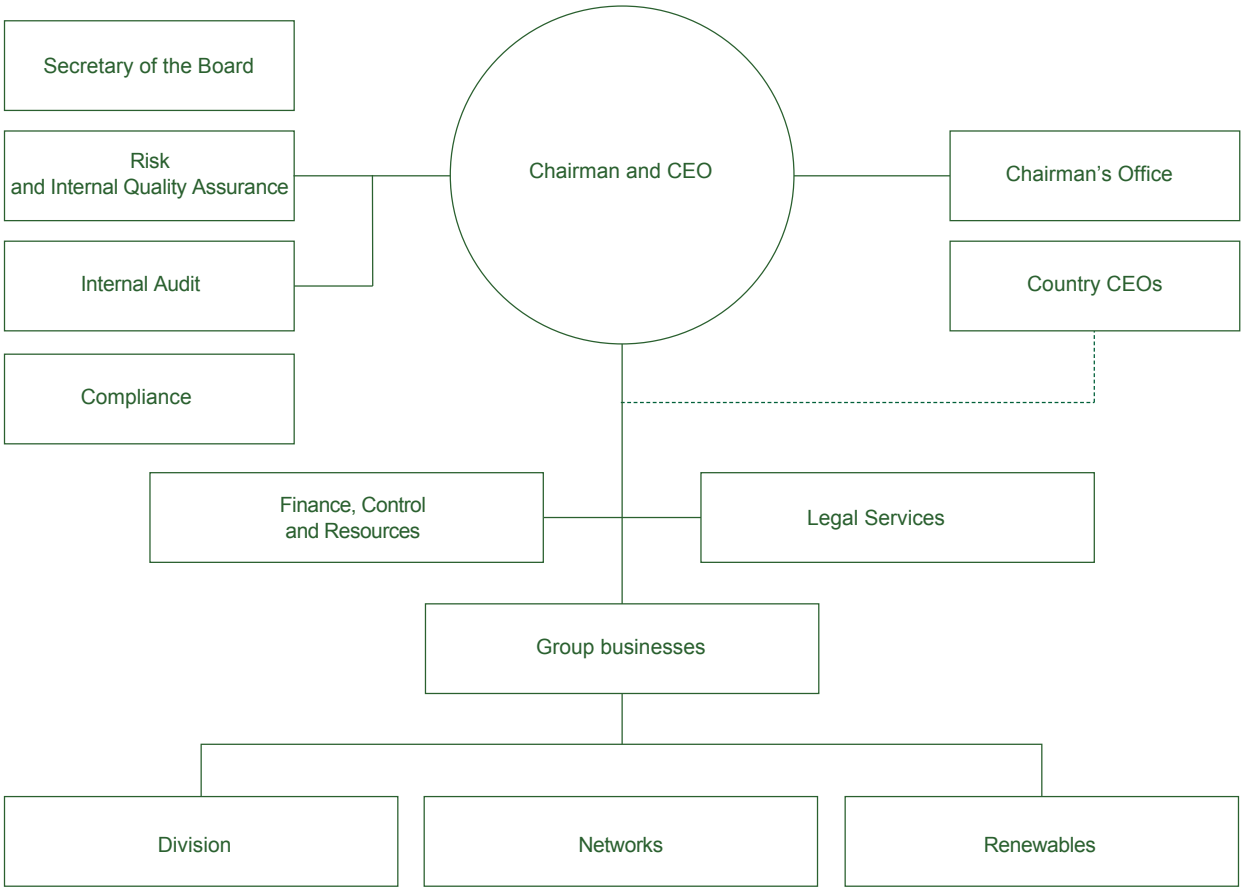
IBERDROLA GENERACIÓN TÉRMICA S.L.U. is a company that is 100% owned by **IBERDROLA S.A.** and dedicated to the generation of electricity.

IBERDROLA S.A, its subsidiaries and affiliates do business in almost thirty countries.

The main product Iberdrola offers its customers is electricity, through a wide range of products, services and solutions in the fields of:

- Renewables, wind (terrestrial and marine), hydroelectric, photovoltaic, etc.
- Transport and distribution of electricity and gas.
- Storage, both grid-scale through reversible hydroelectric on mains and generation assets and for end users.
- New technologies, like Hydrogen from clean energy sources.
- Sale of electricity and gas.
- Energy services for our customers: with smart, innovative solutions in the following areas:
  - residential, with services such as energy storage, heat pumps, self-consumption, electric mobility, solar power, etc.
  - the industrial sector: offering integrated facility management and energy supply, such as Green H2, Industrial Heat, etc.
- Purchase and sale of electricity and gas on wholesale markets.
- Digitalisation: implementing this in its assets to improve the quality, efficiency and safety of the electricity supply.

The organisational structure of **IBERDROLA S.A.** is as follows:



IBERDROLA S.A.'s installed capacity (in MW) in Spain is as follows:

Iberdrola, S.A.'s installed capacity in Spain

MW

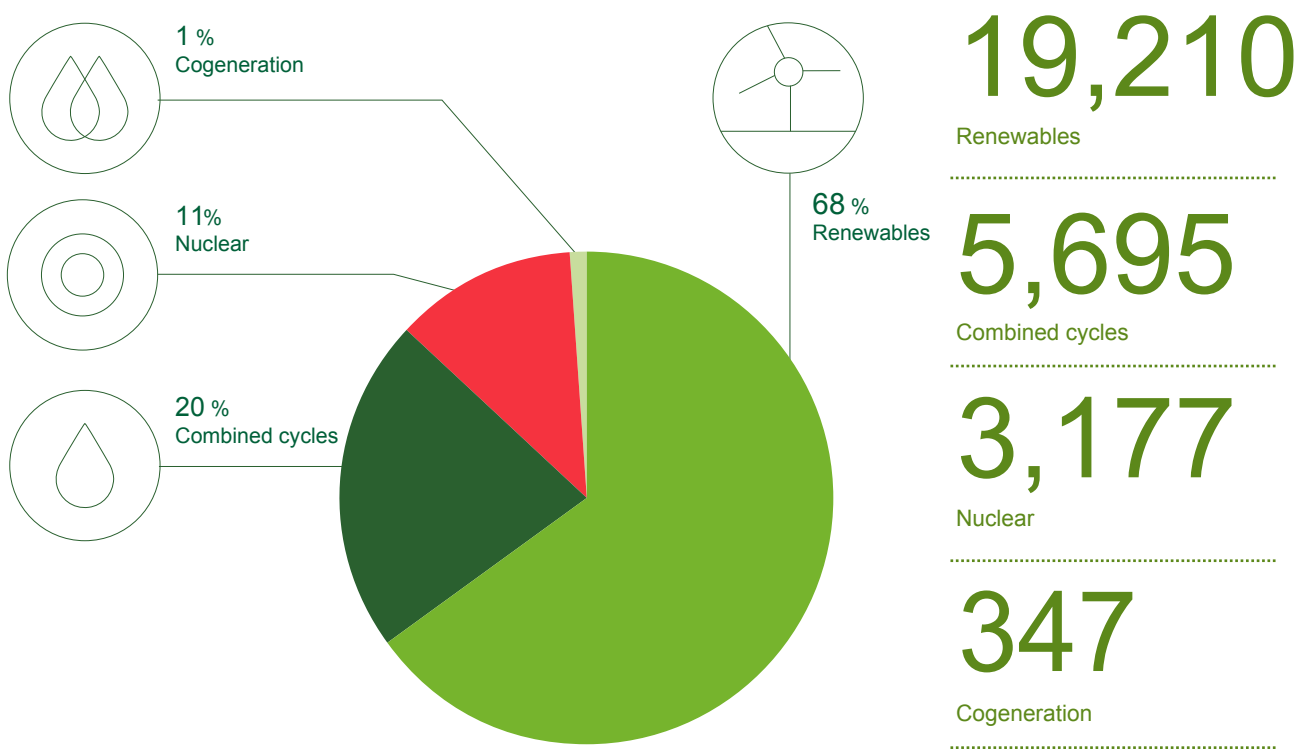


Figure 1: IBERDROLA, S.A.'s installed capacity.

IBERDROLA GENERACIÓN TÉRMICA S.L.U. has decided to register its **CASTEJÓN COMBINED CYCLE PLANT** (hereinafter,**CASTEJÓN C.C.P.**) with the Eco-Management and Audit Scheme (EMAS) approved by Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation of organisations in a Community eco-management and audit scheme (EMAS), amended by Commission Regulation (EU) 2017/1505 of 28 August 2017 and Commission Regulation (EU) 2018/2026 of 19 December 2018.

In 2021, **IBERDROLA GENERACIÓN TÉRMICA S.L.U.** reiterated its commitment to the environment by maintaining six Thermal Generation facilities registered with the EC Eco-Management and Audit Schemes (EMAS). The corresponding updates to the Environmental Statements for the Combined Cycle Power Plants of Castejón, Aceca, Arcos, Escombreras, Santurce and Castellón are available to the public on the website: www.iberdrola.com.

This Statement is intended to act as an instrument of communication from the Company to its customers and any entity or party that is interested in its services, informing of all of its environmental parameters as well as of its standing with regard to current legislation. In addition, suggestions and comments can be emailed to medioambiente@iberdrola.es or sent by post to: Dirección de Innovación, Sostenibilidad y Calidad de Iberdrola. Calle Tomás Redondo, 1. 28033, Madrid.

3

Castejón Combined Cycle Plant

CASTEJÓN C.C.P., which is owned by**IBERDROLA GENERACIÓN TÉRMICA S.L.U.,** is a facility dedicated to the generation of electricity (NACE Rev.2, 35.11 “Production of Electricity”) and located on the banks of the River Ebro in the municipality of Castejón, Navarra, approximately 80 km from Pamplona.

It is operated and serviced by personnel from **IBERDROLA OPERACIÓN Y MANTENIMIENTO, S.A.U.** (hereinafter, **IOMSA**), a wholly-owned subsidiary of **IBERDROLA GENERACIÓN TÉRMICA S.L.U.**

Figures 2 and 3: **CASTEJÓN C.C.P.** site.

CASTEJÓN C.C.P., which went into operation in 2003, consists of a single-shaft unit with a design gross capacity of 386.10MW, an overall performance of 55% and a gas consumption of 0.6 bcm/year (bcm: billion cubic metres).

The main fuel is natural gas from ENAGAS’ network. The plant can also run with diesel oil as an alternative fuel if necessary, for which it has a 2,500t storage tank. The turbine can be started using either of the two fuels, and it is possible to change from one fuel to another after having completed the start-up sequence. However, the facility has only operated with diesel oil sporadically in test mode, to guarantee that it will be available when necessary.

The electricity production process at **CASTEJÓN C.C.P.** is shown in the following diagram:

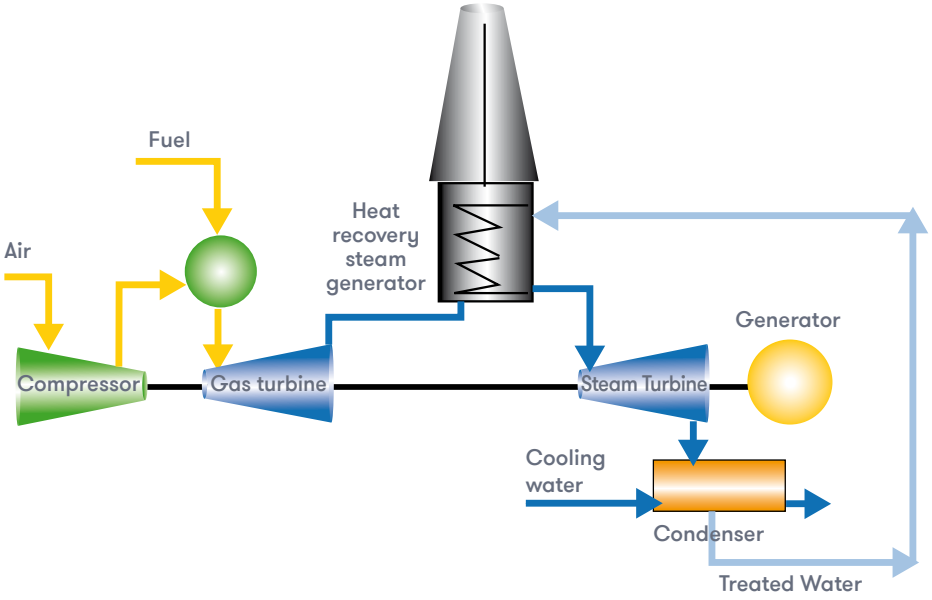


Figure 4: Electricity production process at **CASTEJÓN C.C.P**

The operation of the combined cycle unit is based on the integration of two types of thermodynamic cycles at different temperatures—an open gas-air cycle, and a closed water-steam cycle—for the generation of electric power by turning the thermodynamic energy of the fluids into mechanical energy (in the turbines), which is then turned into electricity (in the generator).

The unit has a gas turbine powered by the combustion of natural gas or diesel oil. The expansion of the combustion gases provides the mechanical energy.

Steam is produced in the waste heat recovery boiler using the residual heat of the exhaust gases from the gas turbine, before being discharged into the atmosphere via a stack. This steam is routed to the steam turbine, where its energy is converted into mechanical energy. The alternator then converts the turbine's rotational energy into electrical energy, which is sent to the mains grid after having its voltage raised to 400kV.

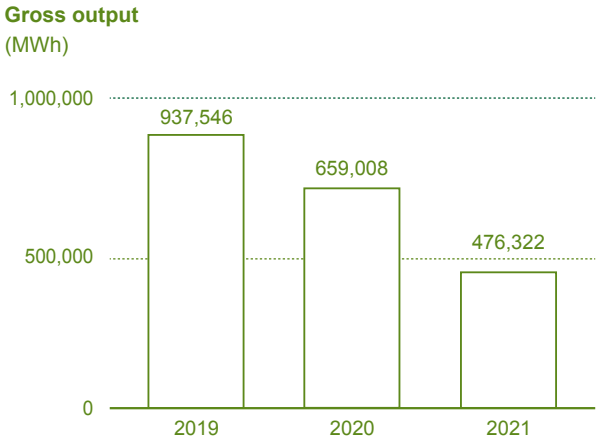
The steam from the last turbine stage is converted into water in the condenser, which is recirculated to the waste heat recovery boiler, where the cycle begins again.

The cooling system consists of a closed circuit of forced draught towers, with the make-up water coming from the River Ebro, which runs next to the facility's site, and occasionally from water wells.

Like any other industrial activity, electricity generation involves an impact on the environment. **CASTEJÓN C.C.P.** controls that impact and tries to minimise it by adopting both preventive and corrective measures and optimising the production systems.

In this climate, **CASTEJÓN C.C.P.** appears as an active facility in the Spanish Electrical System, providing a service of availability and capable of producing power when required to do so.

The production of electricity at **CASTEJÓN C.C.P.** in MWh between 2019 and 2021 is shown below:



Graph 1: Evolution of the gross annual electricity output.

The mission of the organisation of the workforce at **CASTEJÓN C.C.P.** is the safe and efficient operation of the facility's production processes while minimising its environmental impact and guaranteeing the safety of people.

In order to achieve this, the workforce is organised according to the following block structure:

- Operation: it is in charge for operating the production installations and controlling the production process
- Maintenance: it is responsible for keeping the installations in good working condition and resolving any anomalies that may arise
- Plant Engineering: it is in charge of supporting the facility's maintenance planning and management processes
- Chemistry and the Environment: it is responsible for ensuring legal compliance and minimising the plant's environmental impact, as well as for ensuring the chemical parameters stay within the design levels.
- Safety, Quality and Training: they are responsible for coordinating occupational risk prevention at the facility, as well as for assuring and maintaining the plant's quality systems (ISO 9001, ISO 14001, OSHAS 18001, EMAS, monitoring current legislation), and scheduling the ongoing training of the staff.

4

Environmental Management System

IBERDROLA GENERACIÓN TÉRMICA S.L.U. holds the UNE EN ISO 14001 certification for all Combined Cycle generation. These certifications are periodically reviewed, by means of internal and external audits, to ensure continuous improvement in environmental management.

The **CASTEJÓN C.C.P.** has instigated an Integrated Quality Assurance Management System (in Spanish, SIGEC). On 26/11/04, the plant obtained an environmental certification according to ISO 14001:1996, granted by the Spanish Standardization and Certification Association (AENOR). In 2018, the SIGEC was adapted to the ISO 14001:2015 standard, with certification under this standard renewed on 30/09/2019 and valid for three years.

CASTEJÓN C.C.P. has been registered in the registry of centres having a Community Environmental Management and Audit Scheme (EMAS) since 21 December 2006 with registration no ES-NA-000008.

The planning and operation of the **CASTEJÓN C.C.P.** Environmental Management System focus mainly on the following:

- **Identification and assessment of the environmental aspects** arising as a result of energy production. **Every significant environmental aspect has an associated operational control procedure** known to all company personnel and to everyone working on behalf of or for the company.
- **Identification of and response to emergency situations** through the introduction of a “Self-Protection Plan” and “Emergency Environmental Instructions (IMAE)”.
- **Identification and evaluation of compliance with environmental legislation** applicable to combined cycle plants.
- **Identification of training needs** and completion of the actions required to satisfy them, in order to promote greater environmental awareness among personnel.
- **Establishment of environmental objectives and goals**, approving an Environmental Management Programme which defines deadlines, resources and people responsible for achieving them.
- **Establishment of a procedure for communication** across all levels and positions in the organisation, and with all external stakeholders.
- **Establishment of an internal audit programme** to verify that the SIGEC is kept up-to-date, is effective and complies with the regulations in place.

4.1 Employee involvement

In 2021, **CASTEJÓN C.C.P.** continued to encourage the involvement of employees on every level through actions related to the establishment and achievement of objectives and targets, improvements to proposals and suggested improvements to prevent contamination through the best idea competition, the drafting of the review report by the eco-management scheme department, the COCAL (the Plant Quality Committee, which involves the managers of the various departments in the organisational structure of the power station and, through them, all the plant's employees) meetings, training in eco-management and employee information.

5

Environmental Policy

IBERDROLA has established an Environmental Policy as the basis for its Environmental Management System. Management ensures that all members of the company understand and implement this policy, which is available to all interested parties at www.iberdrola.com . The version that was valid for the greater part of 2021 – in force from 19 April 2021 – is reproduced below.

Environmental Policy

19 April 2021

The Board of Directors of IBERDROLA, S.A. (the "**Company**") has the power to design, assess and continuously revise the Governance and Sustainability System, and specifically to approve and update the corporate policies, which contain the guidelines governing the conduct of the Company and of the companies belonging to the group of which the Company is the controlling entity, within the meaning established by law (the "**Group**").

In the exercise of these responsibilities, and aware that leadership in the development of sustainable energy and respect for the environment are the pillars of the Group's energy production model and some of the cornerstones of the *Purpose and Values of the Iberdrola group*, the Board of Directors hereby approves this *Environmental Policy* (the "***Policy***").

1. Purpose

The *Policy* is intended to establish a framework of reference for integrating the protection of nature and the environment within the Group's strategy, as well as its investments and operations, and define the principles of conduct for environmental management and the management of natural capital.

The Company considers respect for the environment to be one of the central elements of the concept of sustainability, and particularly one of the three pillars for reaching a sustainable energy model, together with competitiveness and the safety of supply. The Group is therefore committed to continue taking a leading position in the development of a sustainable energy model, based on the use of renewable energy sources and smart grids, electrification, efficiency, reduction in emissions and digital transformation, where respect for and the protection of the environment is integrated into all of its activities and processes. The Group is also committed to compliance with environmental regulations and international best practices in this area.

Through a business model and supported by a practice favouring transparent information and ongoing dialogue, the Group responds to the expectations of its Stakeholders with respect to the preservation of the environment, ever more stringent regulatory requirements, and constant scrutiny of management by analysts, assessors and various agents of society in general

The Group's commitment to leadership in the development of sustainable energy is aligned with the achievement of Sustainable Development Goals (SDGs) six, seven, twelve, thirteen, fourteen, fifteen and seventeen approved by the United Nations.

2. Scope of Application

This *Policy* applies to all companies of the Group, as well as to all investees not belonging to the Group over which the Company has effective control, within the limits established by law.

Without prejudice to the provisions of the preceding paragraph, listed country subholding companies and their subsidiaries, based on their own special framework of strengthened autonomy, may establish an equivalent policy, which must be in accord with the principles set forth in this *Policy* and in the other environmental, social and corporate governance and regulatory compliance policies of the Governance and Sustainability System.

At those companies in which the Company has an interest and to which this Policy does not apply, the Company will promote, through its representatives on the boards of directors of such companies, the alignment of their own policies with those of the Company.

This *Policy* shall also apply, to the extent relevant, to the joint ventures, temporary joint ventures (*uniones temporales de empresas*) and other equivalent associations, if the Company assumes the management thereof.

3. Main Principles of Conduct

To implement its commitment to the environment and boost environmental sustainability, the Group articulates the following main principles of conduct that apply to all of its activities and businesses and that shall be integrated within the internal decision-making processes:

a. develop a sustainable model that is respectful of nature, biodiversity and historical and artistic heritage;

b. comply with legal provisions and conform to applicable environmental standards.

c. apply the principle of mitigation hierarchy (avoid, minimise, restore and compensate as a last resort) in all activities;

d. promote innovation through research and support for the development of new technologies and best environmental practices;

e. use natural capital sustainably. In particular:

- to make rational and sustainable use of water, managing the risks relating to water scarcity and ensuring that water used is returned to the environment in the desired condition;
- improve the circularity of its business activities and those of its suppliers, through the sustainable use of natural resources, the implementation of life cycle analysis, the eco-design of its infrastructures, the application of the waste hierarchy, as well as the optimisation of waste management and the use of recycled materials; and
- integrate the protection and promotion of biodiversity into the Group's strategy and develop a business model that is sustainable and positive with nature;

f. conserve, protect and promote the development and growth of natural heritage;

g. implement Environmental Management Systems that apply precautionary and continuous improvement principles and place the environment at the centre of decision-making through:

- assessing the environmental risks of its activities, facilities, products and services on a regular basis, improving and updating the mechanisms designed to prevent, mitigate or eradicate them;
- ongoing identification, assessment and mitigation of the environmental impacts of the Group's activities, facilities, products and services;
- management of risks and impacts by establishing objectives, programmes and plans that promote the continuous improvement of the Group's environmental processes and practices, and establishment of monitoring, control and audit mechanisms; and
- environmental training of the Group's professionals;

h. reduce environmental impact and improve the Group's environmental performance from a life-cycle perspective;

i. encourage the engagement of the Stakeholders in Iberdrola's business enterprise pursuant to the provisions of the *Stakeholder Engagement Policy*, which contemplates, among other things, the strong involvement of the Group's companies in the communities in which they operate and the creation of shared sustainable value for all of them;

j. raise awareness, train and involve the Group's professionals, subcontractors, suppliers and other Stakeholders in the commitments and principles of this *Policy*; and

k. report transparently on environmental results and activities.

4. Priority Lines of Action

In order to achieve its commitment to nature and the environment and to promote environmental sustainability and respect for nature, the Group is working on three priority lines of action, in which the main principles of conduct set out in the preceding section shall be applied:

a. climate action;

b. protection of biodiversity; and

c. circular economy.

* * *

This *Policy* was initially approved by the Board of Directors on 18 December 2007 and was last amended on 19 April 2021.

Figure 5: Iberdrola environmental policy, valid since 19 April 2021.

6

Environmental aspects

6.1 Identification of environmental aspects

The **CASTEJÓN C.C.P.** has a related series of environmental aspects, defined as those elements of its activities, products or services that may affect the environment. These environmental impacts include any change to the environment — whether damaging or beneficial — caused totally or partially by the activities carried out at the **CASTEJÓN C.C.P.** Significant aspects are considered to be those that have or could have a significant impact on the environment.

The **CASTEJÓN C.C.P.** has identified a series of direct environmental impacts, namely those that have a direct influence on management, under normal operating conditions and emergency situations. Indirect environmental aspects are considered to be those over which a reasonable degree of influence can be exercised, but whose management cannot be completely controlled.

At the **CASTEJÓN C.C.P**, environmental aspects are identified and reviewed whenever any of the following circumstances occurs:

- The introduction of new legal or regulatory requirements.
- Design changes or new operational methods.
- The implementation, modification, or closure of any activity, project or process.
- A change in the nature of raw materials.
- The occurrence of an environmental event or incident.

Likewise, environmental aspects are reviewed annually even if none of the preceding circumstances occur. The aspects that have been reassessed become apparent in the review by Management.

6.2 Evaluation of environmental aspects

In early 2022, all environmental aspects for 2021 were reviewed by applying procedure 2000-CC1-PG-017 “Environmental Aspects” of the SIGEC for Thermal Generation.

For each of the situations identified in the previous section, different assessment methodologies have been established, and a hierarchical system has been established to classify environmental aspects as significant or non-significant. Some of the objectives of the Environmental Management Programme have been set according to this hierarchical classification.

6.2.1 Evaluation of environmental aspects under normal and emergency conditions

VALUE	10	5	2
CRITERION HARMFULNESS	Air emissions of SO2, NOx, particles, CO, heavy metals, VOCs, dioxins and furanes, HCl and HF.	CO_2 air emissions	Diffuse emissions from landfill
	Fugitive emissions due to fire/ explosion	-	-
	Discharges of process water and water from HC separators	Closed-cycle refrigeration and sanitary discharges and landfill leachates	Open refrigeration discharges and coal storage yard runoff.
	Discharging into water of contaminants resulting from fire/ explosion or from loading/unloading, transfer and storage.	Fire-fighting water	-
	Hazardous waste (including Medical Waste).	Non-hazardous waste	Domestic waste
	-	Waste generated due to fire/ explosion.	-
	Consumption of fuel/materials and chemical products	Electricity consumption	Water consumption
	Consumption of chemicals	-	Water consumption
	-	Nighttime noise emission	Daytime noise emission
	-	-	Noise emission due to fire/ explosion.
	Seepage of pollutants into the groundwater.	Land occupancy	-
	Discharge of contaminants due to fire or explosion, or from loading/ unloading, transfer and storage	-	-

VALUE	30	20	10	N/A (0)
CRITERION QUANTITY	≥ 90% of the maximum amount	≥ 75% and <90% of the maximum amount	< 75% of the maximum amount	No limits have been set for this aspect
	One or more incidents	-	No incidents	

VALUE	10	6	4	2
CRITERION DURATION	Daily or continuous	Monthly (once or more per month but not daily)	Annually (once or more per year but not monthly)	No specific periodicity

VALUE	-10	-5	-2	0
CRITERION BARRIERS	There are technological, measurement and alarm barriers	There are two of the three: technological, measurement and/or alarm barriers.	There is one of the three: technological, measurement or alarm barrier	There are no technological, measurement or alarm barriers

VALUE	10	5	2
CRITERION SENSITIVITY OF THE ENVIRONMENT	Air emissions and noise levels in an urban area or area of ecological interest ≤ 2 km away	Air emissions and noise levels in an urban area or area of ecological interest ≤ 2 km and ≤10 km away	Air emissions and noise levels in an urban area or area of ecological interest >10 km away
	Discharges into rivers and reservoirs	Discharges into the sea	Discharges into a municipal sewer/treatment plant
	≥70 % of the total waste handed over for elimination or depositing in landfill	≥ 30% to < 70% of all waste shipped for elimination or depositing in landfill. Waste generated by fire/ explosion	<30% of the total waste supplied for elimination or depositing in landfill
	Consumption of fuel and materials, chemical products, groundwater and water from rivers and reservoirs	Consumption of electricity and sea water	Consumption of water from the municipal network
	Discharges of soil or gravel into the ground and groundwater in green areas	Discharges into the ground and groundwater in tarmac, concrete and waterproofed areas	Discharges into the ground and groundwater in tarmac and waterproofed areas.
	Air emissions and noise levels in an urban area or area of ecological interest ≤ 2 km away	Air emissions and noise levels in an urban area or area of ecological interest ≤ 2 km and ≤10 km away	Air emissions and noise levels in an urban area or area of ecological interest >10 km away CO_2 emission

Table 1: Criteria for the assessment of environmental aspects in normal and emergency situations.

For each environmental aspect, the criteria listed above are assessed and added.

Significant aspects are aspects that score 40 points or more or aspects which have exceeded the limits established in the Integrated Environmental Authorisation or other currently applicable legislation. If there are no significant aspects, the first five aspects with the highest score, in normal and emergency situations, in each type will be taken with a view to proposing actions to decrease their score.

6.2.2 Evaluation of indirect environmental aspects

VALUE	3	1
HARMFULNESS	Smoke emission from vehicle fires, fuel emissions from transport	Dust emissions from transport, natural gas leakage
	Discharges into water of transported liquids	Discharges into water of transported solids
	-	Noise from transport
	Fuel consumption during transport	Transport container and packaging consumption.
	Waste from vehicle overturns or fires	-
	Discharges to ground of transported liquids	Discharges to ground of transported solids

VALUE	8	4	2	1
FREQUENCY	Daily or continuous	Monthly (once or more per month)	Annually (once or more per year but not monthly)	No specific periodicity

VALUE	4	1
PROBABILITY	High (certain to occur)	Low (occurs occasionally)

VALUE	4	2	1
ENVIRONMENTAL CAPABILITIES CONTRACTOR	The company offers no environmental training.	The company has proof of meeting IBERDROLA's environmental requirements.	The company holds the ISO 14001 certificate or is registered in the EMAS register.

Table 2: Criteria for the assessment of indirect environmental aspects.

For each indirect environmental aspect identified, the aforementioned criteria are assessed and added. When assessing aspects to which a number of values can be applied, the most restrictive should always be taken.

Significant aspects are aspects that score 15 points or more. If none obtain this score, the first five aspects with the highest score will be taken.

6.3 Significant environmental aspects

6.3.1 Significant environmental aspects under normal conditions

Of the 20 aspects identified and assessed, eight have a score higher than 40 points and are therefore considered to be Significant Aspects. The value of the Hazardous Waste Aspect increases over 2021 (from 29 to 46) and becomes Significant, mainly due to having managed "Fuel oil and diesel waste" (9.9 tonnes) as a result of having emptied the diesel storage tank. The other Aspect that increases in value (from 12 to 42) and becomes Significant is that of Domestic Waste, due to a change in the criteria for assessing the Amount. The other six Significant Environmental Aspects that scored higher than 40 points remained at the same value as in 2020. Additionally, despite not having exceeded this score, Night Noise has been indicated as a Significant Aspect, as the daily average value indicated in the AAI is exceeded.

The following table includes the environmental aspects, under normal conditions, that were significant and received a higher score in 2020 and 2021:

CATEGORY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Consumptions	Fuel and materials	Depletion of natural resources.	54
Consumptions	Consumption of chemical products	Depletion of natural resources.	51
Waste	Non-Hazardous Waste	Specific to their management and treatment	49
Consumptions	Electricity consumption	Depletion of natural resources.	48
Consumptions	Water consumption	Depletion of natural resources.	46
Emissions into the Atmosphere	CO_2 emissions	Alteration of the physico-chemical quality of the air and greenhouse gas generation	41
Noise	Night-time noise emission	Increase in the noise level	33

Table 3A: List of the highest scoring significant environmental aspects under normal conditions in 2020.

CATEGORY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Consumptions	Fuel and materials	Depletion of natural resources.	54
Consumptions	Consumption of chemical products	Depletion of natural resources.	51
Consumptions	Water consumption	Depletion of natural resources.	50
Consumptions	Electricity consumption	Depletion of natural resources.	48
Waste	Non-Hazardous Waste	Specific to their management and treatment	46
Waste	Hazardous waste	Specific to their management and treatment	43
Waste	Domestic Waste	Specific to their management and treatment	42
Emissions into the Atmosphere	CO_2 emissions	Alteration of the physico-chemical quality of the air and greenhouse gas generation	41
Noise	Night-time noise emission	Increase in the noise level	33

Table 3B: List of the highest-scoring significant environmental aspects under normal conditions in 2021.

6.3.2 Significant indirect environmental aspects

During 2021, a total of 12 indirect aspects were identified and assessed, of which none had a score above 15 (the score of reference for an aspect to be considered significant).

The following table shows the indirect environmental aspects with the highest scores during 2020 and 2021:

CATEGORY	ACTIVITY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Emissions	Transport of resources, fuels and/or waste	Emissions from combustion and transport	Alteration of the physico-chemical quality of the air and generation of greenhouse gases	13
Consumptions	Transport of resources, fuels and/or waste	Fuel consumption during transport	Depletion of natural resources	13
Emissions	Transport of natural gas to the facility	Natural gas leak emissions	Generation of greenhouse gases	12
Emissions	Transport of resources, fuels and/or waste	Diffuse dust emissions	Alteration of the physico-chemical quality of the air	11
Consumptions	Supply of equipment and/or products	Consumption of containers and packaging	Depletion of natural resources	11
Noise	Transport of resources, fuels and/or waste	Emission of noise generated by vehicles and transport	Increase in the noise level	11

Table 4A: List of highest-scoring significant environmental aspects in 2020.

CATEGORY	ACTIVITY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Emissions	Transport of resources, fuels and/or waste	Emissions from combustion and transport	Alteration of the physico-chemical quality of the air and generation of greenhouse gases	13
Consumptions	Transport of resources, fuels and/or waste	Fuel consumption during transport	Depletion of natural resources	13
Emissions	Transport of natural gas to the facility	Natural gas leak emissions	Generation of greenhouse gases	12
Emissions	Transport of resources, fuels and/or waste	Diffuse dust emissions	Alteration of the physico-chemical quality of the air	11
Consumptions	Supply of equipment and/or products	Consumption of containers and packaging	Depletion of natural resources	11
Noise	Transport of resources, fuels and/or waste	Emission of noise generated by vehicles and transport	Increase in the noise level	11

Table 4B: List of highest-scoring significant environmental aspects in 2021.

There is no change in the score of the Indirect Aspects.

6.3.3 Significant environmental aspects under emergency conditions

Of the 10 environmental aspects in an emergency situation identified and assessed, none exceeded 40 points (the score of reference for an aspect to be considered significant) nor did any exceed other established limits. The following table shows the six environmental aspects under emergency situations that had the highest score in 2020 and 2021:

CATEGORY	ACTIVITY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Consumptions	Fire/explosion	Consumption of fire-fighting chemicals	Depletion of natural resources	32
Emissions into the atmosphere	Fire/explosion	Fugitive emissions due to fire/ explosion	Alteration of the physico-chemical quality of the air and generation of greenhouse gases	32
Discharges into the water	Loading, unloading, transfer and storage of pollutants, and plant operation	Discharge of pollutants into the water	Alteration of the physico-chemical quality of the water	30
Ground and groundwater	Loading, unloading, transfer and storage of pollutants and plant operation	Dumping of pollutants on the ground	Alteration of the physico-chemical quality of the ground and groundwater	30
Discharge into water	Fire/explosion	Discharge of pollutants into the water	Specific to their management and treatment	27
Ground and groundwater	Fire/explosion	Discharge of contaminated substances into ground	Alteration of the physico-chemical quality of the ground and groundwater	27

Table 5A: List of environmental aspects under emergency conditions with the highest score in 2020.

CATEGORY	ACTIVITY	ENVIRONMENTAL ASPECT	ENVIRONMENTAL IMPACT	∑
Consumptions	Fire/explosion	Consumption of fire-fighting chemicals	Depletion of natural resources	32
Emissions into the atmosphere	Fire/explosion	Fugitive emissions due to fire/ explosion	Alteration of the physico-chemical quality of the air and generation of greenhouse gases	32
Discharges into the water	Loading, unloading, transfer and storage of pollutants, and plant operation	Discharge of pollutants into the water	Alteration of the physico-chemical quality of the water	30
Ground and groundwater	Loading, unloading, transfer and storage of pollutants and plant operation	Dumping of pollutants on the ground	Alteration of the physico-chemical quality of the ground and groundwater	30
Discharge into water	Fire/explosion	Discharge of pollutants into the water	Specific to their management and treatment	27
Ground and groundwater	Fire/explosion	Discharge of contaminated substances into ground	Alteration of the physico-chemical quality of the ground and groundwater	27

Table 5B: List of the highest-scoring environmental aspects under emergency conditions in 2021.

There is no change in the score of the Emergency Aspects.

7

Environmental Management Programme

Annually and based on the general objectives set for Thermal Generation, **CASTEJÓN C.C.P.**, through its Local Quality Assurance Committee (COCAL) – which involves the heads of the various departments of the plant's organisational structure and where all employees are represented, draws up an Environmental Management Programme that includes specific goals and targets for the facility, the schedule for activities that have been scheduled to be carried out, the people who are responsible for performing the planned actions, and the human and financial resources for carrying out the planned actions. In order to set the targets and goals, all significant environmental aspects and all applicable legal requirements are taken into account amongst other criteria.

The assessment of the objectives for 2021 is favourable. All the objectives that were set were met. The plant continues to work to improve its environmental aspects, adapting its goals and targets to current circumstances. The last follow-up performed in 2021 (objectives and Environmental Action Plan) is detailed below, including all actions that were carried out as well as the degree of fulfilment of each objective, which demonstrates the plant's environmental performance:

OBJECTIVE	INDICATOR	INITIAL SITUATION	ANTICIPATED FINAL SITUATION	ACTUAL FINAL SITUATION	RESOURCES		RELATED ENVIRONMENTAL ASPECT
					FINANCIAL	HUMAN	
Continue to apply continuous improvement to minimise the plant's potential environmental impact, through the search for and execution of actions aimed at reducing this impact.	% progress of the environmental actions defined in the Environment and Quality Action Plan (PAMA&Q) in 2021	0% progress of the actions defined in the 2021 PAMA&Q.	Achieve at least 95% in the execution of the 2021 PAMA&Q	100% of the environmental actions of the 2021 PAMA&Q executed	€ 5,020	236 man-hours	**Aspects under emergency** situations: Discharge of contaminating substances **Aspect under normal conditions:** discharges into water-Electricity consumption **Aspects under normal conditions for Waste**. Noise-Aspect Noise emission Consumption of water and chemical products

ACTION	INDICATOR	INITIAL SITUATION	ANTICIPATED FINAL SITUATION	ACTUAL FINAL SITUATION	RESOURCES		RELATED ENVIRONMENTAL ASPECT
					FINANCIAL	HUMAN	
Execution of the 2021 environmental action plan.	% of progress in the environmental actions defined in the 2021 PAMA&Q	0% of execution of the environmental actions defined in the 2021 PAMA&Q	95% progress of the environmental actions defined in the 2021 PAMA&Q	Target achieved: 100% of the environmental actions of the 2021 PAMA&Q executed	€ 5,020	236 man-hours	**Aspects under emergency situations**: Discharge of contaminating substances A**spect under normal conditions**: discharges into water-Electricity consumption **Aspects under normal conditions** for Waste. Noise-Aspect Noise emission Consumption of water and chemical products

Table 6: 2021 objectives

The environmental actions defined in the Environment and Quality Action Plan (PAM&Q) in 2021 and their level of achievement were as follows:

ACTIONS	FULFILMENT
Study and installation of plugs for inspection chambers and local means of expansion at the most likely points for the use thereof.	100%
Carry out at least one practical drill, independent from the Corporate Safety drill, for an environmental emergency at the facility, seeking to improve the Environmental Management process and its associated procedures, improve teamwork and integration in PEOPLE organisations.	100%
Carry out at least 2 environmental training sessions promoting the use and knowledge of environmental management systems.	100%
Study/analysis of the data obtained during 2020 on HVAC consumption (workshops and offices) for the implementation of possible actions to help reduce the consumption of auxiliary units.	100%
Study the possibility of installing programmers to automatically control and switch on and off HVAC equipment.	75%
Specific study of noise contamination on specific sources and proposed actions.	100%
Environmental training including the installation of retention means with a view to improving the Environmental Management process and associated procedures; improvement of team work.	100%
The holding of at least 2 theoretical drills for environmental emergencies promoting the use and knowledge of the environmental management systems.	100%
Optimise purge time (reduction in demineralised water consumption) in start-ups following the commissioning of the CMP and CAP particulate analyser.	100%
Analysis of injecting chimney CO_2 gases in the Castejón towers reservoir	100%

Table 7: 2021 Environment and Quality Action Plan.

8

Environmental Indicators

The **CASTEJÓN C.C.P.** monitors its environmental performance in order to assess its compliance with current applicable legislation and its Environmental Management Programme.

In general terms, the situation of the **CASTEJÓN C.C.P.** for the 2019 to 2021 period is summarised in the following sections. These involve monitoring the indicators significant to the organisation, making it possible to quantify and notify their environmental behaviour and perform annual comparisons of the data. In order to calculate the basic indicators included in Annex IV to Regulation (EC) No. 1221/2009, as amended by Commission Regulation (EU) 2018/2026 of 19 December 2018, total gross electricity production, expressed in MWh, has been used as figure B.

The existing Sectoral Reference Documents have been reviewed, none of which apply to the **CASTELLÓN C.C.P.**. They will be taken into account during possible updates.

8.1 Emissions into the atmosphere

Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline '*Combating climate change and its effects*'. The objectives of this guideline to fight climate change are to promote renewable energies and the use of fossil fuels with a lower carbon content in thermal production, as well as to improve efficiency in the generation, transport and final use of energy.

CASTEJÓN C.C.P. has identified gas emissions resulting from the burning of fuels in its gas turbine as an environmental aspect.

The Combined Cycle plant monitors the emission of sulphur dioxide (SO_2), nitrogen oxides (NO_x), particulate and carbon monoxide (CO). The limits set by current legislation and in the Integrated Environmental Authorization are applied to these emissions, which are monitored for compliance in accordance with the requirements of the Emission Control Quality Plan.

CO and NOx emissions are monitored constantly using automatic gauges installed in the chimney, and the signal is sent to the plant control panel. These meters are checked and calibrated regularly in order to ensure that they work properly. The monthly emission reports, as well as the calibration certificates for the metering equipment, are sent to the competent bodies. In addition, on 11/05/21 and 15/12/21, the corresponding regulatory controls of concentrations of SO2 and solid particulates for the first and second half of the year were carried out by OCA.

On 14 and 15 December 2021, the AFT (Annual Follow-up Test) was carried out at the main source, with all parameters Accepted in the result.

As regards CO_2, its emissions are calculated on the basis of the fuel consumed, in accordance with Commission Regulation (EU) No 601/2012, of 21 June 2012, on the monitoring and reporting of greenhouse gas emissions, pursuant to Spanish Law 1/2005, of 9 March, regulating the trading of greenhouse gas emission rights. These emissions are checked annually by a notified body (SGS Tecnos, S.A.U.).

Moreover, the systems available for controlling the atmospheric release of SO2, NOx and particulate emissions follow the provisions of Order PRA/321/2017, which regulates the procedures for determining the emissions, the control of measurement and treatment equipment, and the processing and reporting of information on said emissions.

The **CASTEJÓN C.C.P.** also calculates the emission of CH_4 and N_2O, on the basis of the fuel consumed, applying the emission factor included in the latest National Atmospheric Emissions Inventory: Thermal Power Plant Sector, published by the Ministry of the Environment. During 2021, the CH_4 and N_2O emissions, given in equivalent tonnes of CO_2, were 0.04% and 0.05% of the total plant greenhouse gas emissions, respectively.

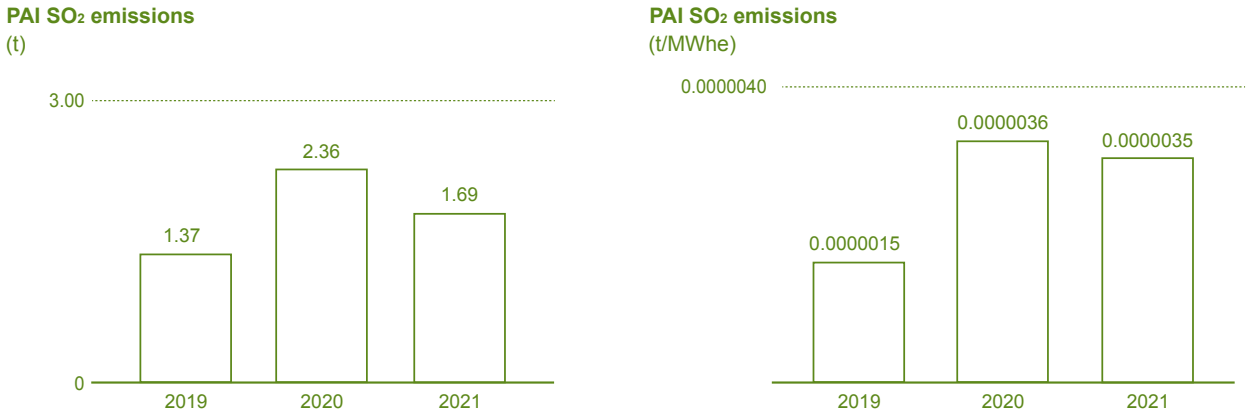
As far as other greenhouse gases that are present in the fire-fighting system and in the plant's cooling equipment are concerned, an annual leak check is conducted in accordance with current legislation.

As a result of this control, it was verified that 6.84 tonnes of CO_2 equivalent (SF6) were emitted during the operation of the equipment.

With regards to NF_3, it should be noted that this type of gas does not exist in the facility.

8.1.1 SO_2 Emissions

The following graphs show the total SO_2 emissions in tonnes for the 2019-2021 period, as well as the indicator showing the specific emission per unit of energy produced in t/MWh:



Graph 2: Annual evolution of SO2 emissions 2019-2021.

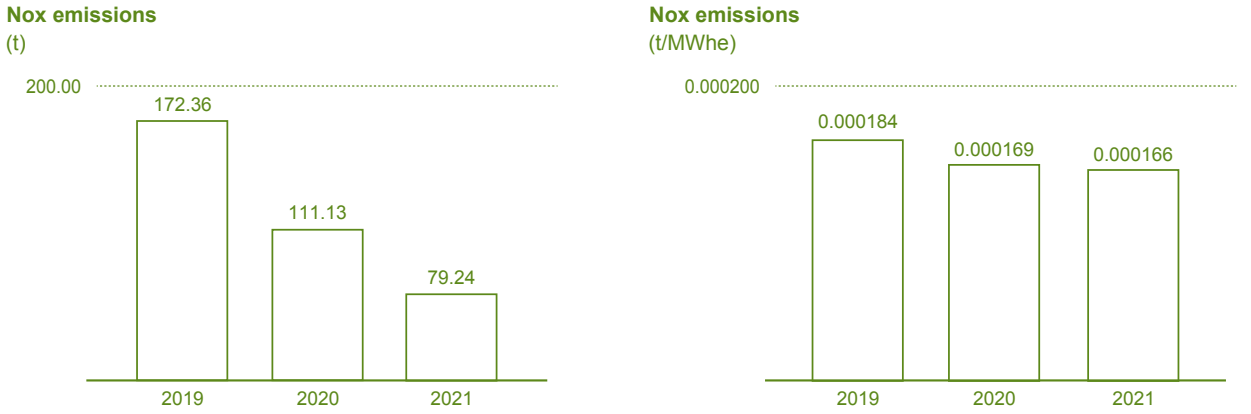
The tonnes of SO_2 emissions from the plant are calculated on the basis of the result of the regulatory inspection reports and six-monthly measurements carried out by an accredited body in the period in question, and are extrapolated to the PAI periods. The variation in these depends on the operation of the facility, as well as the detection limit used by the inspection body.

A reduction in total SO_2 emissions can be observed over the past year as a result of a decrease in the unit's operation.

In the automatic modification of the Integrated Environmental Authorisation of July 2018, the legal limit for the SO2 parameter and the obligation of constant measurement were eliminated.

8.1.2 NOx Emissions

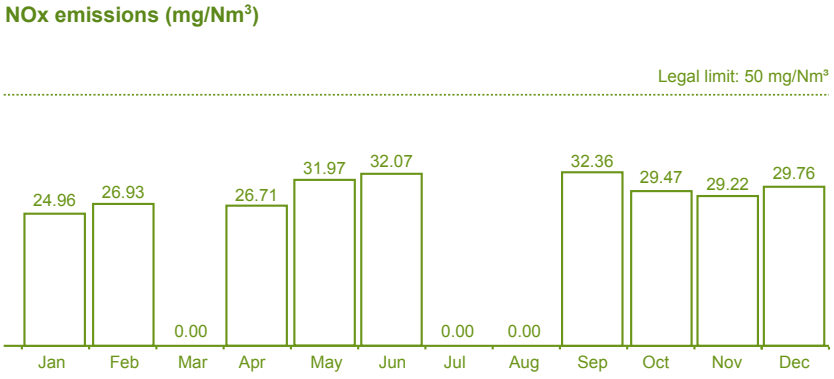
The following graphs show the total NOx emissions in tonnes for the 2019-2021 period, as well as the indicator showing the specific emission per unit of energy produced in t/MWh:



Graph 3: Annual evolution of total NOx emissions 2019-2021.

A small reduction in total mass NOx emissions can be observed over the past year, as a result of the unit operating at lower loads.

The following graphs show the average monthly NOx emissions in 2021 in mg/Nm^3, compared to the legal emission limits set by the Integrated Environmental Authorisation.

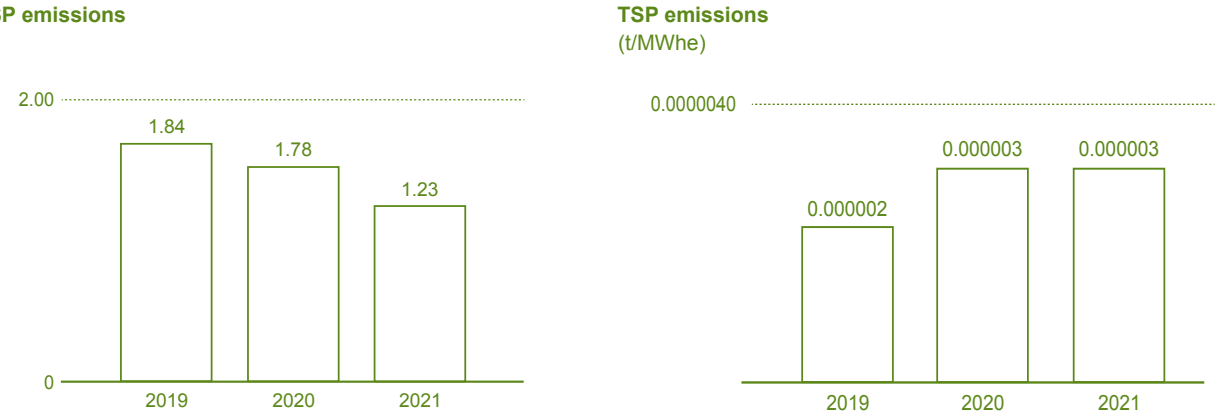


Graph 4: Comparison between NOx emission data and the legal limit according to the Integrated Environmental Authorization. 2021.

As we can see, the legal NOx emission limit was not exceeded at any time during 2021.

8.1.3 Particulate Emissions

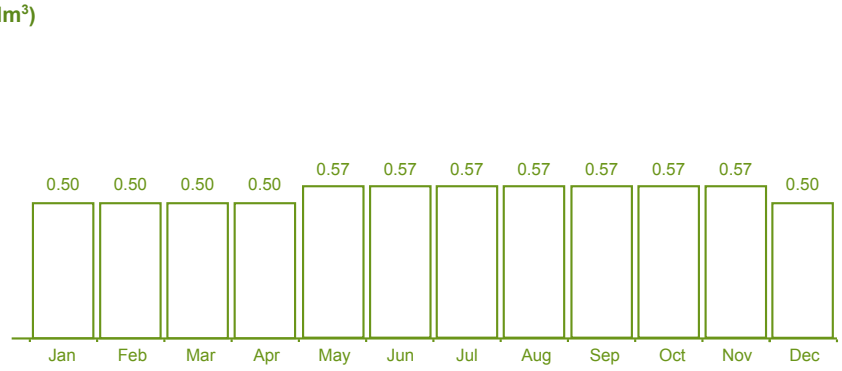
The following graphs show the total particulate emissions in tonnes during the 2019-2021 period, as well as the indicator expressing the specific emission per unit of power produced in t/MWh.



Graph 5: Annual evolution of Particle emissions 2019-2021.

As with SO_2, the particulate emissions from the plant are calculated on the basis of the result of the regulatory inspection reports and six-monthly measurements carried out by an accredited body during the period in question and are extrapolated to the PAI periods. The variation in these depends on the operation of the facility, as well as the detection limit used by the inspection body.

A reduction in total particulate emissions can be observed over the past year, as a result of a decrease in the unit's operation.



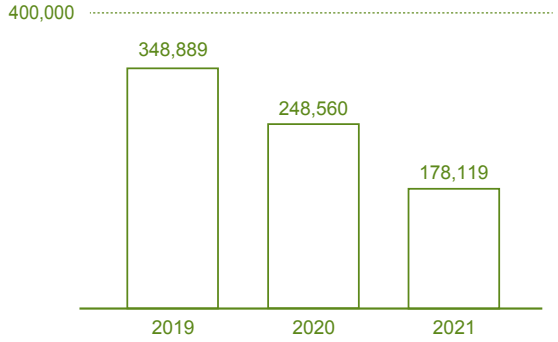
Graph 6: Monthly PST emission data. in 2020.

For the **CASTEJÓN C.C.P.**, no legal particle emissions limit is established with Gas Natural fuel.

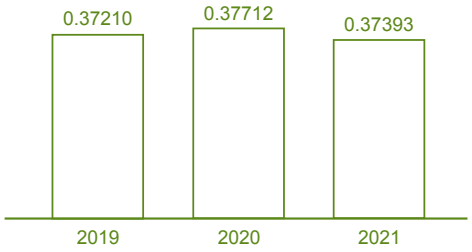
8.1.4 Greenhouse gas emissions

The emission of greenhouse gases during the 2019-2021 period is shown below. The values shown of equivalent t of CO_2 correspond to the sum of $CO^2$1 + N_2O + $CH4^2$+ fluoride gases:

Total greenhouse gas emissions
(equivalent t of CO_2)



Total greenhouse gas emissions
(tCO_2eq/MWhe)

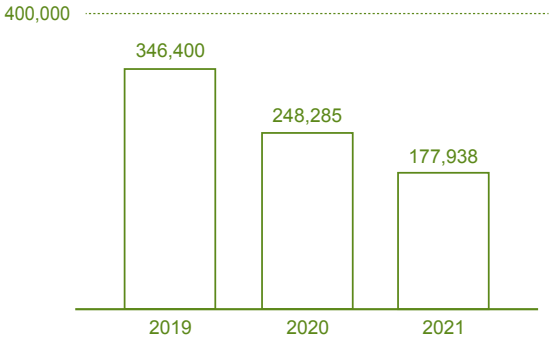


Graph 7: Annual evolution of total emissions of greenhouse gases. 2019-2021.

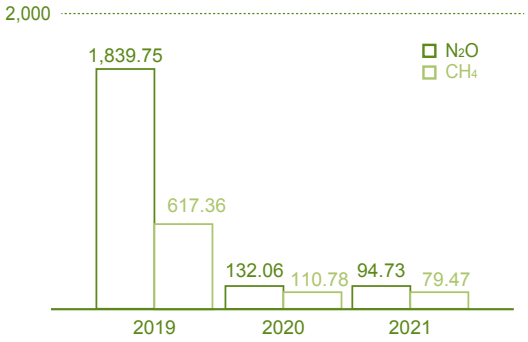
A reduction in total greenhouse gas emissions can be observed over the past year, as a result of a decrease in the unit's operation.

The broken-down value of these emissions, in equivalent tonnes of CO_2, is as follows:

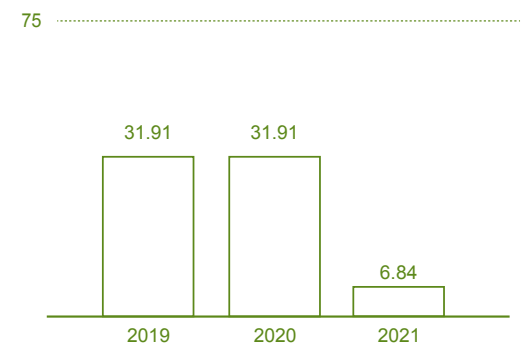
Greenhouse gas emissions CO_2
(equivalent t of CO_2)



Greenhouse gas emissions N_2O-CH_4
(equivalent t of CO_2)



Greenhouse gas emissions HFC-PFC-SF_6
(equivalent t of CO_2)



Graph 8: Annual evolution of greenhouse gas emissions by gas (CO_2, N_2O, CH_4, HFCs, PFCs & SF_6) 2019-2021.

1 CO_2 emissions are calculated in accordance with EU Regulation No. 601/2012.
2 CH4 and N_2O have been calculated based on the plant's fuel consumption for each natural year, applying the emission factors contained in the document "Emission Calculation Methodologies", recorded in the latest National Atmospheric Emissions Inventory: Thermoelectric Power Plant Sector, published by the Ministry of the Environment. The tonnes of CH_4 and N_2O calculated are converted into equivalent tonnes of CO_2 (CO_2-eq for a horizon of 100 years) using the atmospheric heating potentials published by the Intergovernmental Group for the Climate Change in the Directives of the IPCC for the national greenhouse gas inventories (IPCC Fourth Assessment Report: Climate Change 2007 (AR4)).

8.2 Discharges

Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline "*Protect the environment and stop the loss of Biodiversity*". The aim of this guideline is to conserve and restore the ecosystems associated with our activities, coordinating the biodiversity plans of businesses in the affected environments. To improve the compatibility of Iberdrola's infrastructures with the environment, avoiding spillages and water and soil contamination, all in line with Iberdrola's Biodiversity and Environmental Policy.

The **CASTEJÓN C.C.P.** monitors its discharges on a periodic basis, ensuring at all times that they do not exceed the limits set in its Integrated Environmental Authorisation, granted by means of Resolution 1097/2009, of 13 May, from the Director General for the Environment and Water and subsequently updated by Resolution 255E/2018, of 6 July, from the Director of the Circular Economy and Water Service.

To this end, the plant has an Effluent Treatment Plant to ensure the quality of the process waste water prior to its discharge is adequate. At this physico-chemical treatment plant, the effluents from the various process lines are treated and collected and homogenised in two homogenisation ponds:

The purged water from the cooling towers does not require treatment; it is constantly measured to determine the pH, conductivity, temperature and residual free chlorine in the cooling tower basin.

The clarified water from the effluent treatment plant is discharged by gravity to the control catch basin, which is fitted with continuous pH, conductivity, turbidity, residual free chlorine, temperature, and hydrocarbon meters.

If the values of these parameters match the values that allow discharging into the river, the appropriate controllers will allow, following the measurement of the flow rate, effluents to flow into the final discharge basin, where they will join the purged water from the cooling towers, the mixture being discharged directly into the River Ebro.

As an additional control measure, in 2008 a redundant control system was installed in the final mixing catch basin which continuously measures gauges pH, temperature, conductivity, turbidity, presence of hydrocarbons and residual free chlorine. In addition, a motor-operated final cut-off valve was installed, which enables the river discharge outlet to be isolated.

The plant's maintenance activities, necessary to maintain its availability, require the operation of the water plant and the cooling towers, which have an associated water consumption and discharge.

The following table shows the volume discharged in 2021 at each of the two discharge points included in the Integrated Environmental Authorisation and its legal limit:

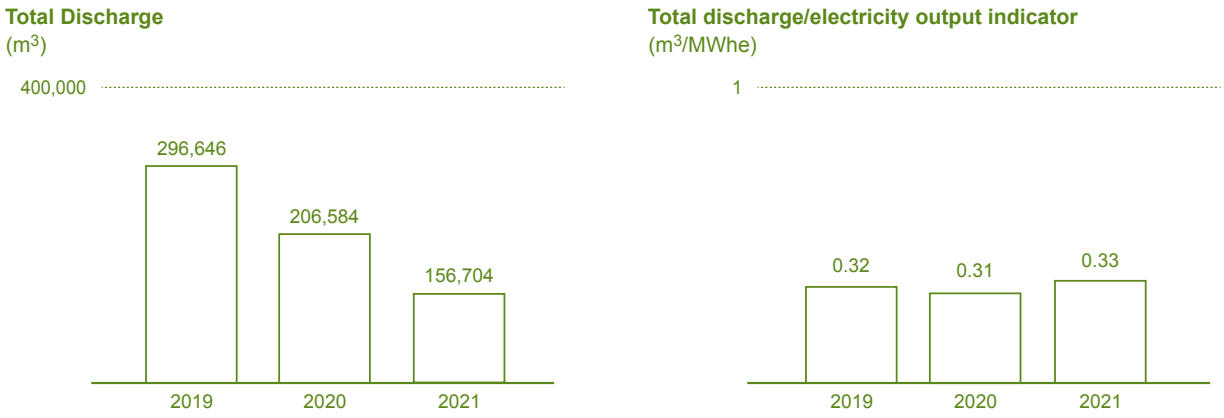
	2021	
DISCHARGE POINT	DISCHARGE (m^3/year)	LEGAL LIMIT (m^3/year)
THERMAL DISCHARGE: Cooling tower purged water	141,617	2,940,000
PHYSICAL/CHEMICAL DISCHARGE: Effluent treatment plant	15,088	280,000

Table 8: Volume discharged 2021.

The photo below shows the exact location of the final discharge well.

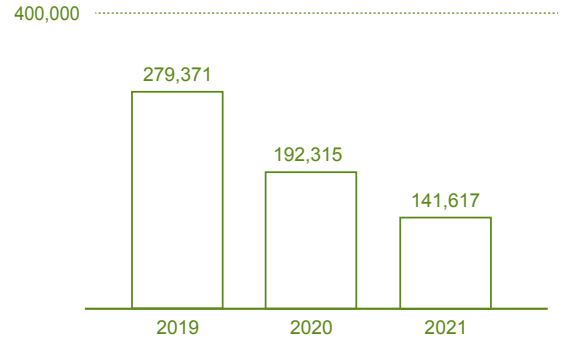
Figure 6: Final discharge inspection chamber of the **CASTEJÓN C.C.P.**

The evolution of the total discharged volume, the thermal discharge volume and the physical and chemical discharge volume for the **CASTEJÓN C.C.P.** during the 2019-2021 period is shown below.

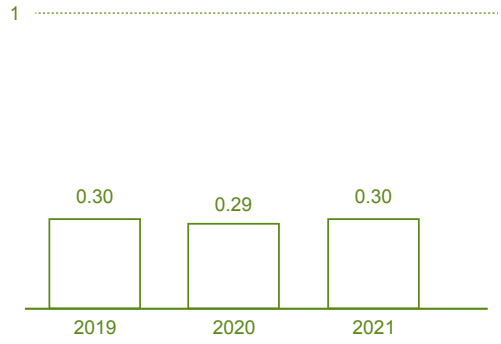


Graph 9: Annual evolution of the total discharge volume 2019-2021.

Thermal discharge
(m^3)

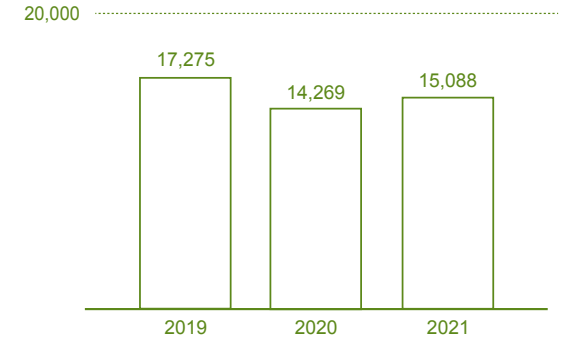


Thermal discharge/electricity output indicator
(m^3/MWhe)

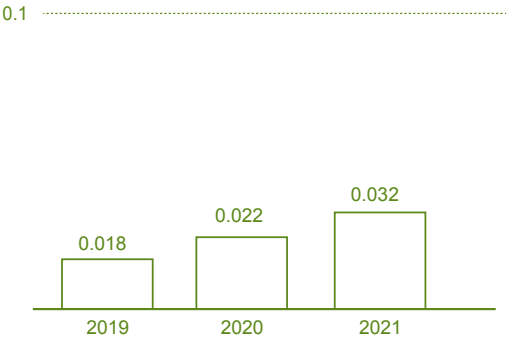


Graph 10: Annual evolution of the thermal discharge volume 2019-2021.

Physico-chemical discharge
(m^3)



Physico-Chemical/Electricity Production Indicator
(m^3/MWhe)



Graph 11: Annual evolution of the physico-chemical discharge volume 2019-2021.

We can see a reduction in the thermal discharge as a result of the plant's reduced production compared to previous years. The indicator is similar. On the other hand, we can see an increase in the volume of physical and chemical discharge. This is because the Plant operated more intermittently, so there were more start-ups and stoppages that increase water consumption. Additionally, in 2021 there was a leak in the main steam generator which also led to higher water consumption.

The results of the analyses of the main parameters carried out by the Control Body (ALFARO LABORATORIES) at the two existing discharge points in 2021 were as follows:

THERMAL DISCHARGE: Cooling tower purged water

PARAMETER	LIMIT		2021											
	UNIT	Value	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Free chlorine	mg/l	0.25	< 0.05	< 0.05	*	< 0.05	< 0.05	< 0.05	*	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Flow rate of the receiving medium	m^3/s	---	656	584	*	70	44	45	*	47	45	31	54	2347
Discharge flow rate	m^3/h	---	33	68	*	401	70	34	*	70	71	70	218	16
Temperature (OCA)	°C	---	11.8	13.4	*	17.5	15.9	23	*	22.1	24.5	23.4	14.2	13.1

* No discharge

Table 9: Analysis of the thermal discharge 2021.

PHYSICAL/CHEMICAL DISCHARGE: Effluent treatment plant

PARAMETER	LIMIT		2021											
	UNIT	Value	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
pH at 25°C	Unit of pH	5.5-9.5	8.22	8.47	*	8.05	8.22	8.02	8.12	8.28	8.15	8.14	8.57	8.03
Flow rate of the receiving medium	m³/s	---	656	584	*	70	44	45	45	47	45	31	54	2347
Discharge flow rate	m³/h	---	44	44	*	46	42	35	36	36	44	38	34	23
Temperature (OCA)	°C	---	10.3	11.1	*	16.7	19.9	27.1	25.4	24.6	24.4	22.5	9.9	17.5
Hydrocarbons	mg/l	10	<0.2	<0.2	*	<0.2	<0.2	<0.2	<0.2	0.4	0.29	<0.2	<0.2	<0.2
Suspended solids	mg/l	35	4	4	*	<4	4	23	5	3	4	<2	<2	<2
COD	mgO2/l	125	24	18	*	18	30	24	17	26	22	14	15	30

* No discharge

Table 10: Analysis of the physico-chemical discharge 2021.

During the months of March and July, thermal discharge samples could not be taken, and physical and chemical discharge samples could not be taken in March, as the system was stopped and there was no need to discharge.

Samples from the river Ebro are taken quarterly upstream and downstream of the discharge point to verify that the composition of the supply water remains unchanged. The thermal impact on the riverbed is also monitored.

After studying the records of these parameters during the 2019-2021 period, it can be concluded that the discharge from the Castejón Combined Cycle Power Plant did not affect the quality of the River Ebro's waters.

8.3 Waste generation

Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline "*Ensuring Sustainable Production and Consumption Modalities*". This requires continuous improvement in operational performance, the implementation of actions to increase energy efficiency, the reduction of natural resource consumption, the inclusion of the environmental variable in the design of infrastructures and improvements to the control and management of waste generated. All of this is done by promoting the use of resources that respect the environment.

As a result of its activities, **CASTEJÓN C.C.P.** generates a variety of hazardous and non-hazardous waste, which it identifies, stores and manages in accordance with current legislation and its Environmental Management System.

The following table details the tonnes of hazardous waste produced during the 2019-2021 period:

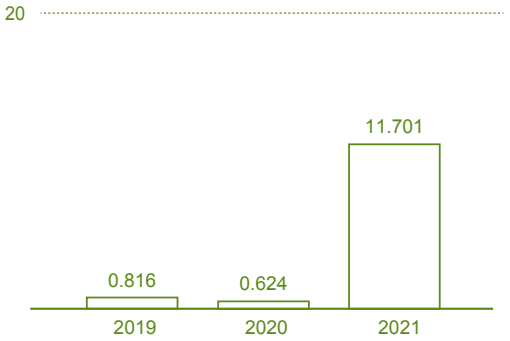
	Hazardous waste (t)		
TYPE	2019	2020	2021
Used oil	-	-	-
Empty aerosol cans	0.040	-	-
Containers that hold remains of hazardous substances or are contaminated with them	0.191	0.114	0.967
Materials contaminated with hydrocarbons	0.225	0.145	0.110
Dry mercury batteries	0.068	-	0.002
Paint, dyes, resins and glues	-	-	-
Discarded chemicals (expired)	0.155	0.272	0.097
Fluorescent tubes and other waste containing mercury	0.052	0.093	0.123
Solvents and mixtures of non-halogenated solvents	-	-	-
Lead batteries	-	-	-
Discarded electrical and electronic equipment	0.085	-	0.502
Fuel oil and diesel	-	-	9.900
TOTAL	**0.816**	**0.624**	**11.701**

Table 11: Generation of hazardous waste 2019-2021.

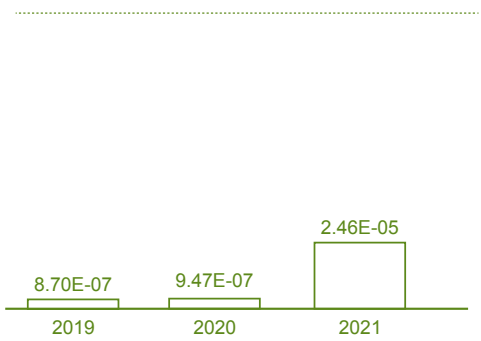
	Hazardous Waste (t/MWh)		
TYPE	2019	2020	2021
Used oil	-	-	-
Empty aerosol cans	4.27E-08	-	-
Containers that hold remains of hazardous substances or are contaminated with them	2.04E-07	1.73E-07	2.03E-06
Materials contaminated with hydrocarbons	2.40E-07	2.20E-07	2.31E-07
Dry mercury batteries	7.25E-08	-	4.20E-09
Paint, dyes, resins and glues	-	-	-
Discarded chemicals (expired)	1.65E-07	4.13E-07	2.04E-07
Fluorescent tubes and other waste containing mercury	5.55E-08	1.41E-07	2.58E-07
Solvents and mixtures of non-halogenated solvents	-	-	-
Lead batteries	-	-	-
Discarded electrical and electronic equipment	8.70E-07	-	1.05E-06
Fuel oil and diesel	-	-	2.08E-05

Table 12: Hazardous waste production/Electricity output indicator 2019-2021.

Annual production of hazardous waste
(t)



Indicator for Annual hazardous waste production/Electricity Production (t/MWh)



Graph 12: Evolution of the production of hazardous waste 2019-2021.

We can observe a considerable increase in the amount of Hazardous Waste produced, mainly due to having managed “Fuel oil and diesel waste” (9.9 t) as a result of having emptied the diesel storage tank. It must be considered that a direct ratio between the increase (or decrease) in the plant's energy output and the increase (or decrease) in the production of hazardous waste does not exist as this mostly depends on the plant's maintenance.

Likewise, the **CASTEJÓN C.C.P.** also generates non-hazardous waste, which it separates properly to ensure it is properly treated later on. The most significant non-hazardous wastes are listed below:

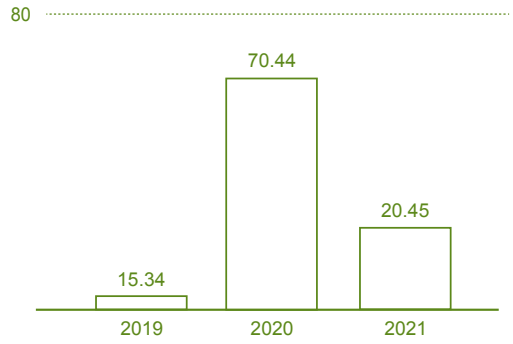
	Non-hazardous waste (t)		
TYPE	2019	2020	2021
Metallic waste	10.22	1.22	2.81
Paper and cardboard	2.21	0.95	0.95
Containers/packaging	1.35	1.35	1.35
Wood packaging	1.06	0.32	-
Urban-like waste	-	-	-
Food waste (RSU)	0.50	0.50	0.50
Sludge (conveyor filter and other)	-	55.44	9.22
Compressor rinse water	-	10.66	-
Rock wool	-	-	5.62
TOTAL non-hazardous waste	**15.34**	**70.44**	**20.45**

Table 13: Generation of non-hazardous waste 2019-2021.

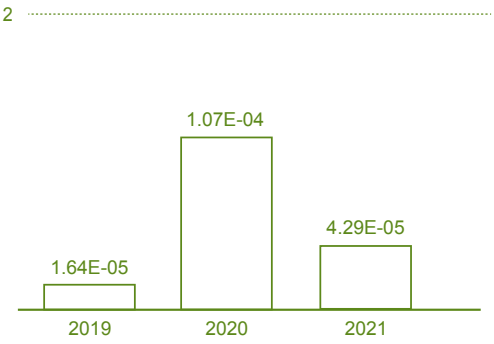
	Non-Hazardous Waste (t/MWh)		
TYPE	2019	2020	2021
Metallic waste	1.09E-05	1.85E-06	5.90E-06
Paper and cardboard	2.36E-06	1.44E-06	1.99E-06
Containers/packaging	1.44E-06	2.05E-06	2.83E-06
Wood packaging	1.13E-06	4.86E-07	-
Urban-like waste	-	-	-
Food waste (RSU)	5.33E-07	7.59E-07	1.05E-06
Sludge (conveyor filter and other)	-	8.41E-05	1.94E-05
Compressor rinse water	-	1.62E-05	-
Rock wool	-	-	1.18E-05

Table 14: Non-hazardous waste production/Electricity output indicator 2019-2021.

Annual production of non-hazardous waste
(t)



Annual Production of Non-Hazardous Waste Indicator Electricity Production (t/MWh)



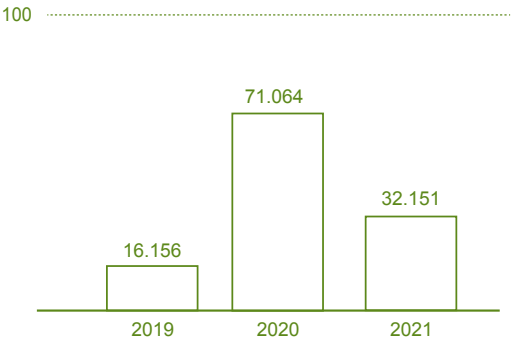
Graph 13: Evolution of the production of non-hazardous waste 2019-2021.

In table 13, we can see that the total production of Non-hazardous waste decreased, because sludge from the filtering of the River Ebro from 2019 and 2020 were managed in 2020. In 2021, most of the Non-hazardous waste produced at the plant were due to managing sludge from the band filter from filtering the River Ebro, and managing Rock wool produced when replacing this insulating material in maintenance work on the Plant. The management of these two types of waste was 73% of the total Non-hazardous Waste managed over the whole year.

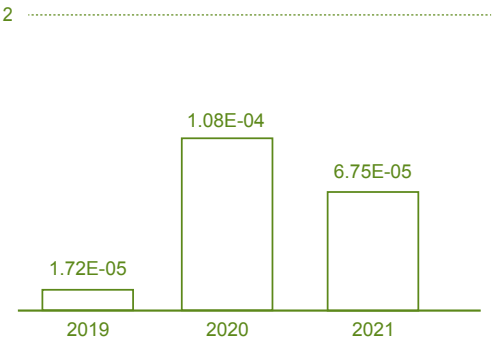
"Food waste (SUW)", "Packaging" and "Paper and cardboard" waste are collected by the corporation responsible for this, for which reason the amounts are estimative.

The total production of hazardous and non-hazardous waste was as follows:

Total Annual Waste Production
(t)



Annual Waste Production/Electricity Production Indicator Electrical (m^3/MWhe)



Graph 14: Evolution of the total waste production 2019-2021.

We can see that the total waste production decreased compared to 2020, due to managing less sludge from the band filter, as mentioned previously.

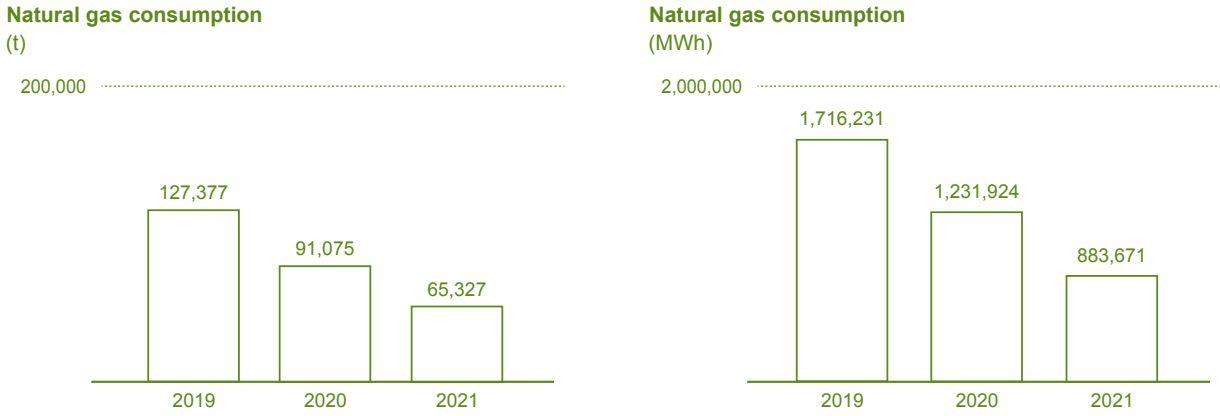
8.4 Resource consumption

Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline "*Ensuring Sustainable Production and Consumption Modalities*". This requires continuous improvement in operational performance, the implementation of actions to increase energy efficiency, the reduction of natural resource consumption, the inclusion of the environmental variable in the design of infrastructures and improvements to the control and management of waste generated. All of this is done by promoting the use of resources that respect the environment.

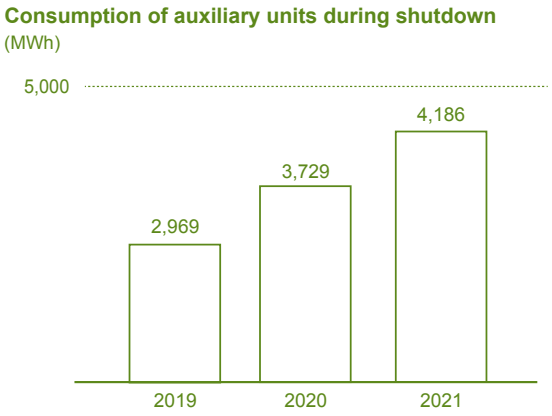
8.4.1 Energy Efficiency

The following charts show the consumptions of fuels (in t and MWh), the consumption of electricity in shutdown situations (in MWh), and total power consumption (calculated as the sum of the former two) during the 2019-2021 period.



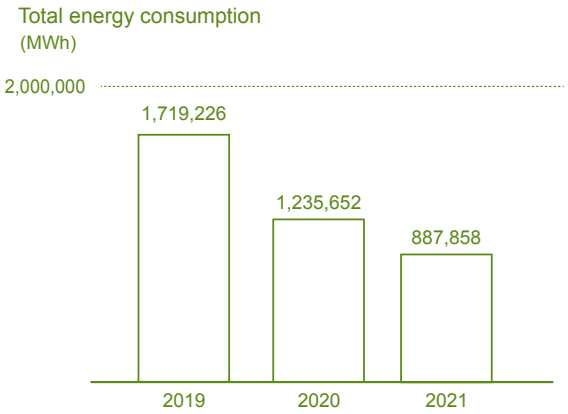
Graph 15: Evolution of the consumption of fuel 2019-2021.

The decrease in the consumption of natural gas is due to the lower operating level of the plant. As mentioned previously, there was no consumption of diesel as the **CASTEJÓN C.C.P.** operates on gas only.



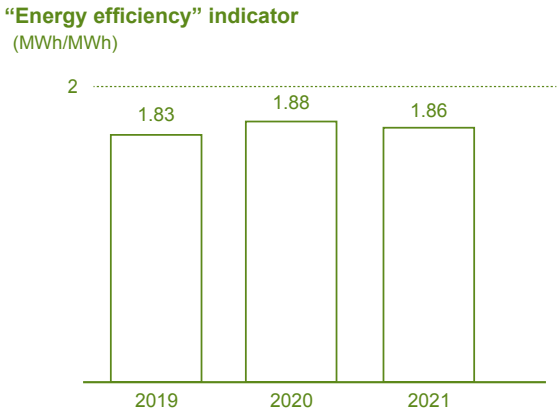
Graph 16: Annual evolution of auxiliary unit electricity consumption during shutdowns 2019-2021.

During shutdowns it is not possible to determine the source of the electric power absorbed from the grid by the **CASTEJÓN C.C.P.**, as there is no information available that allows the "total renewable energy consumption" indicator to be calculated. When the plant is in operation, the power consumed is thermal in origin and originates from the plant itself.



Graph 17: Annual evolution of total energy consumption 2019-2021.

The change in the energy efficiency indicator that compares the total consumption of energy resources with the **CASTEJÓN C.C.P.**'s electrical energy production over the 2019-2021 period is shown below:



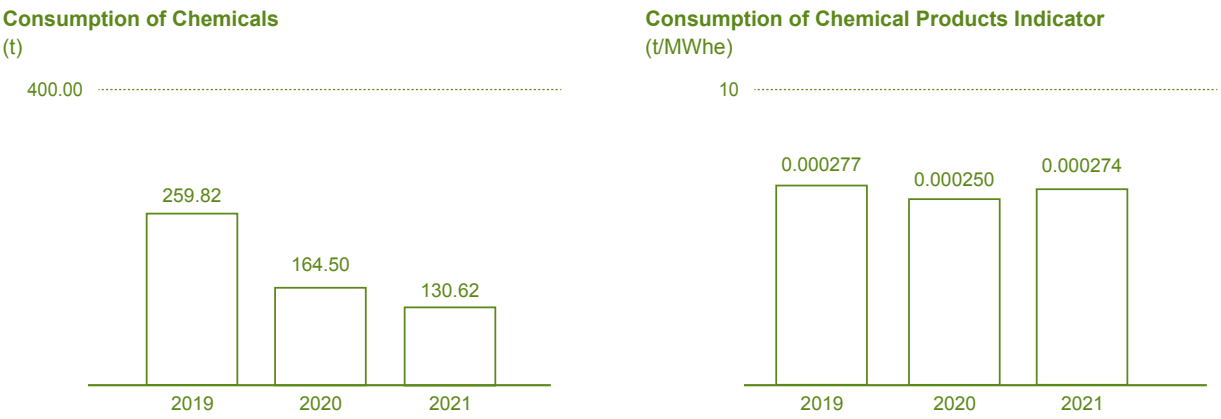
Graph 18: Annual change in energy efficiency.

8.4.2 Chemicals Consumption

The chemical products consumed by the **CASTEJÓN C.C.P.**, mainly in water treatment processes, the purification of effluents and the conditioning of the water of the water-steam cycle during the period 2019-2021 are shown in the following table:

	2019		2020		2021	
CHEMICALS	Consumption (t)	Consumption (t/MWhe)	Consumption (t)	Consumption (t/MWhe)	Consumption (t)	Consumption (t/MWhe)
Sulphuric acid	129.74	0.000138	76.48	0.000116	84.45	0.000177
Sodium hydroxide (caustic soda)	-	-	-	-	-	-
Sodium hypochlorite	80.48	0.000086	65.97	0.000100	38.18	0.000080
Coagulant (ferric chloride)	47.16	0.000044	18.96	0.000029	7.12	0.000015
Sodium bisulphite	0.33	0.0000004	0.30	0.0000005	0.30	0.000001
Ammonia	2.11	0.000002	2.79	0.000004	0.57	0.000001
TOTAL	**259.82**	**0.000277**	**164.50**	**0.000250**	**130.62**	**0.000274**

Table 15: Chemical products consumption 2019-2021.



Graph 19: Evolution of the consumption of chemicals 2019-2021.

The reduced consumption of chemical products is due to the decreased level of operation of the plant, in turn depending on the conditions of the water to be treated: more or less organic material, more or fewer solid particles in suspension, etc.

The chemicals usually consumed in the greatest quantities are sulphuric acid and sodium hypochlorite. Sodium hypochlorite is used for the disinfection of the water from the cooling towers as well as in the water pre-treatment plant as a biocide. Acid is used in the regulation of the pH in the treatment of circulation water.

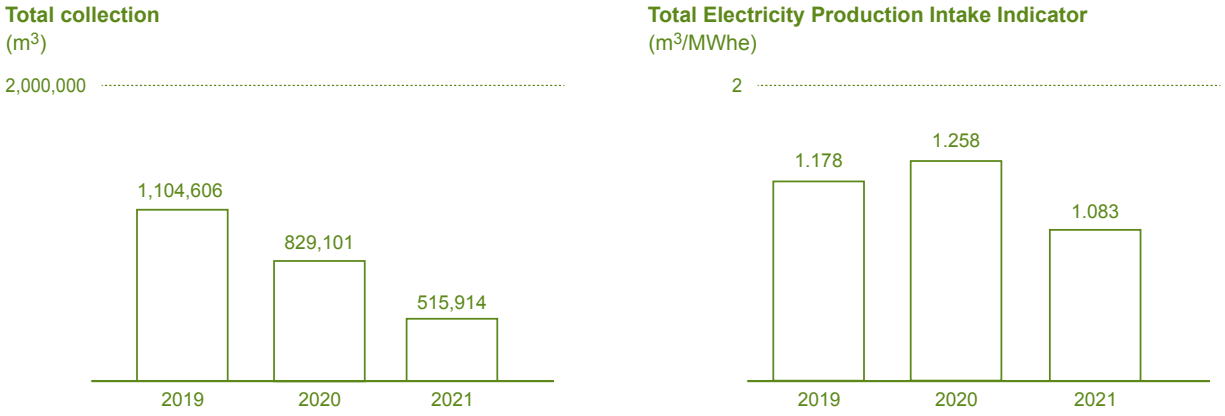
8.4.3 Water Intake

The **CASTEJÓN C.C.P.** water intake is mainly for replenishing cooling circuit water, although there are other requirements, albeit in lesser quantities:

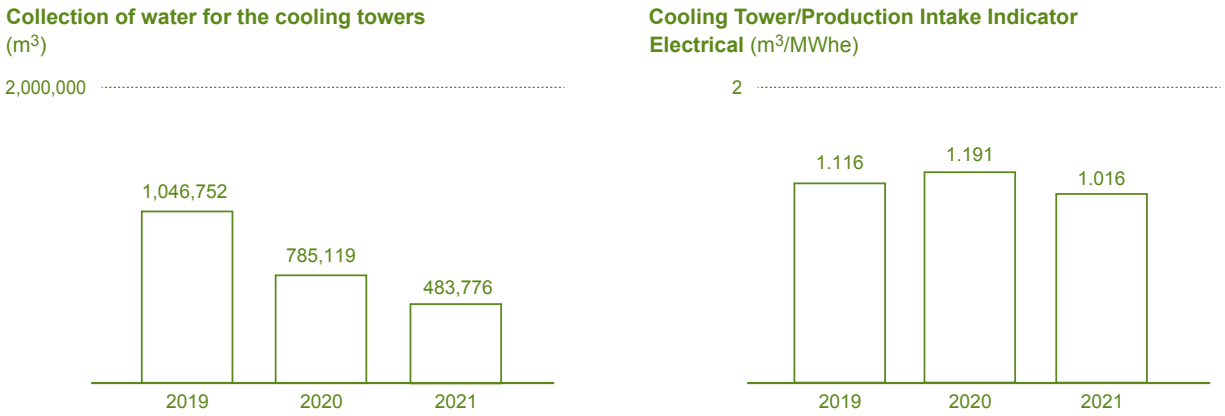
- Demineralised water for replenishing purged and drained water and washing
- Equipment washing
- Fire-fighting system
- Drinking water

The cooling of the combined cycle plant is carried out in a closed circuit by means of a forced-draught wet cooling tower. Water is taken from the River Ebro, there being a supplementary supply of well water if necessary.

Shown below are the total annual water make-up volumes and their breakdown into the different processes that take place at the plant:

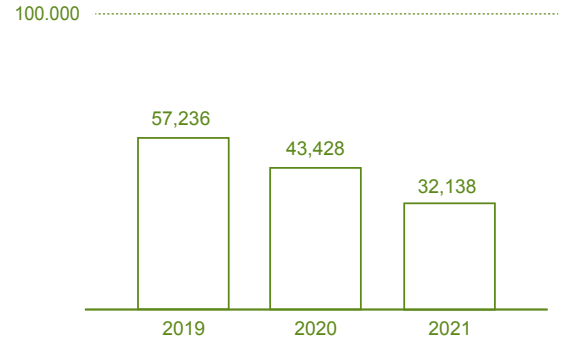


Graph 20: Annual evolution of the total volume of water collected 2019-2021.

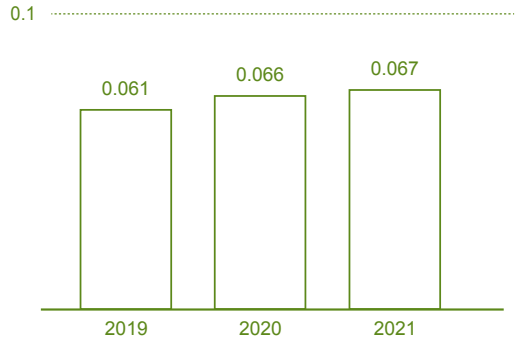


Graph 21: Annual evolution of the volume of water collected for the cooling towers 2019-2021.

Intake for Other Services
(m^3)

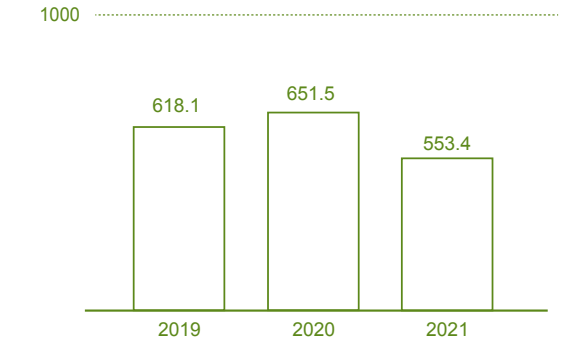


Water Intake for Other Services/Production Electrical (m^3/MWhe)

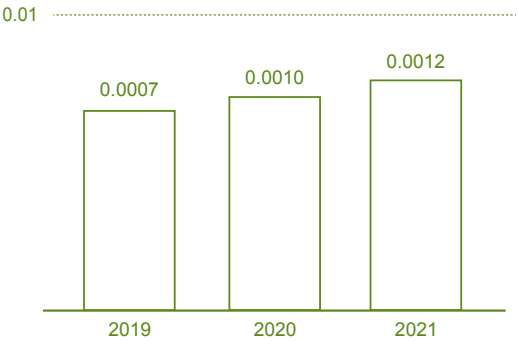


Graph 22: Annual evolution of the volume of water collected for other services 2019-2021.

Drinking Water
(m^3)



Drinking Water/Electricity Production Indicator
(m^3/MWhe)



Graph 23: Annual evolution of volume of drinking water collected 2019-2021.

The intake from the Ebro has an annual limit of 9,460,800 m^3 (2,332,800 m^3 from the wells to be deducted from the total).

Instantaneous flow rates of 300l/s in the river and 100l/s for each well which are strictly complied with.

As mentioned previously, the reduced water intake is due to the reduced operating level of the plant, although it is true that the consumption is also dependent on the quality of the raw water and the treatment thereof.

8.5 Biodiversity

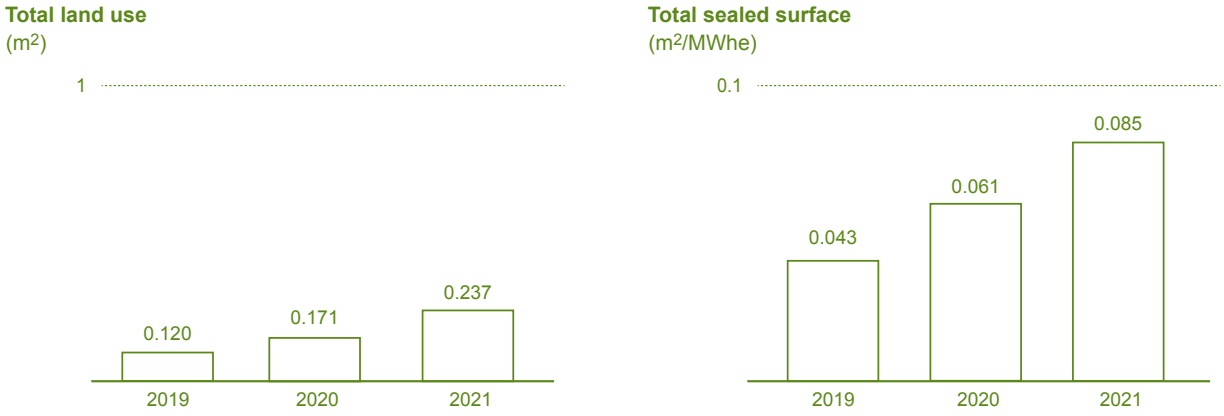
Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline "*Protect the environment and stop the loss of Biodiversity*". The aim of this guideline is to conserve and restore the ecosystems associated with our activities, coordinating the biodiversity plans of businesses in the affected environments. To improve the compatibility of Iberdrola's infrastructures with the environment, avoiding spillages and water and soil contamination, all in line with Iberdrola's Biodiversity and Environmental Policy.

The total surface area occupied by the **CASTEJÓN C.C.P.** remained unchanged throughout the period under consideration (2019-2021): 112,800 m^2 in ground area of which 17,533 m^2 corresponds to buildings, with a total sealed surface area of 40,482 m^2.

There are no areas facing natural areas either inside or outside the plant.

The total use of the ground and specific sealed surface area is shown below (m^2/MWh):



Graph 24: Evolution of total use of the ground and sealed surface area.

8.6 Noise

Contribution to the SDGs of the performance described by the indicators in this section:

Under the guideline "*Ensuring Sustainable Production and Consumption Modalities*". This requires continuous improvement in operational performance, the implementation of actions to increase energy efficiency, the reduction of natural resource consumption, the inclusion of the environmental variable in the design of infrastructures and improvements to the control and management of waste generated. All of this is done by promoting the use of resources that respect the environment.

During 2021, and while the plant was operating, noise measurements were taken at the **CASTEJÓN C.C.P.** by a body authorised by the ENAC.

The measurement points of the Industrial and residential area are located along the perimeter of the site according to the map below:

Figure 7: **Castejón C.C.P.** noise control points.

The following results were obtained in the obligatory measurements taken in May of 2021:

		Acoustic area									
Acoustic area	Meas-urement Point	One-off Day LKeq Value/ Daily (7am - 7pm)	Uncertain-ty ±	One-off Evening LKeq Value/ Daily (7pm - 11pm)	Uncertainty ±	One-off Day=Evening Limit/Daily		One-off Night LKeq Value/ Daily (11pm - 7am)	Uncertainty ±	One-off Night Limit/Day	
INDUSTRIAL	1	50/48	3.1/2.5	55[2]/54[2]	2.0/2.1	65+5	65+3	53/50	4.0/3.3	55+5	55+3
	2	56[1]/55[1]	2.2/1.9	50/52	2.7/2.1	65+5	65+3	48/51	2.9/2.7	55+5	55+3
	3	64/60	2.8/2.7	59/56	2.3/2.0	65+5	65+3	59/54	2.2/2.0	55+5	55+3
	4	61/60	2.6/2.0	58/55	2.8/2.2	65+5	65+3	59/59	2.6/1.8	55+5	55+3
	5	63[2]/63[2]	2.3/1.9	62[1]/60[1]	1.8/1.8	65+5	65+3	60[1]/60[1]	1.8/1.8	55+5	55+3
RESIDENTIAL	6	50/51	7.8/6.3	49/47	6.2/5.5	55+5	55+3	35/36	6.0/5.6	45+5	45+3
	7	50/52	5.4/4.7	50[2]/52[2]	4.8/5.4	55+5	55+3	39/39	5.1/5.2	45+5	45+3

1: It is not possible to distinguish between the noise from the activity and the background noise (the difference between the overall noise and the background noise is <3). This includes the overall value (background + activity).
2: The background noise is greater than the overall noise.

Table 16: Noise measurements.

In table 16, we can see that the values established at all the points of reference are complied with except for points 4 and 5 in the daily value for the night period, and points 3, 4 and 5 in the one-off value for the night period. In accordance with the noise study carried out at the end of 2020, where the ventilators of the Turbine air intake filter house were identified as the point with the most noise emission, the measurements in May of 2021 were done with this equipment stopped. The values continued to be high, so background noise measurements were taken at the end of 2021 with a full shutdown of the plant, resulting in similar values. For this reason, in February of 2022 a specialised company was hired to determine possible actions that could help minimise the noise at various sources in the plant, as well as a noise modelling study to ensure that those measures would have the expected results.

9

Legislation

The **CASTEJÓN C.C.P.** has all the authorisations, licenses and permits required for its activity. The most relevant are listed below:

LEGAL REQUIREMENT	PROVISION	DATE
Environmental Impact Statement	Resolution of 24 March 2000 of the General Secretariat for the Environment formulating an environmental impact statement for the project for the construction of a 400MW natural gas-fired combined cycle power plant in Castejón (Navarre), initiated by "Iberdrola, S.A."	24/03/2000
Installation authorisation	Resolution of the Directorate General for Energy authorising Iberdrola, S.A. to install a combined-cycle thermoelectric power station in the municipality of Castejón (Navarre).	05/05/2000
Business license	Agreement of the Governing Commission of the City Council granting a business license to a combined-cycle power plant at the request of IBERDROLA, S.A.	13/02/2001
	Resolution of 13 February 2001 of the Directorate General for the Environment approving the combined-cycle thermal power plant activity application initiated by IBERDROLA, S.A.	13/02/2001
Transfer of ownership	Resolution of the Directorate General for Energy Policy and Mines authorising the transfer of ownership to Fuerzas Eléctricas de Navarra, S.A. of the project for the Castejón (Navarre) combined-cycle plant construction project initiated by Iberdrola, S.A.	20/06/2001
Registration and commissioning	Certificate issued by the Director of the Industry and Energy Area of the Office of the Government Delegate to Navarre regarding the registration and final commissioning of the combined cycle plant in Castejón (Navarre) owned by FUERZAS ELÉCTRICAS DE NAVARRA, S.A.	11/06/2003
Water collection licence and authorisation for discharge into continental waters.	Resolution of the Chairman of the River Ebro Hydrographic Confederation on the granting and authorisation of a discharge for a public water supply from the River Ebro intended for the supply and cooling of a combined cycle plant running on natural gas in the municipality of Castejón (Navarre), requested by Iberdrola, S.A.	19/09/2001
	Resolution of the Chairman of the River Ebro Hydrographic Confederation on the modification of the characteristics of the concession granted through the Resolution of 19/09/01.	31/03/2004
Registration as a Producer of Hazardous Waste	Resolution of 14 November 2003 of the Head of the Integrated Pollution Control Section authorising the registration of FUERZAS ELÉCTRICAS DE NAVARRA, S.A. in the Registry of Small Producers of Hazardous Waste of Navarre. S.A.	14/03/2003
Registration in the Industrial Registry	Communication of the new establishment data in the industrial register. Reference 31/14946 in the name of Fuerzas Eléctricas de Navarra	30/05/2006
Authorization to emit greenhouse gases	Resolution 2643/2007 of 20 December, of the Directorate General for the Environment and Water Resources authorising the emission of greenhouse gases and approving the Monitoring Plan of the company FUERZAS ELÉCTRICAS DE NAVARRA, S.A.U. for the 2008-2012 period, in accordance with the monitoring guidelines set out in Decision 2007/589/EC.	20/12/2007
Integrated Environmental Authorisation	Resolution 1097/2009, of 13 May, of the Director General for the Environment and Water Resources granting an integrated environmental authorisation for the electric power production facility at a 400MW combined cycle plant, Unit 1, owned by FUERZAS ELÉCTRICAS DE NAVARRA, S.A.U., in the municipality of Castejón.	13/05/2009
Opening licence	Resolution 01506/2009, of 16 July 2009, of the Director General for Environment and Water Resources, granting an opening licence for a 400MW combined-cycle thermal power plant, Unit 1, owned by FUERZAS ELÉCTRICAS DE NAVARRA, S.A.U, in the municipality of Castejón.	16/07/2009

LEGAL REQUIREMENT	PROVISION	DATE
Renewal of registration with EMAS	Resolution 2129/2010, of 31 December, of the Director General for the Environment and Water Resources, renewing the registration with EMAS of the company FUERZAS ELÉCTRICAS DE NAVARRA, S.A., for its combined-cycle thermal power plant located in Castejón. (Registration No: ES-NA-000008).	31/12/2010
Authorization to emit greenhouse gases	Resolution 1218/2012, of 17 December, of the Government of Navarre, Rural and Environment Development and Local Administration Department, granting authorization for the emission of greenhouse gases for the 2013-2020 period to FUERZAS ELECTRICAS DE NAVARRA, S. A. U.	17/12/2012
Ex officio modification of the Integrated Environmental Authorization	Resolution 81/2013, of 15 February, of the Director General for the Environment and Water Resources modifying *ex officio* the integrated environmental authorisation of the facility.	15/02/2013
Integrated environmental Authorisation (deceleration of expiration)	Resolution 233/2013, of 15 March, of the Director General for the Environment and Water Resources declaring the integrated environmental authorization for the electricity production facility at a 825MW Combined-Cycle Thermal Power Plant consisting in two 400MW and 425MW units, respectively, as expired.	15/03/2013
Renewal of registration with EMAS	Resolution 1119/2013 of 23 December, of the Director General for the Environment and Water Resources renewing the registration with EMAS of the company FUERZAS ELÉCTRICAS DE NAVARRA, S.A.U, for its combined-cycle thermal power plant located in Castejón. (Registration No: ES-NA-000008).	23/12/2013
Integrated Environmental Authorisation	Resolution 129E/2014, of 14 April, of the Director General for the Environment and Water Resources, amending the Integrated Environmental Authorisation of the facility.	18/03/2014
Integrated Environmental Authorisation	Amendments to legislation on the integrated prevention and control of contamination. Communication of directive 2010/75/EU. Amendment to the Integrated Environmental Authorization of FUERZAS ELECTRICAS DE NAVARRA S.A.U.	28/05/2015
Renewal of registration with EMAS	Resolution 293E/2016, of 30 August, of the Director of the Environmental Quality and Climate Change Service, renewing the registration with EMAS of the company FUERZAS ELÉCTRICAS DE NAVARRA, S.A.U, for its Combined-Cycle Thermal Power Plant located in Castejón. (Registration No: ES-NA-000008).	31/08/2016
Modification of the Environmental Impact Statement	Resolution of 25 July 2017 of the State Secretariat for the Environment modifying the Resolution of 24 March 2000 formulating the environmental impact statement for the project for the construction of a 400MW natural gas-fired combined-cycle thermal power plant in Castejón (Navarre), initiated by “Iberdrola, S.A.”	25/07/2017
Renewal of registration with EMAS	Resolution 211E/2017, of 10 August, of the Director of the Circular Economy and Water Service renewing the registration with EMAS for FUERZAS ELÉCTRICAS DE NAVARRA, S.A.	10/08/2017
Change-of-ownership authorisation	Resolution of the Directorate General for Energy Policy and Mines authorising the transfer of ownership of the Castejón Combined Cycle Thermal Power Plant, Group A, to Iberdrola Generación S.A.U., whereby the facility is registered in the Administrative Register of Electrical Energy Production Facilities.	14/05/2018
Update of the Integrated Environmental Authorisation	Resolution 255E/2018, of 6 April, of the Director of the Circular Economy and Water Service amending *ex officio*the Integrated Environmental Authorisation.	06/07/2018
Communication of the change of ownership in the Integrated Environmental Authorisation	Government of Navarre, Department of Rural Development, the Environment and Local Administration Approval of the transfer of ownership of the facility from FENSA, S.A. to Iberdrola Generación Térmica, S.L.U.	31/07/2018
Update of the registration in the Industrial Register	Communication to the competent administration of the update to the registration in the Industrial Register due to the change in Ownership of FENSA S.A. to Iberdrola Generación Térmica S.L.U. Reference 15-A-351-00014946	10/09/2018

LEGAL REQUIREMENT	PROVISION	DATE
Renewal of registration with EMAS	Resolution 354E/2018, of 11 October, of the Director of the Circular Economy and Water Service renewing the registration with EMAS for Iberdrola Generación Térmica S.L.U.	11/10/2018
Modification of the greenhouse gas emission authorisation	Resolution 363E/2018, of 29 October, modifying the authorisation for the emission of greenhouse gases from the electricity production activity in favour of Iberdrola Generación Térmica S.L.U.	29/10/2018
Update of the Integrated Environmental Authorisation	Resolution 175E/2019, of 26 September, of the Regional Minister for Rural Development and the Environment, partially upheld the appeal for a review filed by Iberdrola Generación Térmica S.L. against resolution 255E/2018, of 6 July, of the Director of the Circular Economy and Water Service.	26/09/2019
Renewal of registration with EMAS	Resolution 325E/2019, of 5 November, of the Director of the Circular Economy and Water Service renewing the registration with EMAS for Iberdrola Generación Térmica S.L.U.	05/11/2019
Update of the Integrated Environmental Authorisation	Resolution 167E/2020, of 20 July, of the Director of the Circular Economy and Climate Change Service, accepting the change in the operating conditions established in the Integrated Environmental Authorisation for the electricity production facility, the owner of which is Iberdrola Generación Térmica, S.L., located in the municipal district of Castejón.	20/07/2020
Renewal of registration with EMAS	RESOLUTION 70E/2021, of 15 April, of the Director of the Circular Economy and Climate Change Service, renewing the registration of the organisation IBERDROLA GENERACIÓN TÉRMICA SL with the EMAS, for its centre dedicated to ELECTRICITY PRODUCTION, located in Pol. Ind. Castejón, parcela 235, apartado 43 Polígono 1 Parcela 235, in the municipal district of CASTEJÓN, maintaining the registration number ES-NA-0000008.	15/04/2021
Renewal of registration with EMAS	RESOLUTION 345E/2021, of 7 October, of the Director of the Circular Economy and Climate Change Service, renewing the registration of the organisation IBERDROLA GENERACIÓN TÉRMICA SL with the EMAS, for its centre dedicated to ELECTRICITY PRODUCTION, located in Pol. Ind. Castejón, Parcela 235, in the municipal district of CASTEJÓN, maintaining the registration number ES-NA-0000008.	13/10/2021

Table 17: Most relevant authorisations, licences and concessions

The evaluation of legal compliance carried out in accordance with procedure “Monitoring, Measurement, Analysis and Assessment of Data” shows that the **CASTEJÓN C.C.P.** complies with all applicable legal requirements for controlling all applicable environmental parameters, and sends the documentation associated with these aspects to the competent environmental bodies as required, except that which is indicated on page 48 in relation to occasionally exceeding the legal noise limits, which the organisation is in the process of correcting as a priority.

At the same time, in accordance with the “Legal and Other Requirements” procedure, the **CASTEJÓN C.C.P.** incorporates all new legal developments that apply to it regarding the environment into its requirements.

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Deadline for the next validation

The Environmental Statement for 2022 will be validated throughout 2023 in accordance with Regulation (EC) No 1221/2009, amended by Commission Regulation (EU) 2017/1505 and Commission Regulation (EU) 2018/2026.


IBERDROLA