ALMARAZ TRILLO

ENVIRONMENTAL REPORT 2020

CNAT

ENVIRONMENTAL REPORT 2020

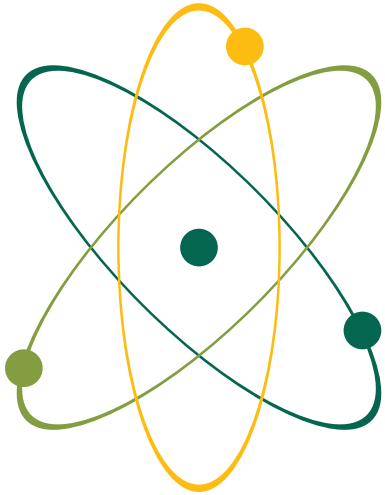
CNAT

AENOR Gestión Ambiental ISO 14001

excelencia efr certificado en conciliación 1000-1 ES – 086 / 2010 / AENOR

CERTIFIED IQNet MANAGEMENT SYSTEM

ALMARAZ TRILLO



Edition:
© Centrales Nucleares
Almaraz-Trillo May / June 2021

Coordination:
CNAT Communication

Design and Layout:
Cambio de Sentido

Photographs:
CNAT Photographic Archive

THE ALMARAZ AND TRILLO POWER PLANTS 01

QUALITY ENVIRONMENTA MANAGEMENT 02

LINES OF ACTION 03

ENVIRONMENTAL MANAGEMENT RESULTS 04

LEGISLATION 05

ENVIRONMENTAL AUDITS 06

ENVIRONMENTAL MONITORING PROGRAMMES 07

STAKEHOLDER RELATIONS 08

THE ALMARAZ AND TRILLO POWER PLANTS

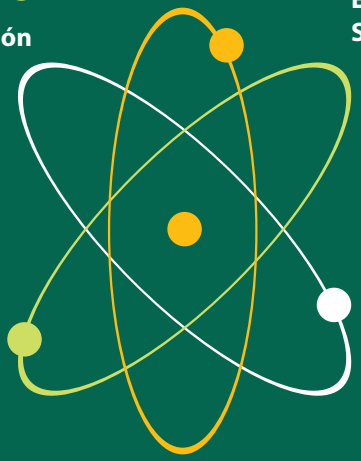
Owner companies

In November 1999, the companies owning the Almaraz and Trillo nuclear power plants set up the Economic Interest Grouping known as Centrales Nucleares Almaraz-Trillo, A.I.E., for the integrated operation, management and administration of both plants, their ownership stakes in each of them remaining unaltered. Currently, in application of Royal Decree Law 13/2014, Centrales Nucleares Almaraz-Trillo A.I.E. also holds ownership of the Operating Permits of the facilities.

The share of the owner companies in the installed capacity, between the two plants, is as follows:

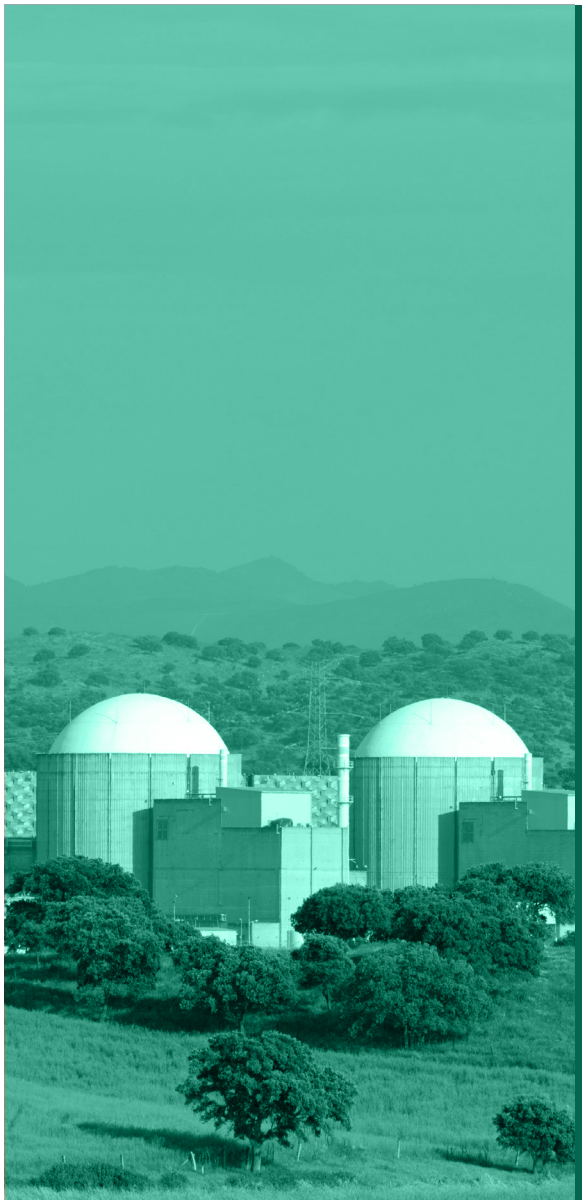
51.44%
Iberdrola Generación Nuclear, S.A.U.

24.18%
Endesa Generación, S.A.U.



19.14%
Naturgy Generación S.L.U.

5.24%
Iberenergía, S.A.U.

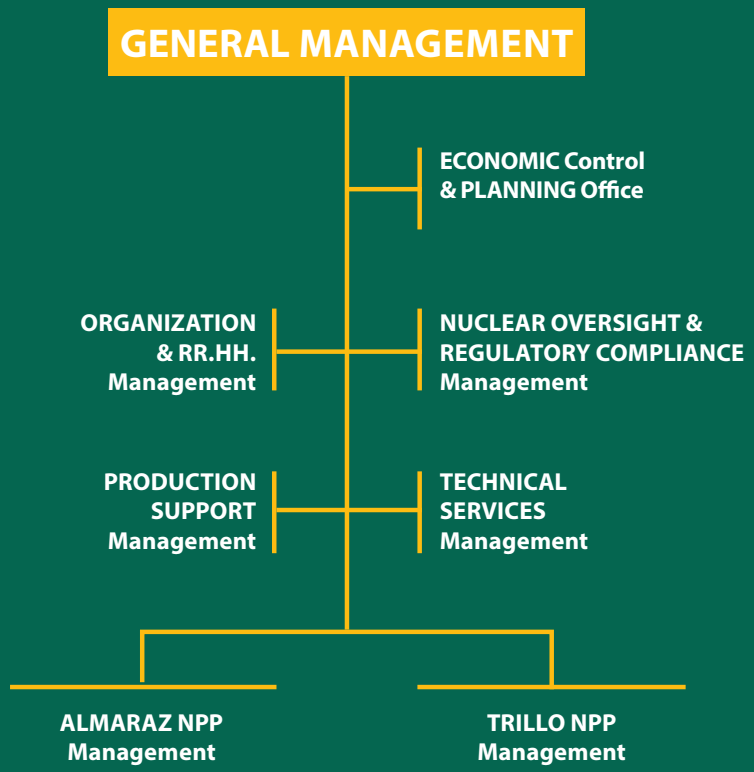


Organisational structure

The structure of the A.I.E. Centrales Nucleares Almaraz-Trillo is based on the creation of a single organisation, with unity of command, clarity in its definition and the precise assignment of functions and responsibilities.

The organisation's governing bodies are the Members' Assembly, which brings together the owner companies, and the Board of Trustees, which includes representatives from each of them.

The basic organisational chart in force at the A.I.E. Centrales Nucleares Almaraz-Trillo is shown below:



Main characteristics of the Plants

Almaraz Nuclear Power Plant (UI-UII)

The plant is located in the municipality of Almaraz de Tajo (Cáceres). The land owned by the plant covers an area of 1,683 hectares, located in the municipalities of Almaraz, Saucedilla, Serrejón and Romangordo.

The plant consists of two nuclear reactors, each with a cooling circuit made up of three loops. In turn, each loop incorporates a cooling pump and a steam generator. Both cooling circuits are contained in respective containment enclosures in each reactor building.

The steam from the generators is taken to the turbine building, which houses both turbine-generators in the same room, but independently. The cooling intake is common to both facilities from the cold source, which is the Arrocampo reservoir, specially built for this purpose.

The main technical characteristics of the plant are shown in the following table:

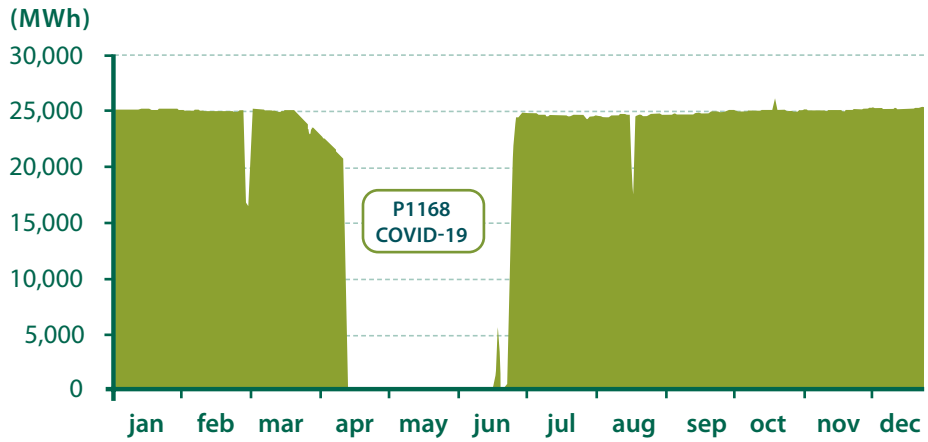
In 2020 the gross production generated between the two units of the Almaraz Nuclear Power Plant was 15,890.78 million kWh and the joint net production was 15,279.52 million kWh.

Individually, the gross electricity production corresponding to Unit I was 7,161.30 million kWh and that corresponding to Unit II was 8,729.49 million kWh.

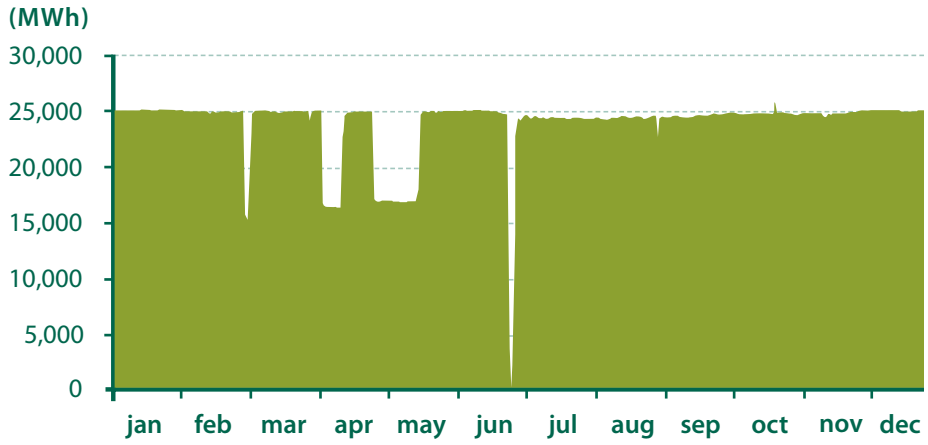
The following graphs reflect the daily gross production of both units over 2020.

GROSS PRODUCTION 2020
ALMARAZ NPP

CNA UNIT I



CNA UNIT II



C.N. Almaraz (UI-UII)

OPERATING PERMIT VALID:

UI - until 01/11/2027

UII - until 31/10/2028

OWNERS:

Iberdrola Generación Nuclear, S.A. **(52.7%)**

Endesa Generación, S.A. **(36.0%)**

Naturgy Generación, S.L.U. **(11.3%)**

TECHNICAL CHARACTERISTICS:

Reactor Type:
Pressurised Water Reactor (PWR)

Supplier:
Westinghouse

Thermal Power:
2,947 MWt (U-I) - 2,947 MWt (U-II)

Fuel:
Enriched Uranium Dioxide (UO2)

No. of fuel elements: 157

Gross Electric Power:
1,049.43 MWe (U-I) - 1,044.45 MWe (U-II)

Net Electrical Power:
1,011.30 MWe (U-I) - 1,005.83 MWe (U-II)

Cooling:
Open Circuit. Arrocampo Reservoir

LOCATION:

Almaraz
(Cáceres)

START OF COMMERCIAL OPERATION:

1 September 1983 (U-I) –
1 July 1984 (U-II)

DURATION OF THE CYCLE:

18 months both units

Trillo Nuclear Power Plant

The Trillo Nuclear Power Plant is located in the Alcarria region, next to the basin of the river Tagus, in the area known as "Cerrillo Alto" in the municipality of Trillo (Guadalajara). The Trillo plant is the most modern of the Spanish nuclear power plants, with an installed power of 1,066 MWe.

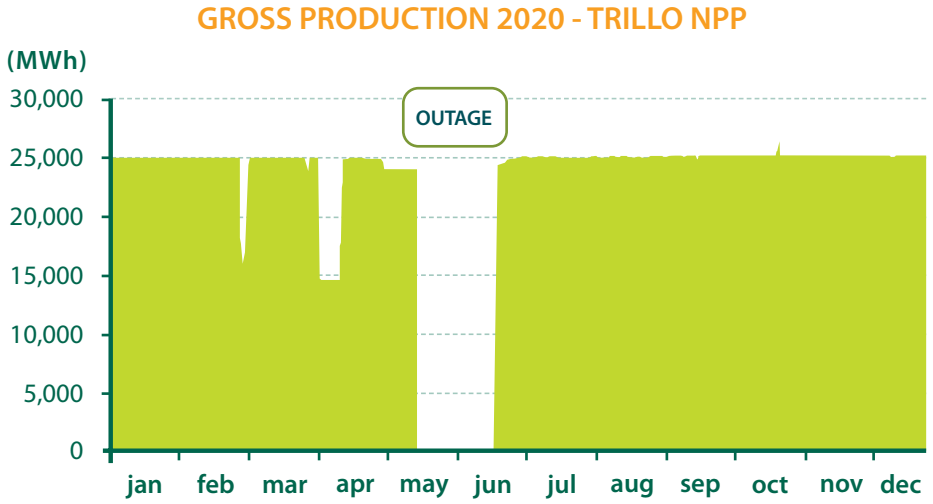
The plant has a pressurised water reactor with a thermal power of 3,010 MWt and three cooling loops of German Siemens-KWU technology, using enriched uranium as fuel.

Unlike the Almaraz plant, cooling is carried out by means of two natural draught cooling towers, a water collection channel and the corresponding impulsion pumps for cooling the condenser and lifting the water to the towers. The water flow evaporated by the towers is returned from the water intake at a weir located on the Tagus river.

The main technical characteristics of the plant are shown in the following table:

The gross production of Trillo Nuclear Power Plant from 1 January to 31 December 2020 amounted to: 8,275.82 million kWh, with 7,729.61 million kWh being the net production during this period.

The following graph shows the daily gross production over the year 2020.



C.N. Trillo

OPERATING AUTHORISATION IN FORCE:
17/11/2014 for a period of 10 years

LOCATION:
Trillo
(Guadalajara)

START OF COMERCIAL OPERATION:
6 August 1988

OWNERS:
Iberdrola Generación Nuclear, S.A. **(49%)**

Endesa Generación, S.A. **(1.0%)**

Naturgy Generación, S.L.U. **(34.5%)**

Iberenergía, S.A. **(15.5%)**

TECHNICAL CHARACTERISTICS:

Tipo Reactor Type:
Pressurised Water Reactor (PWR)

Supplier:
KWU

Thermal Power:
3,010 MWt

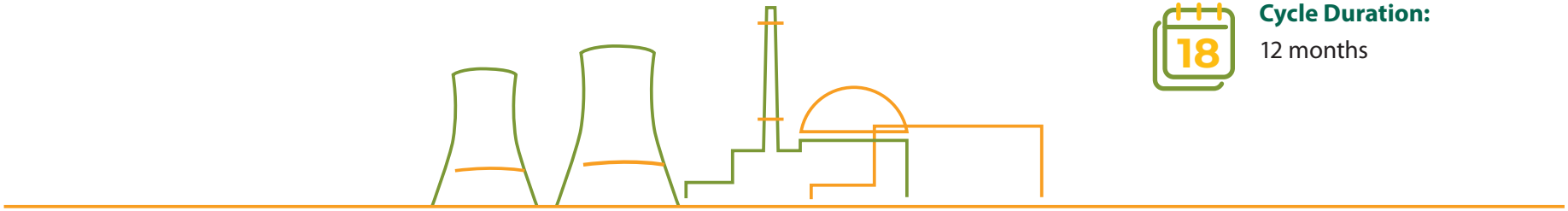
Fuel:
Enriched Uranium Dioxide (UO2)

Nº of fuel elements: 177

Gross Electrical Power:
1,066 MWe

Net Electrical Power:
1,003 MWe

Cooling:
Natural Draft Towers (Tagus River)



Cycle Duration:
12 months

MISSION, VISION, STRATEGIC PILLARS

The mission of Centrales Nucleares Almaraz-Trillo is to produce electricity in a safe, reliable, economic and environmentally friendly manner, guaranteeing long-term production through the optimal operation of the Almaraz and Trillo power plants.

Our Vision aims to place the Almaraz and Trillo plants among the benchmark plants in terms of safety, quality and costs, by means of a management model in which the development and participation of people makes it possible to achieve higher levels of safety, productivity and efficiency.

In order to achieve its Mission and advance towards the horizon established by its Vision, Centrales Nucleares Almaraz-Trillo develops its strategy around the following strategic pillars:

QUALITY ENVIRONMENTAL MANAGEMENT

In order to fulfil its mission within a socially responsible framework, Centrales Nucleares Almaraz-Trillo has different corporate policies that set working guidelines for the organisation as a whole.

The Environmental Policy drives the application of the Environmental Management System and the continuous improvement of its performance, reflecting the Management's commitment and constituting the guiding principle from which the annual programmes of objectives and, in general, all the company's activities in relation to the Environment are derived.

Each and every one of the organisation's departments has assumed the environmental policy of CC.NN. Almaraz - Trillo A.I.E., integrating the commitment to respect for the environment into their processes.

The organisation's established policy is set out below:

ENVIRONMENTAL POLICY

CNAT's environmental policy has been defined in accordance with the purpose and context of the organisation, including the nature, magnitude and environmental impacts of its activities, products and services, constituting the guiding framework of the Environmental Management System and in which the environmental objectives are established and reviewed. It guarantees the following commitments:

- Fully integrate the environmental dimension into the organisation's strategy, to ensure the protection of the environment, the natural surroundings and the prevention of pollution.
- Continuous improvement in all processes that may have an environmental impact.
- Knowing and assessing the environmental opportunities and risks of the activities carried out, to ensure the achievement of the expected results.

- Comply with applicable environmental legislation and other requirements voluntarily subscribed to, maintaining an attitude of permanent compliance with them.
- Integrate environmental management into all activities and levels of the organisation, including design, supply, operation and maintenance; identifying, preventing, controlling and minimising, as far as possible, environmental impacts in the development of these activities:
  - » **USING** raw materials and energy rationally, and minimising the generation of conventional and nuclear waste and effluents.
  - » **AVOIDING** improper waste collection and effluent disposal in unauthorised ways and places.
  - » **CONSIDERING** the development or application of new technologies to improve efficiency in electricity generation, environmental research and the promotion of energy saving.
- Motivate, inform and train staff to respect the environment, stimulating the development of an environmental culture and disseminating the Environmental Policy inside and outside the Organisation, including collaborating companies..
- To report transparently on environmental results and actions, maintaining the appropriate channels to encourage communication with stakeholders.
- Implement and maintain a standardised Environmental Management System.

In line with this Policy, CC.NN. Almaraz - Trillo A.I.E. has had since 2005 its Environmental Management System certified by AENOR INTERNACIONAL SAU, in accordance with the international standard UNE-EN-ISO 14001 (certification number GA-2005/0519).

This three-yearly certificate was renewed for the last time in 2020, in accordance with the UNE-EN-ISO 14.001:2015 standard, valid until November 2023.

In this way, CC.NN. Almaraz - Trillo, through the Environmental Management System, annually identifies the organisation's environmental risks and opportunities that need to be addressed, considering environmental aspects, legal and other voluntarily subscribed requirements, internal and external issues of the organisation, and needs and expectations of the interested parties, and manages them through specific prevention and mitigation instruments for risks and action plans for opportunities.

Furthermore, the environmental management of Almaraz-Trillo NPPs includes the identification and assessment of environmental aspects based on the life cycle perspective. Almaraz - Trillo NPP also includes the identification and evaluation of environmental aspects based on the life cycle perspective, which makes it possible to identify and assess those aspects that are most relevant to the activity of the plants.

LINES OF ACTION

In the environmental area, throughout 2020, Centrales Nucleares Almaraz - Trillo has continued with the development of important actions included in the Environmental Management Programme, the most significant of which are listed below:

- Actions aimed at minimising the production of radioactive waste:
  - » **Low and intermediate level waste:** optimisation of the design to avoid the undesired generation of radioactive waste in certain operations, strengthening of processes for the declassification of materials (used oil, activated carbon, earth, metals and others), installation of equipment for the destruction of compactable waste, and improvements in the management of used oil and grease waste in a controlled area by means of centrifugation.
  - » **High level waste:** actions are also under way to reduce high level radioactive waste by means of new cycle management at Trillo NPP and reduction of the volume of special wastes (fuel assembly heads) located in the spent fuel pool at Trillo NPP and reduction of the volume of special wastes (headers) located in the spent fuel pool at Almaraz NPP for subsequent management as LILW.
- Creation of an interdepartmental group for the minimisation of hazardous and non-hazardous waste generation at both plants.
- Improvement in pollution prevention systems: conditioning of the storage area for reserve transformers at Almaraz NPP.
- Improvement of the thermo-ecological conditions of the Arrocampo reservoir, through the progressive repair of sections of the thermal separation screen at Almaraz NPP and optimisation of discharge temperature control.
- Improvements in the data acquisition of the EM-02 meteorological tower.
- Carrying out environmental awareness campaigns aimed at promoting good environmental practices.

ENVIRONMENTAL MANAGEMENT RESULTS

The Trillo Nuclear Power Plant and the Almaraz Nuclear Power Plant produce electricity from the fission of atoms of slightly enriched uranium. The heat energy resulting from the fission of the uranium is used to produce the steam that drives the turbine which in turn drives the electric generator.

The basis for developing an adequate and effective environmental management system is the correct identification of all those "elements of our activities, products and services that can interact with the environment", i.e. the so-called environmental aspects.

The subsequent evaluation of the impact of these aspects and the establishment of control measures for their management is carried out by Almaraz-Trillo A.I.E. to guarantee environmental protection.

The main aspects are grouped into the categories described below:

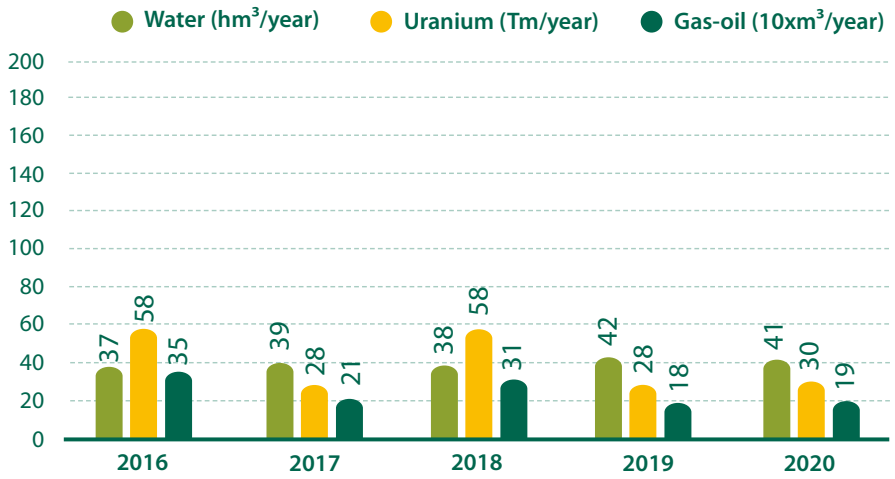
Consumption of material resources

This category of Environmental Aspects refers to the use of abiotic resources, both in the main production process of electricity generation and in auxiliary services.

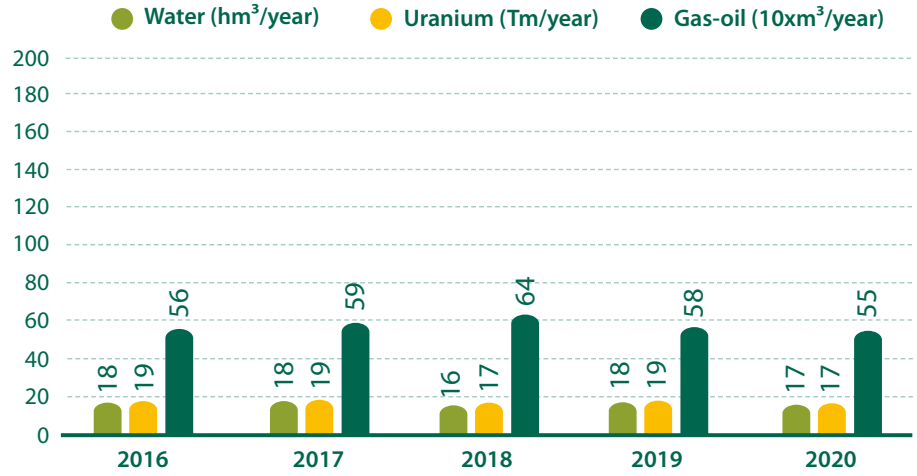
The main consumptions correspond to:

- **Water**
- **Enriched uranium**
- **Diesel**
- **Chemical products**

CONSUMPTION OF NATURAL RESOURCES ALMARAZ NPP



CONSUMPTION OF NATURAL RESOURCES TRILLO NPP



Water consumption

Nuclear power plants need a source of water as a coolant in the primary circuit to produce the condensation of the steam which, when it expands in the turbine, drives the generator and produces electrical energy, a small part of which is consumed in the process itself by evaporation, and the rest is returned to the natural receiving environment.

Water consumption is directly related to the number of operating hours of the plant and therefore to the production of electrical energy. On the other hand, water consumption depends not only on the cooling needs and the operating regime of the plants, but also on the weather conditions (mainly temperature and humidity), since during the summer months, the increase in temperature and the associated increase in evaporation mean that the volume of water consumed is greater.

Both plants are supplied with cooling water from the Tagus River. For this purpose, they have the corresponding water extraction concessions granted by the river custodial authority Confederación Hidrográfica del Tajo.

On the other hand, there is additional water consumption for consumptive uses for supplying the plant. Consumptive uses correspond to irrigation, PCI, sanitary uses and circuit replacement. The latter include, in the case of Almaraz NPP, the contribution to compensate for evaporation in the turbine cooling system towers.

Both plants have a discharge point into the Tagus River, through which the water used, but not consumed, is returned to the environment.

The effluents from the plants are treated before they are discharged into the receiving environment, with exhaustive monitoring of the physical and chemical parameters.

The totals consumed in the year for the two plants and uses indicated above (cooling and consumptive) are shown below.

WATER CATCHMENTS		QUANTITY Year 2020 (m^3)
		TRILLO NPP
Refrigeration Needs Consumptive use	(EVAPORATED: Tagus River Extraction - Discharge)	16,650,206
	(Extraction of the river Cifuentes)	91,520
		ALMARAZ NPP
Refrigeration Needs Consumptive use	(EVAPORATED Calculated Arrocampo +TEVA)	41,072,587
	(Tajo river raw water catchment)	912,448[1]

Uranium consumption

The fuel used in power plants for electricity production is enriched uranium fed into the reactor. The uranium consumption is directly related to the number of operating hours of the power plant.

This uranium is conditioned to form the fuel elements that are inserted into the nuclear reactor vessel. The main objective for the design of the core (determination of the positions of the elements inside the reactor) is safety and reliability, and compliance with licensing parameters and criteria. While respecting this basic premise, the aim is to optimise uranium consumption as much as possible, extracting as much energy as possible with the chosen design.

1. The evaporated volume that appears in the table for the Trillo plant originates in the cooling tower circuit and that of the Almaraz Nuclear Power Plant in the Arrocampo reservoir and TEVA towers, which are also used for cooling the plant.

Diesel consumption

Diesel B is used in both plants mainly for the emergency electricity generation system (diesel engines, which would come into operation in the event of a total loss of AC power supply from outside), auxiliary steam during shutdown (boilers only at Trillo Nuclear Power Plant).

Another fuel used is **diesel A**, mainly related to the use of company vehicles and for the practices of the Fire Fighting field.

The specific diesel consumption in 2020 is shown below:

DIESEL CONSUMPTION	QUANTITY Year 2020 (m^3)	
	ALMARAZ NPP	TRILLO NPP
Diesel B	154.9	523.5
Diesel A	38.3	30.7

Chemical consumption

The Almaraz and Trillo plants have various **chemical product** storage facilities at their facilities, which are necessary to guarantee the quality and purity of the cooling circuit water and the cycle feed water, the most widely used being: sulphuric acid, sodium hydroxide, sodium hypochlorite and ammonia.

The consumption of these products is directly related to the amount of water consumed and extracted, which in turn requires a greater regulation of chemical parameters for its conditioning.

NPP's Almaraz-Trillo tend towards an efficient use of materials, minimising the generation of waste and environmental pollution. Proof of this is the implementation of environmental objectives, also mentioned in the waste section, consisting of the reduction of chemical product leaks through the introduction of improvements at different points in the plant.

The consumption of the main chemicals used in the plant, expressed as a quantity of pure product, is shown below.

CHEMICAL CONSUMPTION	QUANTITY Year 2020 (t of pure product)	
	ALMARAZ NPP	TRILLO NPP
Sulphuric Acid	119.69	4,729.65
Sodium Hydroxide	54.41	38.96
Sodium Hypochlorite	21.73	167.38
Ammonia	89.02	0.20
Oils	17.36	11.71

From the above table, it should be noted that Trillo NPP has a significant consumption of sulphuric acid for the cooling tower circuit to maintain the chemical conditions required therein (prevention of calcium carbonate incrustations). The same system also has a significant consumption of sodium hypochlorite used as a biocide.

With respect to ammonia, the consumption indicated at Almaraz NPP is due to its use as an alkalinising agent in the secondary circuit (water-steam). The characteristics of this circuit at Trillo NPP mean that a similar dosage is not necessary.

Energy consumption

The direct energy consumed within the operational limits of the plants comes from primary sources: mainly uranium and diesel.

From uranium, another intermediate form of energy is generated: electrical energy.

Of this electrical energy produced by both plants, part is used for own energy consumption (since practically all the plant's equipment and activities need to consume electrical energy for their daily operation) and the rest of the production is sold to the Energy Market.

Direct energy consumption is detailed below:

ENERGY CONSUMPTION[2]	QUANTITY Year 2020 (GJ)	
	ALMARAZ NPP	TRILLO NPP
Fuel: Uranium	173,354,018	90,281,673
Fuel: Diesel B	5,694.8	19,245.9
Fuel: Diesel A	1,409.8	1,128.4
Auxiliary Electrical Energy (Self-consumption)	2,200,536	1,96,363

2. The actual annual uranium consumption is expressed as the thermal energy used out of the total produced in the reactor and converted into electrical energy, assuming an average efficiency of 33%.
The auxiliary electrical energy for self-consumption is determined as the difference between the gross energy and the net energy produced in the power plants. GJ conversion: 1 kWh = 0.0036 GJ.
Source for the lower calorific value (LCV) of diesel: MITERD, "Emission factors: Carbon footprint registry, offsetting and carbon dioxide absorption projects" of April 2020 (Version 13).

Conventional air emissions

Emissions from combustion activities

No greenhouse gases or other combustion products that contribute to the greenhouse effect are generated in the nuclear power generation process.

However, due to the use of diesel B as fuel, mainly in the operation of the auxiliary boilers and emergency diesel units, atmospheric pollutants are generated, including a small amount of greenhouse gases that are emitted into the atmosphere. Emissions from transport associated with the use of vehicles and those associated with fire-fighting training are also considered.

It should be noted that the operating regime of these combustion sources is not continuous since, during normal operation, the diesel generators are started only for periodic tests or maintenance work.

Normal operation of the auxiliary boilers (only at Trillo NPP) occurs only during refuelling, for auxiliary steam supply.

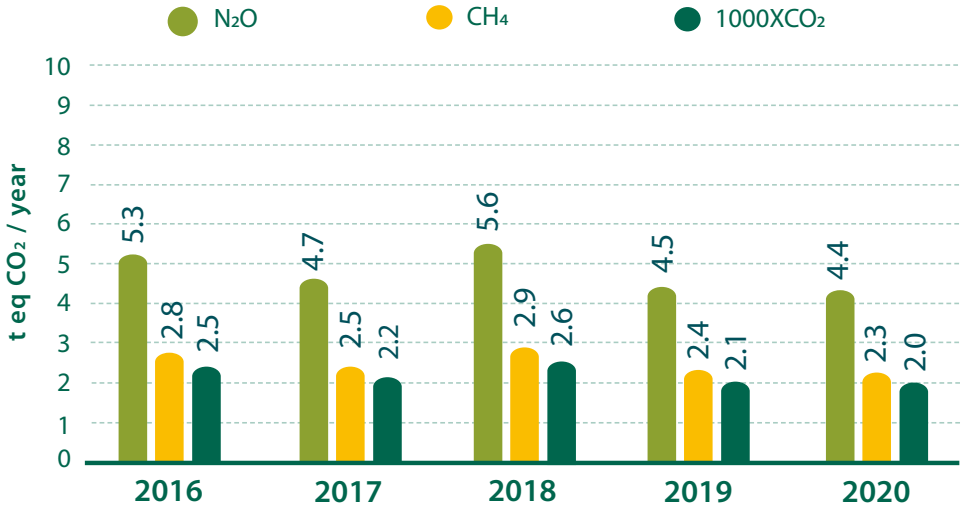
Emissions information is reported below following the GRI (Global Reporting Initiative) recommendations for sustainability reporting.

The following graph shows an estimate of **greenhouse gas emissions from** diesel combustion (CO_2, CH_4, N_2O), expressed in tonnes of CO_2 equivalent (teq CO_2), using the methodology described above and the emission factors in the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories[3].

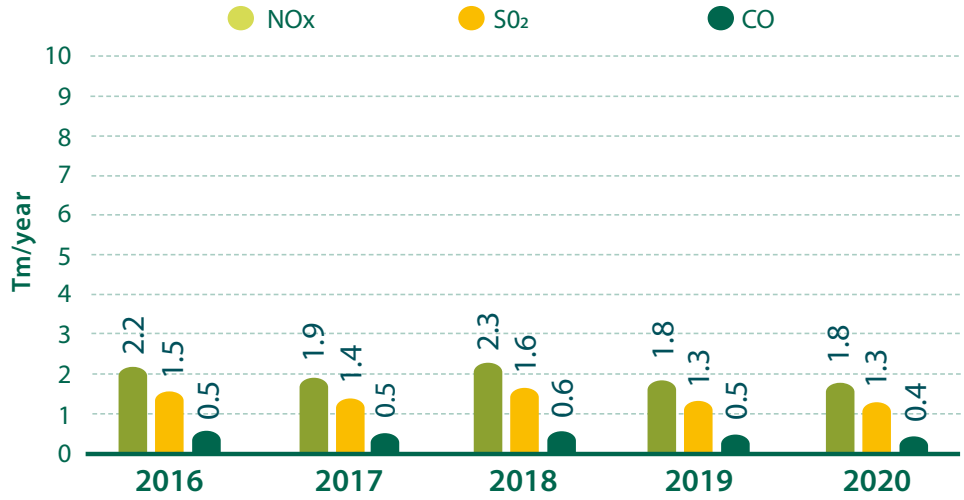
As basic indicators of total emissions into the air, the annual quantities of sulphur dioxide (SO_2), nitrogen oxides (NOx) and CO emitted into the atmosphere from the consumption of diesel A and B, expressed in tonnes, have been determined.

[3] The conversion factors used to express the emissions of these greenhouse gases in tonnes of CO_2 equivalent are those published by the IPCC in the Fifth Assessment Report on Climate Change (2013) and correspond to the global warming potential values of CH_4 and N_2O relative to CO_2 for a 100-year horizon.

EMISSIONS OF GREENHOUSE GASES (AUXILIARY AND EMERGENCY EQUIPMENT, VEHICLES AND FP) (BOTH ALMARAZ & TRILLO)



EMISSIONS TO THE ATMOSPHERE (AUXILIARY AND EMERGENCY EQUIPMENT, VEHICLES AND PF) (BOTH ALMARAZ & TRILLO)



Emissions of fluorinated gases

Ozone depleting substances have a marginal presence at NPPs Almaraz-Trillo and are located in some refrigeration systems that still contain HCFCs. These equipment and systems are maintained according to the provisions of the regulations in force.

In compliance with Regulation (EC) No 1005/2009 on substances that deplete the ozone layer, over several years CC.NN. Almaraz-Trillo has aimed to replace equipment at both plants containing HCFCs with HFC-type gases.

Regarding the use of greenhouse gases, they are present in the HFCs in refrigeration equipment, air conditioning, PCI and SF_6 present in high voltage switchgear. The only emissions to the atmosphere from these products would be those derived from possible losses. To this end, both Almaraz NPP and Trillo NPP carry out preventive and corrective control and maintenance to prevent leaks in accordance with current regulations.

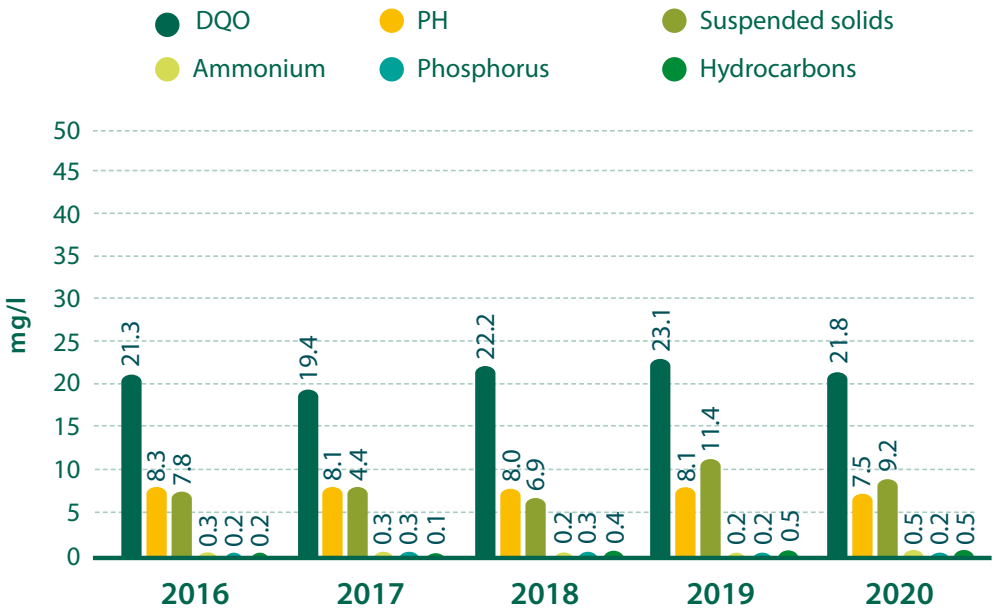
Conventional liquid effluents - physical-chemical discharge

To guarantee the correct physical and chemical quality of the water before it is discharged into the receiving environment, both plants have waste water treatment plants and a network for collecting all liquid effluents, with exhaustive monitoring of the physical and chemical parameters.

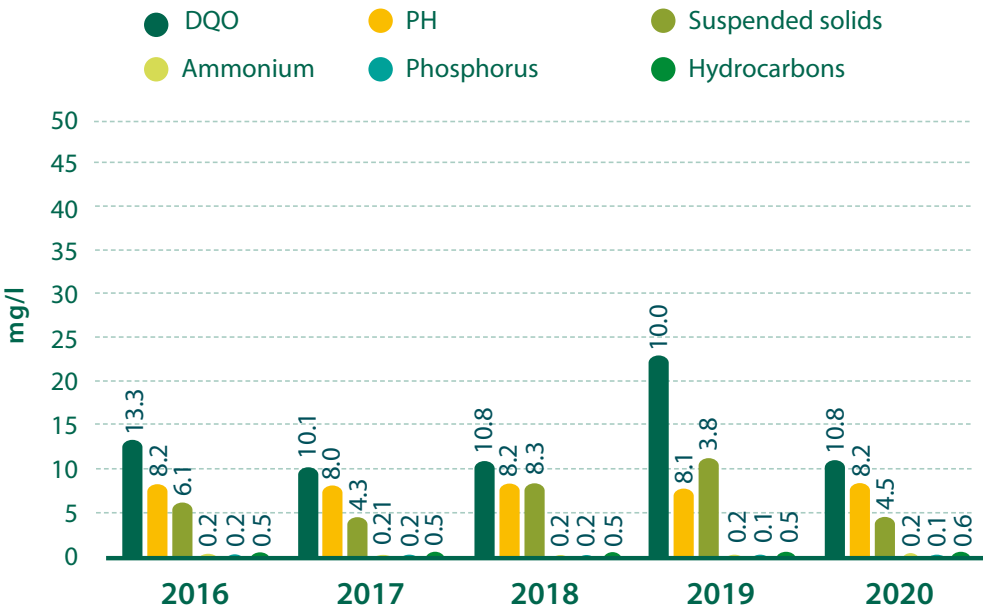
This discharge is also regulated by the river custody authority Confederación Hidrográfica del Tajo by means of the corresponding authorisation. Samples are taken monthly by a Control Entity for analysis and verification of compliance with the applicable limits.

The following graphs show the evolution of the main parameters limited by their discharge authorisations, which are sent monthly to the Tagus Hydrographic Confederation.

PHYSICO-CHEMICAL DISCHARGES ALMARAZ NPP



PHYSICO-CHEMICAL DISCHARGES TRILLO NPP



Radiological emissions from liquid and gaseous effluents

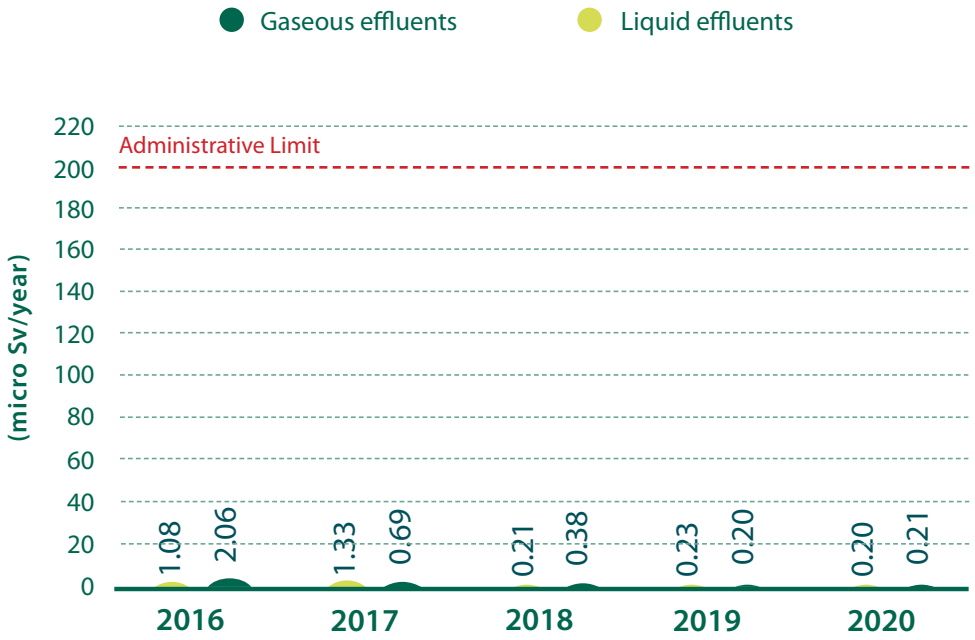
External radiological emissions, both atmospheric and liquid, are limited in the Operating Permit and are regulated in accordance with the standards established by the Nuclear Safety Council.

The external doses due to liquid and gaseous effluents from both plants remain at very low values, clearly lower than those established in the limitation imposed by the Nuclear Safety Council and reflected in the corresponding EDCM's. These doses are negligible compared to those originating from the natural radiation background, the attached graphs showing the interannual evolution. These doses are negligible compared to those originated by the natural radiation background, the accompanying graphs showing the interannual evolution.

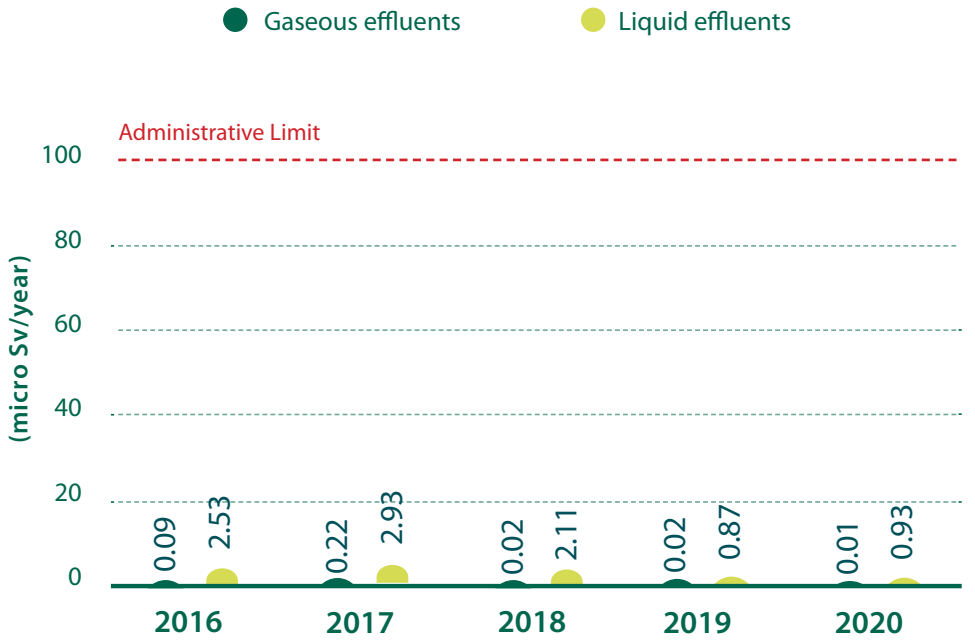
The natural radiation background is in the order of 700 a1200 µSv/year in the vicinity of the sites, while the doses deriving from plant operation are between 50 and 100 times lower for the most unfavourable situation. Realistic dose calculations, which take into account Human Geography and the real existing activities in the vicinity, yield values even lower than those mentioned, this making the contribution to environmental radiation from the operation of the plants negligible.

The plants have Environmental Radiological Surveillance Programmes aimed at detecting possible radiological impacts on the environment.

EXTERNAL DOSE FROM EFFLUENTS ALMARAZ NPP



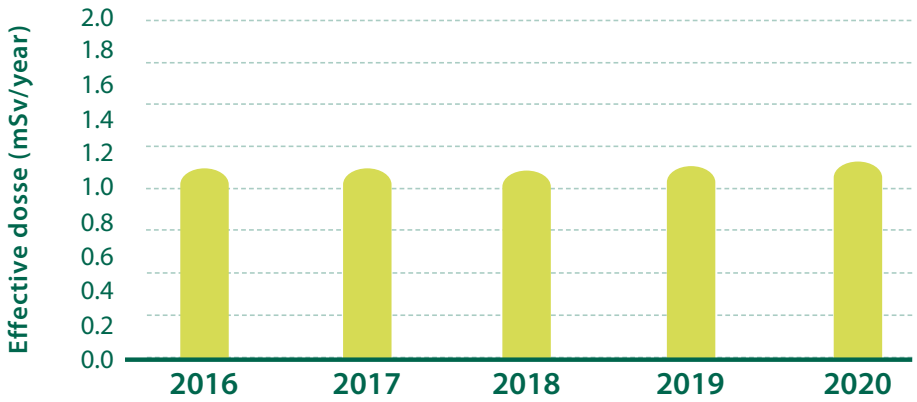
EXTERNAL DOSE FROM EFFLUENTS TRILLO NPP



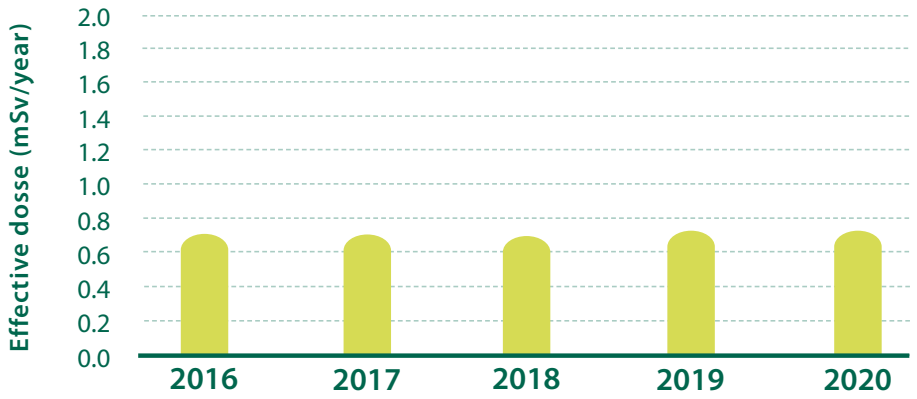
Measured doses in environmental monitoring programmes

The evolution of dose values measured in the area surrounding both plants is included in the corresponding environmental radiological surveillance programmes are as follows.

ALMARAZ NPP ENVIRONMENTAL RADIATION MONITORING AMBIENT DOSE



TRILLO NPP ENVIRONMENTAL RADIATION MONITORING AMBIENT DOSE



Waste generation

As a result of their activities, the Almaraz and Trillo Nuclear Power Plants generate hazardous, non-hazardous and low and intermediate level radioactive wastes (LILRW) and very low level radioactive wastes (VLLRW), which are identified, stored and managed in accordance with the legislation in force and the specific procedures of the Environmental Management System.

In addition to the wastes described above, high level radioactive wastes are generated during plant refuelling periods. Approximately one third of the fuel assemblies in the reactor vessel are removed for transfer to the spent fuel storage pools after replacement with fresh fuel.

High Activity Level Wastes

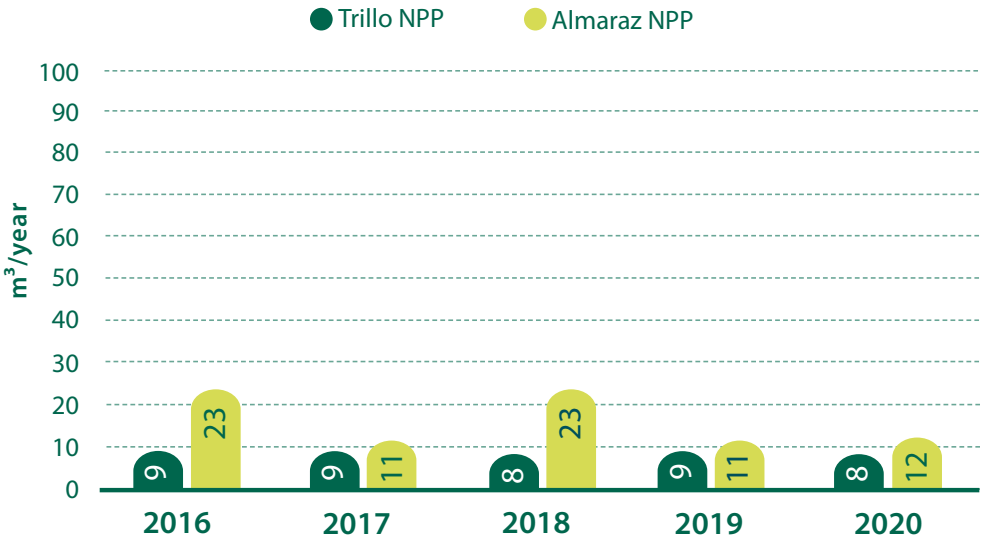
In 2020, a total of 100 spent fuel assemblies were removed from the reactors: 36 fuel assemblies from Trillo NPP and 64 assemblies from Unit I of Almaraz NPP, all having being replaced by new arrays. The volume occupied by the removed assemblies is approximately 20 m^3 between the two plants.

The spent fuel is stored inside the facilities in the corresponding pools located in the controlled zone. As of 31st December, 1,576 spent fuel assemblies were stored at Unit I of Almaraz NPP, 1,468 at Unit II and 528 at Trillo NPP. In addition, both plants have an Individualised Temporary Storage Facility (ITSF), which allows the retired assemblies to be stored dry inside dual-use storage-transport casks.

At the end of 2020, a total of 800 assemblies were stored in 36 casks at NPP Trillo and 160 spent fuel assemblies in 5-ENUN-32P casks at Almaraz NPP.

The graph shows the evolution over time of spent fuel generation at both plants. The higher values corresponding to NPP Almaraz are due to the periodic coincidence of the refueling outages of its two Units in the same year.

GENERATION OF HIGH ACTIVITY RADIOACTIVE WASTE
(FUEL REMOVED FROM REACTOR)



Very Low Level and Low and Intermediate Level Waste

This type of waste arises as a result of the operation and maintenance of the plants, in the activities carried out in the controlled area. They include, on the one hand, spent coolant filtration and purification media and, on the other hand, materials from the maintenance of the installation, coveralls and protective clothing.

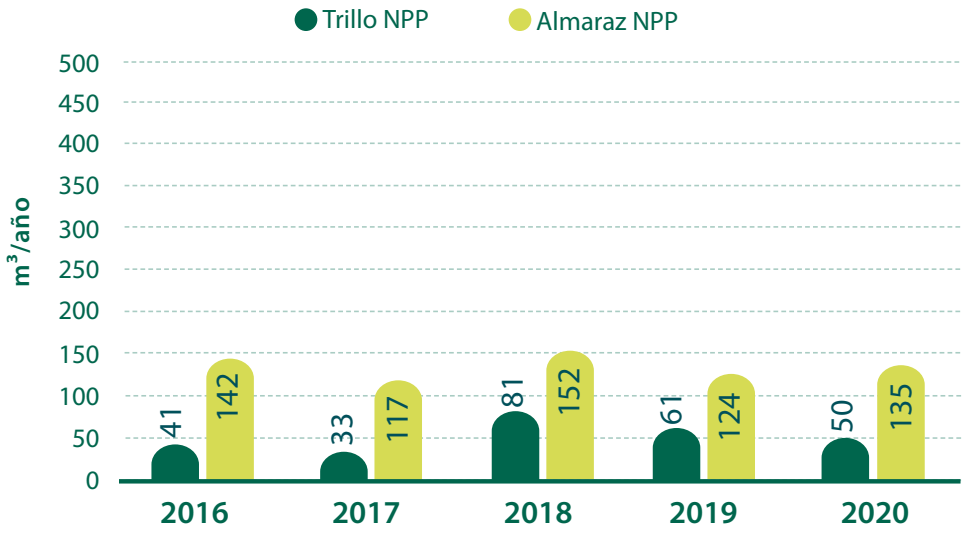
Depending on the specific activity (concentration) of their radionuclides, radioactive wastes may be classified as Low and Intermediate Level Waste (LILW) or Very Low Level Waste (VLLW). All these wastes have been optimised since the beginning of operation of the Plant. State-of-the-art working procedures and facilities for the treatment and conditioning of these wastes have been implemented, and an environmental culture has been established among all the plant's workers for the reduction, segregation and recycling (where possible) of all waste materials. Thanks to the segregation measures implemented in recent years, the content of radioactive isotopes in the waste is being reduced and its concentration lowered, changing its classification.

Low and Intermediate Level Wastes are conditioned at the plants themselves in order to make them suitable for final disposal. Each type of waste, depending on its origin, has a specific conditioning process, the main streams being the following:

- **Heterogeneous solids**
- **Dried, from evaporator concentrate**
- **Pressable solids**
- **Depleted ion exchange resins**
- **Depleted Filters**
- **Evaporator concentrates**

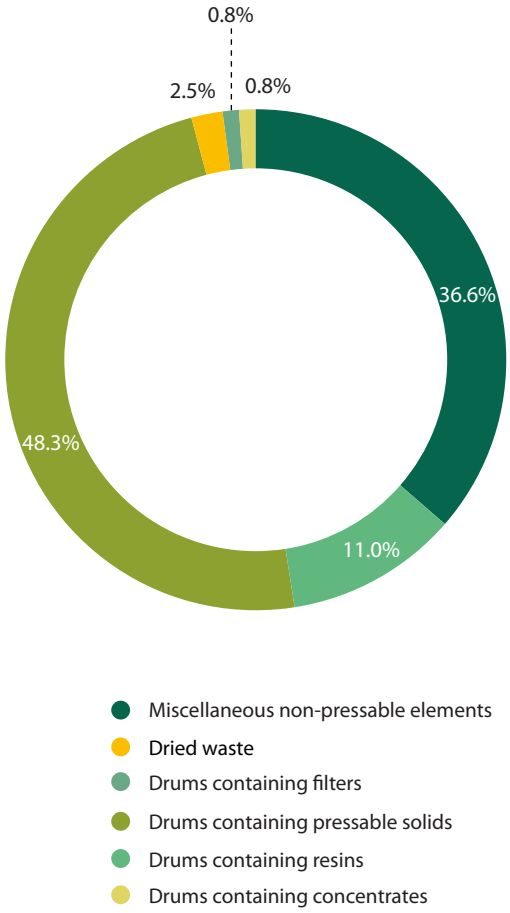
In 2020, 28.38 m^3 of low and intermediate level waste (LILW) and 106.34 m^3 of very low level waste (VLLW) were generated at the Almaraz plant. In the case of the Trillo plant, 39.38 m^3 and 10.56 m^3 respectively. The graph shows the overall evolution of the production of these wastes.

GENERATION OF LOW AND INTERMEDIATE RADIOACTIVE WASTE, AND VERY LOW ACTIVITY



The diagram shows the proportional distribution of the different categories.

DISTRIBUTION OF LOW AND INTERMEDIATE RADIOACTIVE WASTE, AND VERY LOW ACTIVITY GENERATED IN 2020 (BOTH ALMARAZ & TRILLO)



Once conditioned in order to make them suitable for disposal, Low and Very Low Level Wastes are temporarily stored inside the plants and periodically removed by the public company in charge Empresa Nacional de Residuos Radiactivos (ENRESA) to the facilities it has at the El Cabril site (Córdoba).

During 2020, several shipments were made to these facilities from each plant, with 117.48 m^3 from Almaraz NPP and 46.20 m^3 from Trillo NPP.

Hazardous and Non-Hazardous Waste Generation

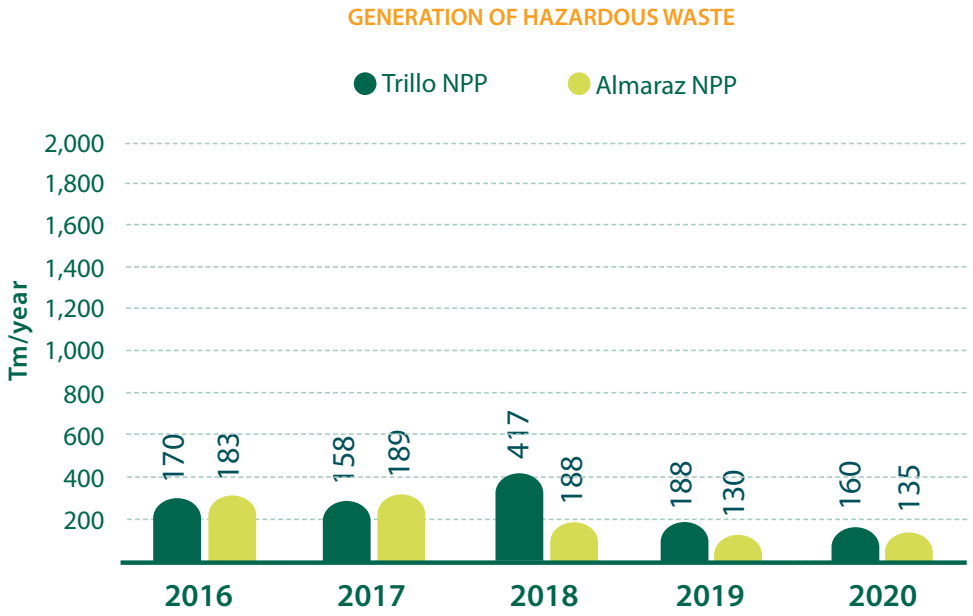
Non-radioactive industrial waste is also generated, mainly as a consequence of the preventive maintenance of conventional machinery and equipment: replacement of oils, equipment cleaning sludge, filters, packaging, etc. All these activities give rise to the generation of different categories of Hazardous and Non-Hazardous Waste.

On an extraordinary basis, waste may additionally be generated from the execution of works and design modifications, and non-standard corrective maintenance activities, which cause fluctuations in the historical series.

In line with the commitment to minimise the waste generated, selective collection is carried out in order to separate the recoverable materials contained in the waste, so that waste that cannot be reused and/or recycled is sent for disposal (landfill). To this end, plant personnel receive training and information on the segregation at source of the waste generated.

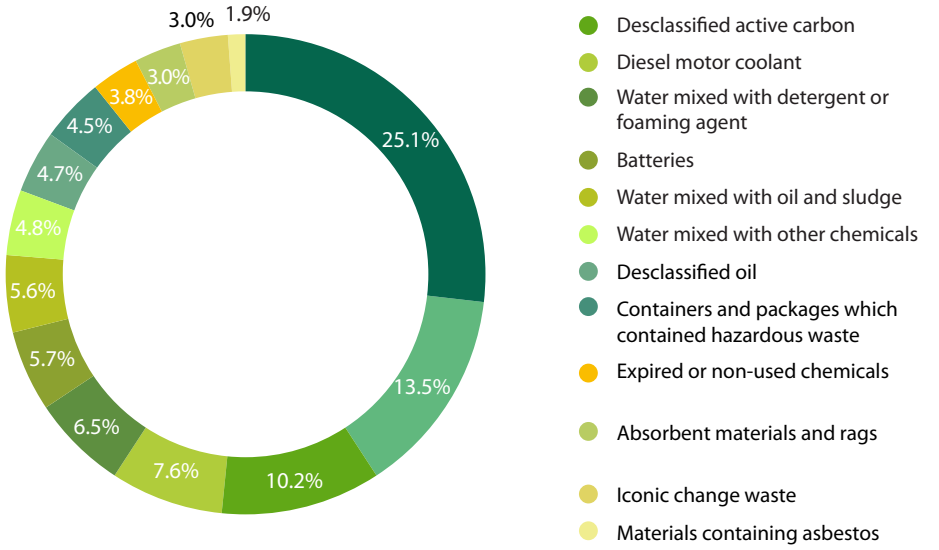
Hazardous waste management is carried out in accordance with the guidelines established in the corresponding Hazardous Waste Minimisation Studies for each of the plants.

The evolution of **Hazardous Waste is shown** below:



The following graph shows the relative share of the different hazardous waste typologies in 2020.

DISTRIBUTION OF MAIN HAZARDOUS WASTE GENERATED IN 2020 (BOTH ALMARAZ & TRILLO)

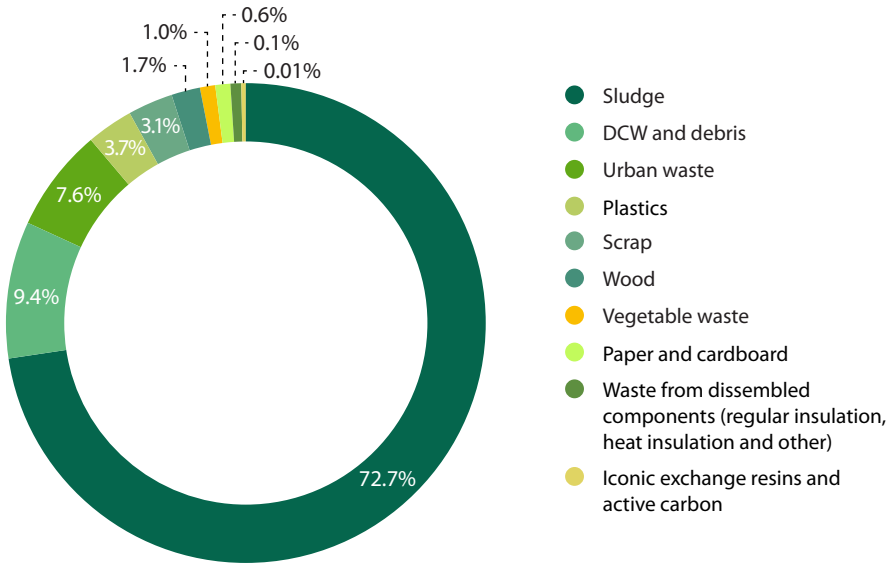


With regard to **Non-Hazardous Waste,** it should be noted that the category most sensitive to the extraordinary activities carried out at the plant is the generation of rubble and construction and demolition waste (CDW), due to the design modification works that took place during the year.

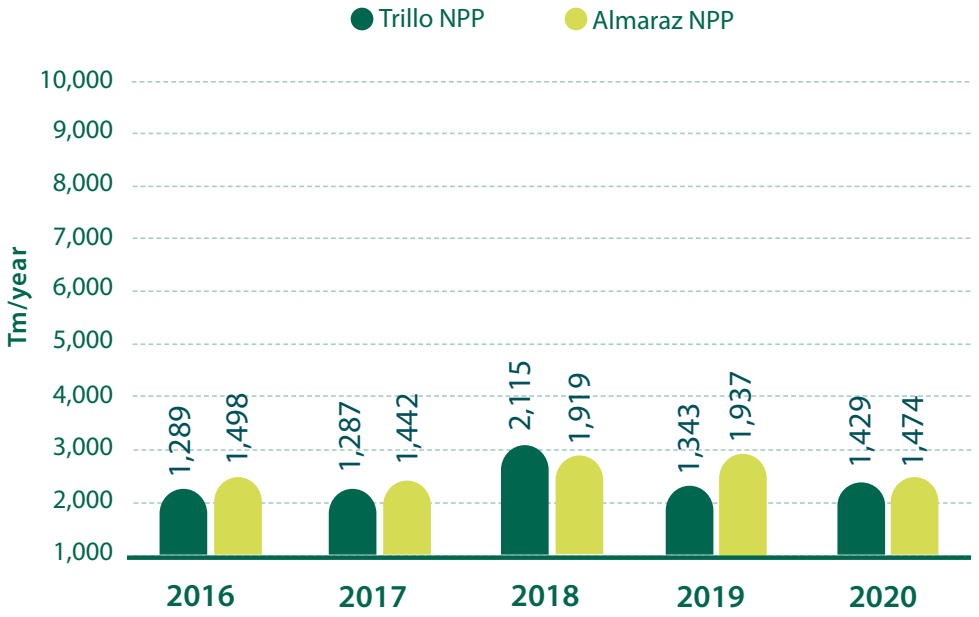
Another important contribution is the generation of sludge from the pretreatment of feedwater at both plants, which has been consolidated as a routinely generated non-hazardous waste following the start-up of the new pretreatment plants at NPP Almaraz and Trillo in 2012, as shown proportionally in the following graph, compared to the rest of the categories.

The year-on-year evolution of Non-Hazardous Waste is shown below.

DISTRIBUTION OF NON-HAZARDOUS WASTE GENERATED IN2020
(BOTH ALMARAZ & TRILLO)



GENERATION OF NON-HAZARDOUS WASTE



Biodiversity

The **Almaraz Nuclear Power Plant** is located in the region of Campo Arañuelo (Cáceres) in Extremadura, in an area bounded by the rivers Tiétar and Tagus.

The surface area occupied by Almaraz NPP covers an area of 428 hectares, excluding those flooded by the Arrocampo reservoir. Of this land, approximately 1,123,000 m^2 are used for the development of the activity, corresponding to the different industrial areas of the plant. The rest of the land is mostly forest land.

The climate of the area is continental, with scarce and irregular rainfall, which makes the environment an area of pastures rather than crops, with pastureland and irrigated land being the two most common forms of land use. The area is close to a large number of environmental protected areas, including the Monfragüe National Park LIC (Site of Community Importance) and its ZEPA (Special Protection Area) and Environment Pastures alongside the Arrocampo.

The **Trillo Nuclear Power Plant** is located in Castilla La Mancha, in the Alcarria region (Guadalajara), next to the course of the Tagus River.

The plant covers an area of approximately 554 hectares. Of this land, approximately 870,000 m^2 are used for the development of the activity, corresponding to the different industrial areas of the plant, the rest being mostly forest land.

The climate of La Alcarria is continental Mediterranean, typical of the inland areas of the Iberian Peninsula, with strong temperature fluctuations, very hot summers and very cold winters with little rain and the presence of frosts. The plant site is located in the vicinity of the LIC and ZEPA in the Alto Tajo Natural Park.

Flora and fauna

In accordance with the precautionary principle, NPPs Almaraz-Trillo is committed to knowledge of the environment by participating in different studies to learn about the behaviour of species in the habitats in which it operates through the Agreement with the Ecology Department of the Faculty of Science of the University of Extremadura (UEX), for scientific-technical work relating to the monitoring of spatio-temporal structures and successions of plant populations in the environment of Almaraz NPP and of the bird populations that use the Arrocampo reservoir. Almaraz and the bird populations that use the Arrocampo reservoir.

It is also worth mentioning the collaboration with the University of Extremadura for the ornithological study of the Arrocampo ZEPA and the surrounding area for the implementation of various projects for improvement and local development.

Furthermore, from the beginning of the filling of the Arrocampo reservoir in 1978, a Monitoring and Control Plan was designed which included limnological and ichthyological studies. Since then, these studies have been carried out uninterruptedly to date along the Arrocampo and Torrejón reservoirs, in accordance with the corresponding authorisations.

More information on these studies is given in the section on Environmental Monitoring Programmes.

LEGISLATION

The facilities that make up the Almaraz-Trillo A.I.E. NPPs are subject to compliance with a wide range of regulations, in addition to administrative authorisations for the performance of their activities, waste water discharges, atmospheric emissions, waste generation, etc.

Centrales Nucleares Almaraz-Trillo A.I.E. guarantees the legal compliance of its installation through the application of a systematic approach that ensures the identification of and compliance with the applicable environmental legislative requirements.

The Environmental Management System has a computer tool and legislative database, updated monthly, which includes all the legal or voluntary provisions of a conventional type typified in the scope of applicability at Almaraz-Trillo NPPs, with the corresponding detailed requirements extracted.

The legislative compliance verification process takes place every six months, the result of which is reported to the E.I.A. Management in the Environmental Committees and in the Annual Management Review of the Environmental Management System.

In the field of environmental legislation, of particular relevance to our activities is the emergence of the following legislation in 2020:

- **Royal Decree 553/2020** of 2 June, which regulates the shipment of waste within the territory of the State.
- **Royal Decree 646/2020** of 7 July, regulating the disposal of waste in landfills.
- **Royal Decree 731/2020** of 4 August amending Royal Decree 1619/2005 of 30 December on the management of end-of-life tyres.
- **Amended text of Annexes A and B of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR 2019) with Amendments adopted during the 100th, 101st, 102nd, 103rd and 104th sessions of the Working Party on the Transport of Dangerous Goods of the United Nations Economic Commission for Europe (UNECE).**
- Commission **Delegated Regulation (EU) 2020/217** of 4 October 2019 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures, and correcting that Regulation.
- Commission **Regulation (EU) 2020/171** of 6 February 2020 amending Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- Commission **Regulation (EU) 2020/1149** of 3 August 2020 amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals as regards diisocyanates.
- **Order (Extremadura) of 22 May 2020** establishing the High Forest Fire Danger Season of the INFOEX Plan, regulating the use of fire and activities that may cause fires during this season in 2020.
- **Decree (Extremadura) of 9 October 2020** establishing the Low Forest Fire Danger Period of the INFOEX Plan, regulating the uses and activities that may give rise to fire risk and developing the general prevention measures and self-protection measures defined in the PREIFEX Plan.
- **Decree 6/2020 (Castilla-La Mancha)**, of 27 January, of the Consejería de Desarrollo Sostenible (Sustainable Development Counsel), for the fisching periods and closures in 2020.
- **Law 2/2020**, of 7 February, on Environmental Assessment of Castilla-La Mancha.
- **Royal Decree-Law 23/2020**, of 23 June, approving measures in the energy sector and in other areas for economic recovery.

ENVIRONMENTAL AUDITS

Centrales Nucleares Almaraz-Trillo A.I.E. has had its Environmental Management System certified by AENOR since 2005, in accordance with the international standard UNE-EN-ISO-14001:2015. From 21st to 24th September 2020, the Environmental Management System Certification Renewal Audit was carried out by AENOR INTERNACIONAL S.A.U. The auditors reviewed the Almaraz and Trillo plants and the activities carried out at the Central Offices, with a final result of "Compliant Assessment".

The Environmental Management Certificate, after fifteen years of validity, has been renewed in 2020 with validity until 28/11/2023, thus recognising the involvement of the Management and the collective effort of the entire Organisation, carried out throughout these years. Each milestone of this nature, however, must be understood as a new starting point towards a better environmental performance of the company.

Previously, in May, the internal audit of the system, which forms part of the verification process required by the system, had been carried out without any non-conformity detected.

The Nuclear Safety Council carried out a number of inspections at both plants on various environmental matters.

IQNet

THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

AENOR has issued an IQNet recognized certificate that the organization:

CENTRALES NUCLEARES ALMARAZ-TRILLO, A.I.E.

Oficinas Centrales: AV MANOTERAS, 46 BIS, EDIFICIO DELTA NOVA 6 28050 - MADRID

Central Nuclear de Almaraz: CR N-V, KM 199 10350 - ALMARAZ DE TAJO (CACERES)

Central Nuclear de Trillo: CERRILLO ALTO, S/N 19450 - TRILLO (GUADALAJARA)

has implemented and maintains a

Environmental Management System

for the following scope:

Nuclear power generation.

which fulfils the requirements of the following standard

ISO 14001:2015

First issued on: 2005-11-28 Last issued: 2020-11-28 Validity date: 2023-11-28

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Registration Number: ES-2005/0519

Alex Stoichitoiu
President of IQNet

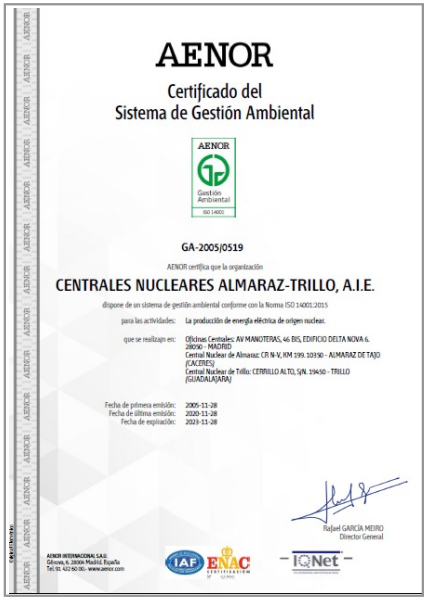
Rafael GARCIA MEIRO
Chief Executive Officer

AENOR

IQNet Partners*:

AENOR Spain AFNOR Certification France APCER Portugal CCC Cyprus CISQ Italy CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany EAGLE Certification Group USA FCAV Brazil FONDONORMA Venezuela ICONTEC Colombia Inspecta Sertifiointi Oy Finland INTECO Costa Rica IRAM Argentina JQA Japan KFQ Korea MEITEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland RYCE-SIGE México PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia SIRIM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey TUQS Serbia

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com



AENOR

Certificado del
Sistema de Gestión Ambiental

AENOR

Gestión Ambiental

ISO 14001

GA-2005/0519

AENOR certifica que la organización

CENTRALES NUCLEARES ALMARAZ-TRILLO, A.I.E.

dispone de un sistema de gestión ambiental conforme con la Norma ISO 14001:2015

para las actividades: La producción de energía eléctrica de origen nuclear.

que se realizan en: Oficinas Centrales: AV MANOTERAS, 46 BIS, EDIFICIO DELTA NOVA 6. 28050 - MADRID.
Central Nuclear de Almaraz: CR N-V, KM 199. 10350 - ALMARAZ DE TAJO (CACERES)
Central Nuclear de Trillo: CERRILLO ALTO, S/N. 19450 - TRILLO (GUADALAJARA)

Fecha de primera emisión: 2005-11-28
Fecha de última emisión: 2020-11-28
Fecha de expiración: 2023-11-28

Rafael GARCIA MEIRO
Director General

AENOR INTERNACIONAL S.A.U.
Génova, 6. 28004 Madrid. España
Tel. 91 432 60 00.- www.aenor.com

IAF ENAC

IQNet

ENVIRONMENTAL MONITORING PROGRAMMES

The Almaraz and Trillo plants have historically carried out various environmental surveillance programmes aimed at verifying the absence of significant environmental impacts as a result of their activities, in both the radiological and conventional fields.

The content of these programmes is set out below:

Studies of the Almaraz power plant environment

Basically, two environmental studies are being carried out in the area surrounding the Almaraz power plant, the scope of which includes the Arrocampo and Torrejón reservoirs:

- Ecological study of the aquatic ecosystem.
- Thermal study of reservoirs.

These monitoring studies are far-reaching due to the fact that the Arrocampo reservoir should also be considered as another system of the plant, since it was built exclusively for industrial use for cooling Almaraz NPP and is therefore used for its final heat dissipation, and it is hence necessary to have the most precise knowledge possible of its characteristics in terms of its capacity to perform its cooling function, both in the short and long term. This requires intensive control and monitoring of both physico-chemical parameters, especially temperature, and biological parameters.

The main characteristics of the Arrocampo reservoir are as follows:

- Capacity of 35.5 hm^3.
- Very elongated shape, with a length of more than 10 km and a surface area of 7.73 km^2, with a predominance of shallow waters.

Divided into two parts by a thermal separation screen that forces the cooling water to travel approximately 25 km the length of the reservoir to allow it to cool down before reaching the cooling intake again.

The natural water supply to the Arrocampo reservoir is very low, so it is fed mainly by pumping water from the Tagus river.

The water fed into the Arrocampo reservoir from the Torrejón reservoir has a high nutrient load, particularly phosphorus and nitrogen.

The contribution of these nutrients, together with the effect of the water temperature, means that an important biomass of planktonic organisms develops in Arrocampo, whose metabolic processes, which influence the quality of the water, must be controlled and monitored.

Ecological Study of the Arrocampo and Torrejón Reservoirs

The monitoring of the aquatic ecosystems of both reservoirs consists of two studies carried out independently and in a coordinated manner:

- Limnological study.
- Ichthyological study.

The sampling and analysis programme of the limnological survey consists of the sampling and measurement points and is carried out with the frequency indicated in the table below:

BASIN	NUMBER OF SAMPLING POINTS	
	LIMNOLOGICAL STUDY	ICHTHYOLOGICAL STUDY
ARROCAMPO	7	9
TORREJÓN	8	10
VALDECAÑAS	1	-
ESSENTIALS	1	-
SAMPLING/MEASURING FREQUENCY	MONTHLY/SEASONAL	QUARTERLY

These studies determine the state of the ichthyofauna, and the diversity and abundance of species, taking into account their evolution over time. From the limnological point of view, a detailed monitoring of the state of the plankton is carried out, together with a wide variety of physicochemical variables.

The results obtained in both studies, which are submitted to the Administration, indicate the existence of a dynamic equilibrium in the ecosystem constituted by the Arrocampo reservoir, which is fundamentally affected by the power at which the plant operates, the physical-chemical characteristics and flow of the inflow from Torrejón, and the meteorological conditions of the area. The equilibrium conditions has not undergone any significant changes in recent years. As regards to the Torrejón reservoir, its zoning is conditioned, in its initial section, by the turbined flow from the deep waters of the Valdecañas reservoir, in its middle section by the recirculated flow from the Arrocampo reservoir and in its final section by the flow pumped from the Tiétar river.

Thermal study of the reservoirs of Arrocampo and Torrejón

Exhaustive monitoring of the evolution of the water temperature of the Arrocampo and Torrejón reservoirs and the evaluation of the measured values is carried out in order to know the thermal impact that the operation of the plants has on the water bodies.

There are also systems for continuous measurement and recording of temperature, pH value, dissolved oxygen and water flow in the Arrocampo spillway, in order to verify the fundamental characteristics of the discharge from Arrocampo.

In compliance with the conditions of the water use concession, the most relevant information on the thermal status of the reservoirs is sent monthly to the Tagus Hydrographic Confederation as the competent body of the Administration, so that it has continuous knowledge of this status.

Study of the surroundings of the Trillo power plant

The environmental study of the aquatic ecosystems around the Trillo Power Station currently consists of monitoring the Tagus river, into which water is discharged from the plant, and the Entrepeñas reservoir, located downstream, in the vicinity of the plant.

The scope of the study includes the assessment of water quality from the physico-chemical point of view and of the content of metals and other undesirable substances, as well as the characteristics of other elements of the aquatic ecosystem such as sediments, benthic algae, phyto- and zooplankton and ichthyofauna.

Water is taken from the Tagus river from the waters dammed by the Ermita weir, built to ensure a constant level that allows the pumps to operate. The water is discharged back into the river, after fulfilling its cooling function, immediately downstream of the weir by means of a diffuser system that allows complete mixing with the flow of the river.

The plant is located at the far end of the Upper Tagus area, where the river flows with considerable variations in flow due to the lack of regulation upstream, which causes floods, albeit minor, with a certain frequency, coinciding with episodes of intense rainfall, which affects the quality of the water due to the dragging of solids at such times.

The water quality of the Tagus in the area of the power station is generally good and can be classified as oligotrophic.

The Entrepeñas reservoir is located downstream in the vicinity of the power station and its main characteristic is its low level in recent years, with significant variations in its level throughout the year. The main use of the water in the Entrepeñas reservoir is hydroelectric production and irrigation, as, together with the Buendía reservoir, it constitutes the reserve for the Tajo-Segura water transfer.

The sampling and analysis programme consists of 4 sampling points located both upstream and downstream of the Ermita weir, including a point located in the Entrepeñas reservoir, taking samples of water on a monthly basis, and sediment, benthic algae, phyto- and zooplankton and ichthyofauna on a quarterly basis.

Environmental Radiological Monitoring

The Almaraz and Trillo plants carry out continuous and strict control and surveillance of their own radioactive effluent releases. Nevertheless, in order to experimentally verify the impact that radioactive effluents might have on the environment, the plants carry out an Environmental Radiological Monitoring Programme (ERSP) through the direct measurement of radiation levels in the vicinity of the facilities and of the radioactive substance content of a series of environmental samples collected at a set of sampling points.

All abiotic elements and living beings representative of the ecosystems linked to all natural environments around the plants (aerial, terrestrial and aquatic) are fully monitored.

The goodness of the analytical results is ensured by the parallel performance of a quality control programme by another laboratory independent from the main laboratory and by the performance of an independent surveillance programme (PVRAIN) carried out by the Nuclear Safety Council.

Furthermore, in the case of the Almaraz plant, a collaboration agreement has been entered into with CEDEX for this official organisation, which reports to the Ministry of Public Works, to carry out independent monitoring of the aquatic environment around the plnt. The Regional Government of Extremadura also carries out independent radiological surveillance through the University of Extremadura.

The results obtained during the year 2020 at both plants indicate that the radiological status of the surrounding ecosystems has not undergone significant variations during the year, with the natural background values remaining unchanged, confirming the absence of environmental effects due to the release of radioactive effluents, a fact to be expected given the practically insignificant radiological relevance of the releases carried out by both plants.

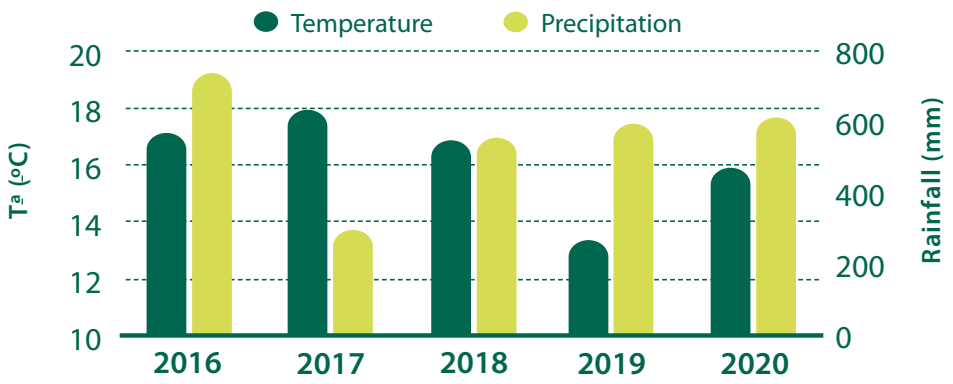
Meteorological Studies

The Almaraz and Trillo plants have weather stations that continuously measure and record the most significant parameters such as temperature, precipitation, wind direction and speed, humidity and solar radiation. Meteorological information is of special relevance for various applications related to the environment, and a very good characterisation of the climate at the sites is available after more than thirty years of monitoring.

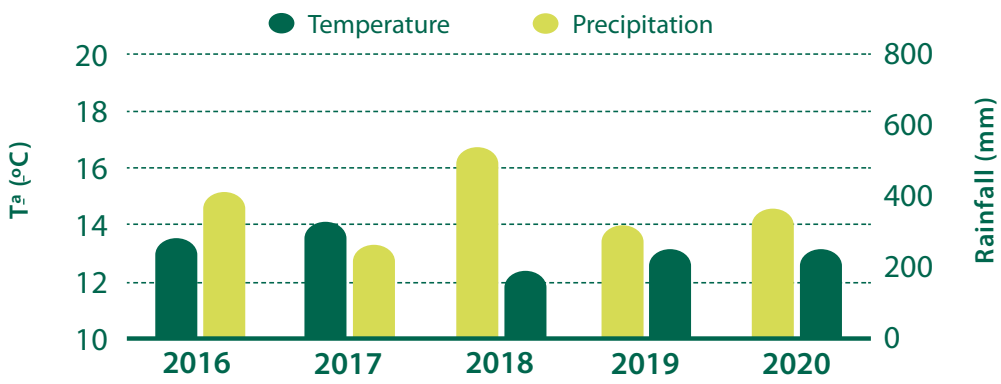
The stations have the necessary redundancies to ensure the continuous availability of meteorological information.

Below are the mean temperature and total precipitation values recorded during the last years in each plant, as well as the respective frequency wind roses for each direction.

ALMARAZ NPP - METEOROLOGY AT THE SITE AVERAGE TEMPERATURE AND TOTAL PRECIPITATION

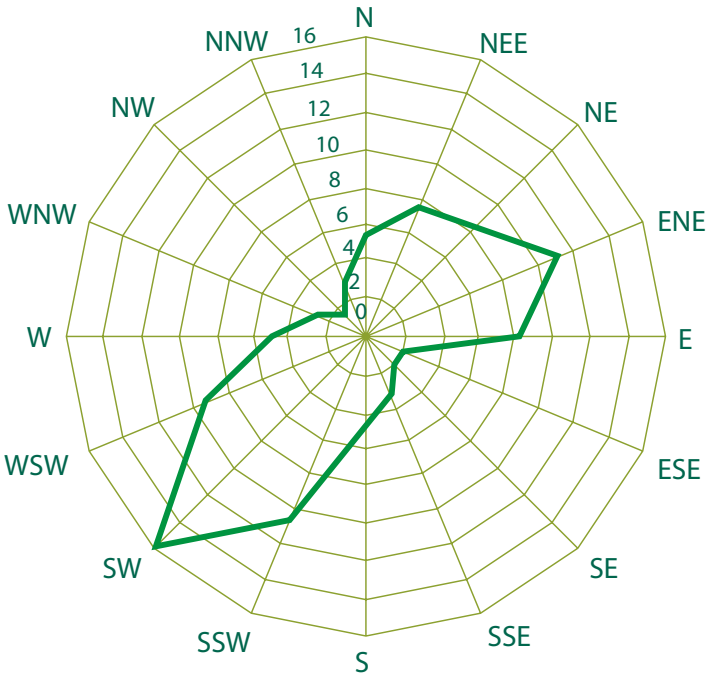


TRILLO NPP - METEOROLOGY AT THE SITE AVERAGE TEMPERATURE AND TOTAL PRECIPITATION



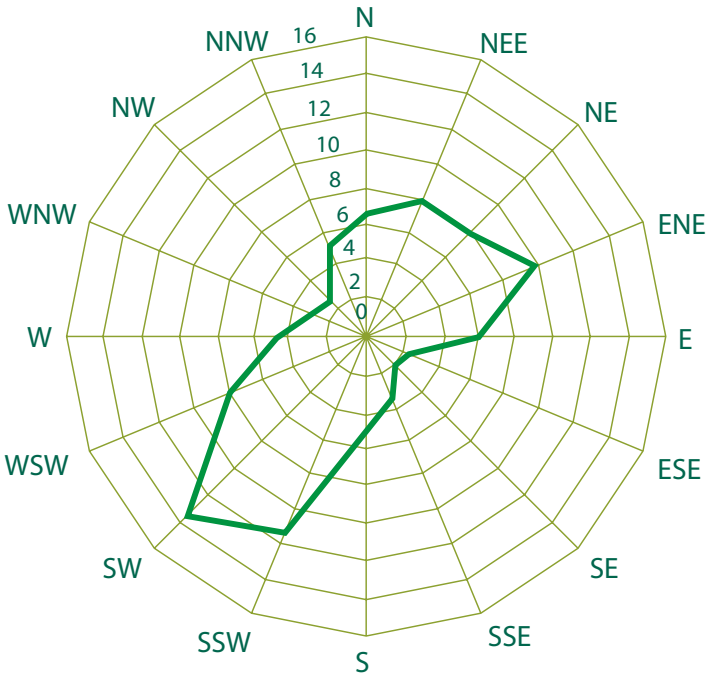
COMPASS ROSE ALMARAZ NPP

AT 100 METERS. YEAR 2020



Calm Weather: 4.03%

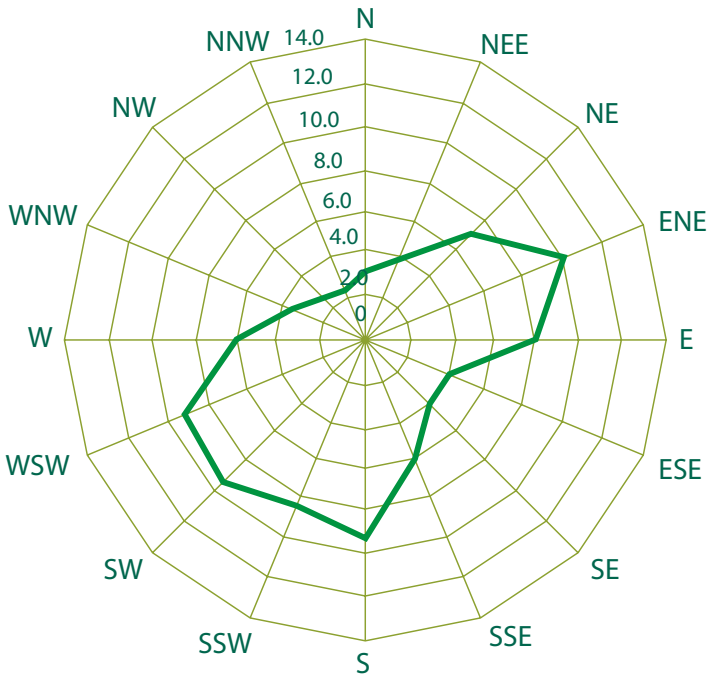
1976-2020 PERIOD



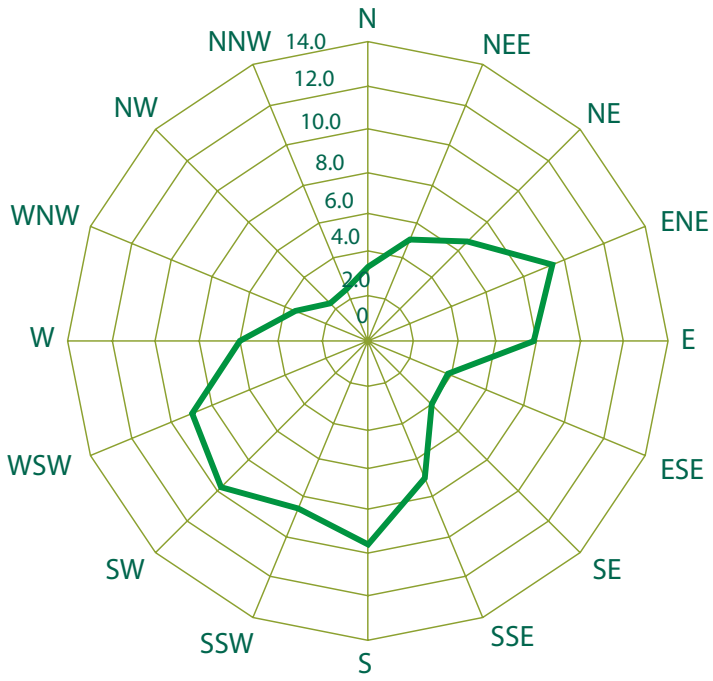
Calm Weather 0.93%

COMPASS ROSE TRILLO NPP

YEAR 2020



1987-2020 PERIOD



STAKEHOLDER RELATIONS

One of the fundamental pillars of the Environmental Management System is communication. The actions in this area, focused on disseminating our actions and raising awareness in environmental matters, are aimed at both employees and other publics outside the organisation but linked to its activity: official bodies, neighbours, associations, the media and the general public: all these agents are the so-called interested parties.

Local Corporations

CNAT continues to maintain fluid and dynamic relations with the institutions that have competences in the scope of action of the plants, holding half-yearly informative meetings (two in each plant), participating in the Information Committees convened by MITERD, organising meetings with the mayors of the surrounding areas to bilaterally study the relations of the plants with each municipality and the possible channels of collaboration, as well as institutional meetings with provincial and autonomous community organisations.

In the pandemic year 2020, the six-monthly reporting to the mayors of the surrounding municipalities and the media has been provided by telematic means. This information details all the data concerning the results of the operation and provides updates on future plans and projects. Also, and always in compliance with the measures established by the health authorities to prevent COVID 19 infection, 163 meetings were held with the mayors of the areas surrounding both plants. Likewise, this year the company has participated in the Almaraz Information Committee organised in virtual format by the official bodies responsible for nuclear energy, providing the information required at all times.

The media

An intense relationship is also maintained with the media based on truthfulness, transparency and our permanent availability to meet their demands for information. During 2020, 14 news items were distributed, providing information on the most significant events at the facilities, related to various plant operation and maintenance issues (refuelling, drills, etc., environmental issues and other information of general interest).

Public

Over the years, the Information Centres at the Almaraz and Trillo plants have become consolidated as effective channels of communication with society.

Thanks to the diversity of audiovisual and exhibition resources that have been provided, nuclear energy and in particular the characteristics of nuclear installations and their relevant environmental aspects are significantly better known to the general public.

CNAT continues to issue publications, both periodicals and specific publications. During 2020, several publications have been made available for general interest, most of them available on the CNAT website (www.cnat.es).

In addition, the organisation has a corporate blog, www.energiaymas.es, to inform the public about the activities carried out at our facilities and in the municipalities in its areas of influence.

Nearby environment

The Almaraz and Trillo nuclear power plants represent an important socio-economic reference point, as they are an unquestionable source of jobs and wealth in their areas of influence. The commitment of the plants to their neighbouring communities is materialised in the support of initiatives that have an impact on improving the quality of life and the economic and social development of their regions. In 2020, various initiatives have been developed, of which we mention the most significant ones carried out in the environmental field:

- Framework Collaboration Agreement with the University of Extremadura, to carry out technical and scientific projects. In addition, the company also collaborates with the Department of Chemical and Energy Engineering of the UEX, to carry out scientific and technical work related to the analysis of the retention of radioactive isotopes by activated carbons prepared from indigenous waste and the reuse of activated carbons present in the CNA filters for the treatment of cooling circuit water.

- Agreement with the Ecology Department of the Faculty of Science of the UEX, to carry out scientific-technical work relating to the monitoring of spatio-temporal structures and successions of plant populations in the surroundings of CNA and of the bird populations that use the Arrocampo reservoir.
- Collaboration with the University of Extremadura for the ornithological study of the Arrocampo ZEPA and the surrounding area to carry out various improvement and local development projects.
- Collaboration agreement with the UEX Chair of Energy and Environment, to encourage university students to get closer to the professional world, as well as their integration, once they have finished their studies, through scholarships that enable contact with the business world.
- Collaboration Agreement with Toril Town Council to promote visits to the Biosphere Reserve Interpretation Centre: Portico de Monfragüe.
- Collaboration with local councils in the Almaraz NPP area for the implementation of various improvement and local development projects.
- Agreement with the Irrigation Community of the of the Irrigation Plan of nearby Valdecañas.
- Various collaborations with schools and associations around Trillo NPP in activities related to the environment (beekeeping observatories, workshops, tours of natural environments).
- Agreement with the Mancomunidad Riberas del Tajo (Tagus river banks association), to carry out programmes and actions in the areas of economic, social, cultural and environmental development.
- Agreement with the Mantiel Town Council to publicise its Beekeeping Observatory.

ALMARAZ NPP
Apdo Correos, 74
10300 Navalmoral de la Mata
Cáceres
(+34) 927 54 50 90
ci.almaraz@cnat.es

TRILLO NPP
Apdo Correos, 2
19450 Trillo
Guadalajara
(+34) 949 81 79 00
ci.trillo@cnat.es

ALMARAZ - TRILLO NPP AIE
Avda. de Manoteras, 46-BIS
Edificio Delta Nova 6. 5ªPlanta
28050 Madrid
(+34) 91 555 91 11
comunicacion@cnat.es