

The background of the cover features a blurred image of a wind turbine in a field of green grass and red poppies under a clear blue sky with a few white clouds. The turbine is white with red and white striped accents on its blades. The foreground is dominated by several bright red poppies in various stages of bloom, with green stems and leaves. Two overlapping circles are positioned in the upper left quadrant: a white circle on top and a black circle below it. The text is placed within these circles.

*edp* renováveis

Report of  
Environmental  
Activities

## Introduction

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EDPR, as a global leader in the renewable energy sector, is committed to protect the environment, complementing its strategy of fighting against climate change with a responsible management of the environment along the whole value chain.

Wind and solar power are two of the most environmentally friendly ways of producing energy, and even though EDPR's business inherently implies a positive impact on the environment, the Company continues to work on a daily basis to hold itself to a higher standard.

EDPR has an Environmental Policy which allows the Company to control, manage, communicate and to ensure the continuous improvement of its environmental performance throughout the entire value chain. This policy assumes specific commitments with the protection of the climate, the engagement with biodiversity and the preservation of natural resources:

- **Protect the climate** – EDPR produces energy based on renewable sources, contributing to the fight against climate change. Its core business activity inherently implies the reduction of GHG emissions. Wind and solar energy has zero carbon emissions and does not produce harmful SO<sub>x</sub>, NO<sub>x</sub>, or mercury emissions, protecting valuable air and water resources.
- **Engage with biodiversity** – The Company is aware of the sensitivity of natural ecosystems and the pressures affecting biodiversity and therefore assumes its commitment to contribute to the prevention or reduction of loss in biodiversity. EDPR's commitment towards biodiversity protection is focused on the main impacts of its activities such as migrating birds, bats and habitat fragmentation.
- **Preserve natural resources** – EDPR produces clean energy, water-free and with low waste generation. Wind energy uses no water for electricity generation, the water consumed is for human use, and the low waste generation is mainly due to turbines' operations & maintenance and administrative activities. Nevertheless, the Company promotes the efficient use of natural resources in its activities within the framework of a circular economy, also fostering a corporate culture of environmental responsibility and awareness, mainly through recycling initiatives.

All in all, as a responsible company, EDPR protects the environment by producing clean energy, and is committed to minimize any potential environmental impact of its operations by further protecting the wildlife surrounding its sites and promoting a culture of rational use of resources throughout its value chain.

The purpose of this report is to gather in one document all the environmental activities carried out by the Company in the last years organized in accordance with the three previously listed areas, depending on which they mostly contribute to.



Protect  
the climate

## EDPR works to reduce and compensate its CO<sub>2</sub> emissions

EDPR core business activity inherently implies the reduction GHG emissions. It is estimated that the Company's activities avoided the emission of 20 million tons of CO<sub>2</sub> per year in the last 5 years. In 2019, EDPR's emissions represented 0.2% of the total amount of emissions avoided and 72% of the total emissions were from the necessary electricity consumption by the wind farms.

EDPR continuously promotes initiatives that foster environmental best practices and has included in its Sustainability Roadmap 2019-2022 the objective to promote the transition of its fleet to electric vehicles. Also, in accordance with its commitment to sustainable development, in 2019, 100% of the emissions related to electricity consumption in windfarms and offices in all EDPR countries have been compensated by Certifications of Origin in Spain and Renewable Energy Certifications (RECs) in the US, obtained from the renewable energy generation.

Furthermore, alongside Reforest'Action, EDPR implemented a process to offset the annual CO<sub>2</sub> emissions generated by the transport of its employees. The initiative resulted in planting 2,000 trees near EDPR wind farms in France and Belgium. In addition, EDPR participated in a planting programme in Floresta de Portel, Brazil, to prevent deforestation, also providing training for the local communities in sustainable forest management.

Even though EDPR's activity is based on clean energy generation, it is conscious about promoting a culture of rational use of resources. In line with its Environmental Policy, EDPR is committed to reduce and compensate its CO<sub>2</sub> emissions, contributing to the protection of the environment.

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## EDPR awarded Clean Air Champion Award four years in a row

EDPR is proud to be a recipient of the "Clean Air Champion" award given by the Houston-Galveston Area Council for four years in a row, and continues to strive to be at the forefront of combating carbon emissions and traffic congestion.

EDPR, particularly in North America, works to offer a range of sustainable commuting options to meet the diverse needs of its employees. Employees' public transportation passes are reloaded automatically for free, and employees who cannot take advantage of public transportation are encouraged to find a carpool group through a membership on Nuride. Moreover, for employees who prefer to bike to work, the Houston office offers shower facilities and bike storage.

EDPR NA also has an internal sustainability marketplace to create further incentive for employees to reduce emissions. In it, employees record their sustainable commuting behaviours and receive points for their respective department. These points are spent as currency to hold "work breaks" or improve EDPR NA's Social Room with games, books and other entertainment.

Employees are also provided with flexible schedules, allowing them to work a compressed schedule or from home, which reduces CO<sub>2</sub> emissions and promotes work-life balance. EDPR will continue making efforts to encourage employees to take alternative commuting methods which are more environmentally friendly and help reduce traffic congestion.



Engage  
with biodiversity

## Conservation of habitats

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EDPR undertakes an environmental restoration project in Spain

When it comes to managing biodiversity, not everything comes down to initiatives that focus on the protection of wildlife; restoring plants and landscape integration are also key aspects in operational wind farms. EDPR has undertaken an environmental restoration program at several of its operational facilities in Spain with the goal of preventing erosion related problems as well as to improve the integration of its facilities into the landscape.

The works consisted in planting and hydro seeding activities, slope restructuring and improvements to drainage structures. The investment allowed to restore 16 hectares, plant over 24,000 specimens and conduct landscaping integration activities in an area of 2.8 hectares.

Once the plan's measures were finalized, the follow-up plan that was implemented allows monitoring how such measures evolve over time, which have so far yielded satisfactory results.

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EDPR collaborates in the prevention of forest fires in the area of the Sierra del Boquerón wind farm in Spain

Spain is one of the European countries with most forest fires. Taking preventive measures is key to prevent them, especially when taking into account that the impact of forest fires is expected to increase in the coming years as a result of climate change, both in intensity and in duration.

Aware of this issue, EDPR collaborates with the Castilla La Mancha Communities Council since 2013 in the prevention of forest fires in the vicinity of the Sierra del Boquerón wind farm in Albacete. The works that were performed together with forest rangers consisted in improving the conditions of forest firebreaks located near the wind farm.



Preventive measures against forest fires are always fundamental, but they take on special relevance in the vicinity of the Sierra del Boquerón wind farm, since it is located near the Hoces del Júcar natural protected area, which is included in the Natura 2000 Network.

By carrying out this type of initiatives, EDPR contributes to the protection of biodiversity, specifically in the conservation of habitats surrounding its operations.

## EDPR contributes to the protection of forests against fires in Portugal

The occurrence of forest fires in Portugal is usual, particularly during the summer periods and causes considerable material, environmental and property damages.

As a sustainable company and one that is concerned about having a positive impact on areas where it operates, and with respect to the defence against forest fires, EDPR has taken a proactive attitude when complying with the existing legislation that defines the National Forest Fire Defence System.

In this context, EDPR contracted a Fuel Management Services provider, whose work was under way at both power line tracks and wind farms. The established multi-year plan spans areas greater than 900 hectares distributed across almost 60 EDPR infrastructures located in the north and the south of continental Portugal. Additionally, similar works also take place annually in the Forest Perimeter of the Cantanhede Dunes area where the Tocha wind farm is located.

As a result of this Protocol established with the Institute for the Conservation of Nature and Forests, these works have contributed to keep this Natura 2000 Network Site that is home to priority habitats free of forest fires.



## EDPR employees on field for bats habitat protection in France

As a responsible company, EDPR is aware of the sensitivity of natural ecosystems and the pressures affecting biodiversity.

Therefore, EDPR assumes its commitment to contribute to the prevention or reduction of loss in biodiversity, as stated in its Environmental Policy. Specially, the company commits to protect the wildlife surrounding its wind farms.

As a result, EDPR partnered with local naturalist association Indre Nature in 2014 to protect the most sensitive species regarding wind farm operations: migrating birds and bats. Following that partnership, in November 2018 ten EDPR employees went to “Ile de la Marquise”, a national refuge for bats, to actively contribute to bat protection in Indre, France. The employees were accompanied by the mission supervisor for Indre Nature and a bats specialist volunteer. During the day, the volunteers started by visiting the island and its vaulted cellar to quietly observe different bats species without disturbing them. The team mission was to preserve the island by clearing and cutting invasive plants that have extremely strong roots that can damage cellar, which could risk falling on bats lodged.

Indre Nature wants to keep improving its knowledge of the bat populations on site and, with the help of volunteers such as company members, neighbours and residents of the island, the mission is evolving with time. Indre Nature has developed a 2016-2020 management plan that aims to protect and inventory the species in the island. EDPR will have an active participation in this long-term plan not only through participating in volunteering activities, but also by providing financial support to the projects.



## Protection of animal species

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The Regional Government of Castilla y León, EDPR and Fundación EDP collaborate on a conservation program for the red kite

As part of EDPR's Environmental Policy, the commitment to the conservation of natural spaces and wildlife in local communities is of vital importance within the company's biodiversity management strategy.

Accordingly, EDPR, through Fundación EDP and in collaboration with the Fundación Patrimonio Natural de Castilla y León, has undertaken a number of environmental initiatives to support the conservation of bird wildlife where it operates.

Fundación Patrimonio Natural aims to promote, maintain and manage the natural heritage of the Community of Castilla y León, Spain. EDPR and the Fundación Patrimonio Natural have collaborated since 2014 to carry out a series of environmental actions aimed at conserving the red kite, a bird of prey native to Western Europe. The red kite is classified by Spain's National Catalogue of Endangered Species as "in danger of extinction", and Castilla y León is home to the largest breeding and wintering populations of red kite in the Iberian Peninsula.

In late 2014, the Fundación Patrimonio Natural and Fundación EDP, with the support of EDPR, launched a conservation program for the red kite in Castilla y León. The program consists of a number of activities aimed at acquiring knowledge about the bird's behaviour, biology, its population, the main threats it faces and awareness-raising and protection campaigns. Of those activities, the following stand out:

- Radio tracking of several specimens of red kite;
- Actions aimed at recovering and improving the species' habitats;
- Design and construction of new dunghills;
- Repair and restoration of existing dunghills;
- Development of awareness-raising and environmental education activities for the local population and groups that have an effect on the conservation of these species.

A key feature of this program is the scientific tagging of specimens with solar powered GPS-GSM tracking devices. This measure is aimed at gaining valuable knowledge about the behaviour of the red kite, such as the use they make of the territory, their dispersal movements and their philopatry (the tendency of an organism to stay in the same area where they were born or to habitually return to a particular area to breed or nest) via radio-telemetry, an important research tool that allows the birds to be precisely tracked and located.

EDPR's absolute commitment to the biodiversity in the areas where it operates is one of the cornerstones of the company's activity. EDPR is particularly pleased to have the opportunity to collaborate with several organisations to further protect wildlife surrounding its facilities, and will continue to do so.

## EDPR contributes to the conservation of bats and their ecosystems

EDPR's commitment to contribute to the protection of biodiversity leads to an active role in the conservation of wildlife surrounding its facilities, focusing on the main impacts of its activities such as bats. Mortality at wind turbines is currently the one of the greatest concerns for bats in general at wind farms, and therefore EDPR has adopted several measures in its wind farms in North America to contribute to the conservation of bats and their ecosystems.

Currently, one of the most effective method of reducing bat fatalities at wind farms is to employ a strategy known as curtailment. This strategy limits blade rotation during high risk periods such as low wind and during fall migration period.

Normally, wind turbine blades turn slowly in the wind until they reach cut-in speed, the point at which they're spinning fast enough to begin generating power. EDPR has instituted a conservation program that incorporates feathering (positioning the blades parallel to the wind) operational wind turbine blades below the manufacturer's operational cut-in speed from half an hour before sunset to half an hour after sunrise during the fall migration period. The initiative implemented by EDPR in several of its wind farms can significantly reduce bat fatalities.

EDPR will continue to implement this conservation program in future years, enhancing the functionality at many of its sites and contributing to the protection of the wildlife around them.

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## EDPR contributes to the protection of the golden eagle in the US

As a responsible company, EDPR is aware of the sensitivity of natural ecosystems and the pressures affecting biodiversity. Thus, EDPR assumes its commitment to contribute to the prevention or reduction of loss in biodiversity, as stated in its Environmental Policy.

The golden eagle population status affects the manner by which EDPR develops and operates its wind projects in adherence with the Bald and Golden Eagle Protection Action (BGEPA).

EDPR has contributed funding to the Oregon Eagle Foundation (OEF) and the Washington Department of Fish and Wildlife (WDFW) to conduct state-specific efforts to understand population status of eagles in those states.

As a sustainable company, it is EDPR's duty to contribute to the development of research and conservation programs, as well as to broaden scientific knowledge on biodiversity matters by supporting institutions and strengthening dialogue and partnerships. As a result, the Company particularly commits to protect the wildlife surrounding its wind farms.

## EDPR finances studies of rock-nesting species in Spain

EDPR's Environmental Policy ensures to contribute to the broadening and spreading scientific knowledge on biodiversity matters. A comprehensive biodiversity strategy also implies having an active role as a company, contributing to the protection of the wildlife near its operations.

As a responsible company, EDPR contributes to expand the knowledge about the most typical birds of a natural area located near one wind farm in Spain. The Júcar River valley stands out due to its outstanding geomorphology, plant diversity and birdlife as well as its high landscape value. Its vertical walls are an important refuge for birds of prey and other rock-nesting species, who are those who nest in rock cliffs.

EDPR financed a study of the rock-nesting species that live in the Júcar River valley, specifically the golden eagle (*Aquila chrysaetos*), Bonelli's eagle (*Aquila fasciata*), red-billed chough (*Pyrrhocorax pyrrhocorax*) and black wheatear (*Oenanthe leucura*). The works consisted of a thorough analysis of the existing population in the area, therefore allowing EDPR to understand their current situation, future trends and possible factors of threat.

In addition, EDPR assisted and provided financial aid to the University of Málaga, a prestigious academic institution, for the preparation of a study on the nation-wide scale interaction among rock-nesting species, through the Fundación EDP. The research study focused on three particular species: the griffon vulture (*Gyps fulvus*), the Egyptian vulture (*Neophron percnopterus*) and the Bonelli's eagle (*Aquila fasciata*).

EDPR implements these initiatives as a result of its commitment to contribute to the protection of biodiversity, particularly committing to protect the wildlife surrounding its wind farms.



## EDPR installs anti-drowning devices for wildlife in ponds used for fire suppression near its wind farms in Spain

Many of EDPR's wind farms are located in forest areas that have ponds that are used for firefighting. These ponds can be dangerous for small animals that approach them searching for water, with the associated risk of them falling in accidentally and most likely drown as they become trapped in the ponds.

Aware of this issue, EDPR financed the installation of anti-drowning devices for wildlife in ponds that are used for fire suppression at the Coll de Garganta wind farm in Tarragona, Spain. The works consisted in the construction of an outer and inner ramp that can facilitate the way out of the wildlife that may visit the pond.



With this measure, EDPR further contributes to the protection and conservation of biodiversity surrounding its facilities.

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## EDPR invests in retrofitting of overhead power lines to protect biodiversity

In Spain, many birds die each year as a result of collision or electrocution with overhead power cables, also resulting in outages and imbalances in the electrical distribution system. To prevent this, several measures involving electrical and technical retrofitting should be adopted.

Aware of this situation, EDPR financed a project to retrofit the existing electrical distribution overhead power line network in the vicinity of its wind farms that had been identified as potentially dangerous by technical personnel from the Castilla La Mancha Council. The works consisted in retrofitting over 70 supports, with the purpose of protecting the wildlife in the area.

As a responsible company, EDPR complements its strategy of fighting against climate change with a responsible management of the environment along the whole value chain.



## EDPR finances a study of the great bustard in the province of Albacete, Spain

EDPR's business is its best contribution to reduce biodiversity loss. Nevertheless, the Company's commitment to contribute to the protection of biodiversity leads to an active role in the conservation of wildlife surrounding its facilities.

As a result, EDPR financed a study of the great bustard in the central-western part of Albacete, a province where the company operates. The great bustard (*Otis tarda*) is a distinctive bird due to its large size that lives in steppe areas. EDPR contributes to expand the knowledge of this species, which is classified as "of special interest" in the Threatened Species National Inventory.

The study consisted of two phases: the first phase involved extensive office work to analyse the available literature; the second phase involved fieldwork to conduct a population count. Once the study was over, the conclusions showed how the great bustard population in the area appears to be stable, therefore providing confirmation that it is a very important territory for the species both regionally and nationally.

Even though EDPR's business inherently has a positive impact on the environment, the company commits to further protect the biodiversity near its wind farms through these type of initiatives.



## EDPR commits to favour bird of prey populations in Spain

As a responsible company, EDPR is aware of the sensitivity of natural ecosystems and the pressures affecting biodiversity. Thus, EDPR assumes its commitment to contribute to the prevention or reduction of loss in biodiversity, as stated in its Environmental Policy.

Accordingly, EDPR collaborates with the Castilla La Mancha Communities Council since 2012 in the maintenance of pigeon lofts with the purpose of improving the continuous supply of food for large birds of prey in certain areas of the province of Albacete, Spain.

Improving the conditions of these pigeon lofts helps achieve a stable population of pigeons in the area and therefore a continuous supply of food for the bird of prey population. The works began with a number of repair tasks such as fixing doors, fence installation, nest construction, retiling of the roof as well as cleaning of feeders and replacement of water tanks.

In addition, EDPR has been in charge of the maintenance of the Liétor pigeon loft in Albacete since 2012, contributing every year with funding for cleaning and fumigation tasks and medicated feed supply that is specifically prepared for pigeons.

EDPR's commitment towards biodiversity protection is focused on the main impacts of its activities. As a result, the Company particularly commits to protect wildlife near its wind farms.



## EDPR conducts study of the Dupont's lark in the province of Soria, Spain

EDPR's commitment with biodiversity protection leads us to take an active role in the conservation of wildlife.

Therefore, EDPR has been collaborating since 2011 with the Fundación Patrimonio Natural de Castilla y León in a study that allows understanding the population dynamics of Dupont's larks in the vicinity of the Cerros de Radona wind farm in Soria, Spain.

The Dupont's lark (*Chersophilus duponti*) is a bird that inhabits in steppe zones and feeds on insects and seeds. It is precisely the alteration of these steppe habitats where it lives that poses the greatest threat, after having experimented a significant drop in the last decades. The study conducted by EDPR helps understand the degree of affection a wind project development could have on this species in the town of Medinaceli.

During the study, over 100 population counts were completed that have significantly increased the knowledge about key aspects surrounding these species, which can help manage them more effectively. This initiative has also contributed to the promotion of wind power development in a way that is compatible with the conservation of this bird species.




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## EDPR finances a study of the Spanish imperial eagle in Spain

EDPR's business inherently implies a positive impact on the environment. Even so, the Company continues to work on a daily basis to protect the wildlife surrounding its wind farms.

As a result, EDPR financed a monitoring program of the Spanish imperial eagle population in the province of Ávila with a two-fold objective: studying the distribution area of the species to locate reproducing couples, and identifying any threats that may imply risks to the success of reproduction. The conclusions obtained from the monitoring program were very positive, as they showed an upward trend of the population.



The Spanish imperial eagle (*Aquila adalberti*) is an endemic bird of the Iberian Peninsula that is characterized by its great size. Its main threats are associated with human interaction such as poisons illegally used in hunting grounds, electrocution in overhead power lines or destruction and fragmentation of its habitat, among others.

As a sustainable company, it is EDPR's duty to contribute to broaden scientific knowledge on biodiversity matters and work to promote its protection.

## EDPR contributes to the conservation of the lesser kestrel population in Spain

EDPR's business is its best contribution to reduce biodiversity loss. Still, the Company further protects biodiversity through an active role in the conservation of wildlife near its facilities.

The lesser kestrel (*Falco naumanni*) is a small bird of prey belonging to the hawk family that inhabits open areas, but which requires isolated building structures to build their reproductive colonies. The main threat for this species is the loss of its habitat, so factors such as the intensification of agricultural activities, crops changes, land abandonment or the development of peri-urban areas are negative for this bird. The restoration of old buildings for use as lofts promotes the conservation of the species and favours the preservation of historical heritage.

Therefore, as a responsible Company, EDPR worked to promote the conservation of this species and its habitat. The Company collaborated with the Council of Communities of Castilla la Mancha in a project geared at restoring old buildings for their conversion into lesser kestrel lofts, with the purpose of improving the number and conditions of their nesting sites. The actions taken consisted mainly in the repair of the roof structure, the removal of broken roof tiles and their replacement, in addition to heightening of roof tile rows and installing nest boxes and tile-nests to favour nesting of the lesser kestrel. EDPR worked on this initiative, which showed satisfactory results, in the vicinity of the Garcimuñoz wind farm, located in the province of Cuenca, Spain.

EDPR participates in the protection of biodiversity mainly through collaborations with organisations and local authorities to further protect wildlife surrounding its facilities.

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## EDPR contributes to the recovery of the Montagu's harrier in the province of Albacete, Spain

The Montagu's harrier (*Circus pygargus*), a species particularly linked to cereal crops, builds its nests on the ground, which is one of the main threats it is exposed to since machine wheat harvesting becomes a severe risk.

Aware of this situation, EDPR collaborates with the Council of Communities of Castilla la Mancha in an annual search and rescue campaign of Montagu's harrier nests. Then, an agreement is made with land owners not to harvest cereal crops in an area near identified nests, allowing the species to live without any risk. In turn, farmers are compensated economically for the amount of land not cropped.



EDPR annually invests in these search and rescue initiatives and in awareness-raising campaigns on the problematic of the Montagu's harrier and its importance for the sustainability of agricultural ecosystems. After years collaborating on this project, the campaign has been a success by actively contributing to the progressive recovery of the Montagu's harrier.

## EDPR collaborates with Fundación Migres to protect biodiversity

Fundación Migres promotes research on bird migration and promotes activities aimed at sustainable development, being recognised as an international benchmark in these matters. Likewise, the Fundación Migres also works to raise awareness among the local community in matters pertaining to the preservation of the natural habitat as well as renewable energy.

Since its establishment, EDPR has an agreement with Fundación Migres to prepare the Compensatory Measures project for wind farms in La Janda, Spain. For this reason, Fundación Migres now conducts several projects and undertakes a number of environmental measures at wind farms whose end goal is reducing avian mortality rates in the latter, understanding to what degree such mortality rates affect local populations and lastly, conduct specific studies and undertake specific recovery programs for some of the affected species.

More recently, the following actions have been carried out: coordination and monitoring of the environmental monitoring plan; environmental measures for the conservation of the Egyptian vulture; measures for the conservation of the Montagu's Harrier; and the scientific monitoring of migration in the Strait of Gibraltar.

EDPR's commitment to contribute to the protection of biodiversity leads to an active role in the conservation of wildlife surrounding its facilities, mainly through collaborations with several organisations to further protect wildlife surrounding its facilities, focusing on birds and bats.



EDPR contributes to the protection of the Iberian wolf in Portugal

As stated in its Environmental Policy, the Company particularly commits to protect the wildlife surrounding its wind farms. Accordingly, EDPR is part of the Iberian Wolf Habitat Conservation Association, a non-profit organization founded by a group of wind energy companies, specialized in implementing monitoring plans and compensatory measures for the Iberian wolf.

The Iberian wolf (*Canis lupus signatus*) is a species subject to particular attention in Portugal, as stated in the specific legislation for the protection and preservation of its habitat. It is estimated that there are nearly 300 specimens of Iberian wolf in Portugal whose habitat extends from the district of Viseu to the north of the country. EDPR has several wind farms in this area, which have been developed with the contribution of specialists in Iberian wolf. Tracking programs were established in the most sensible areas, as well as mitigation and compensation measures for this species and its habitat.

Many of these measures are intended to reduce the conflict between the local population and the Iberian wolf, trying to direct the wolf towards the wild prey species existing in their habitat. EDPR carries out these measures in accordance with its commitment to contribute to the prevention or reduction of loss in biodiversity.



## EDPR installs metal containers in a farm near the Rabosera wind farm in Aragón, Spain

Minimizing the negative impacts on biodiversity is one of the main commitments of EDPR's environmental strategy. Year after year, EDPR continues to show its commitment with continuous improvement in environmental performance.

In collaboration with Grupo Jorge, a company from the pork meat sector with a farm located near the area of the Rabosera wind farm (Aragón, Spain), metal containers were installed to replace the old plastic containers that had been traditionally used. The goal of this measure is preventing the "pull effect" that the presence of animal remains generated in the pork farm could generate for species such as vultures.

The installation of metal containers that are inaccessible to scavenger birds prevents them from approaching and attempting to feed in the vicinity of the wind farm, as such birds are attracted by the remains generated by the farm. Therefore, this initiative reduces the risks that derive from the presence of the installation, contributing to the protection of the surrounding wildlife.

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## EDPR creates ponds to help protect birds near its wind farms

The Chimay wind farm in France is located near a Natura 2000 area and on a migratory route frequented by several birds, notably the stork. Thus, EDPR created a space made up of two ponds and meadows naturally maintained by 4 cows in the town of Virelles, near Chimay.

The purpose of this complex is to attract these birds or other wildlife, diverting them from the wind farm and therefore from a possible risk of collision with the blades, and offering them a quality migratory stopover. Storks, ducks, wild geese, herons, egrets and many other species frequent the two ponds, representing a great success for EDPR's initiative.



EDPR collaborates with GREFA to develop programs for the conservation and protection of biodiversity

As a responsible Company, EDPR collaborates with GREFA – a group for the rehabilitation of native fauna and its habitat. This non-governmental and non-profit organization is dedicated to the study and conservation of nature and wildlife.

Among the initiatives carried out in Spain within the collaboration agreement, the following are highlighted: the contribution to the Monachus Project through the annual funding for radio-tagging and monitoring of black vultures, the financing of the study of the impact of the Urraca Miguel waste treatment center on protected and threatened avifauna, as well as the adjustment of a power line that, despite not being part of EDPR's infrastructures, served as a main cause of accidents involving birds.

This last initiative was successfully completed thanks to intense field work, the close relationship with the Castilla and León committee for territorial service of the environment, the good will of the owner of the power line and the joint efforts of GREFA and EDPR to protect the environment. The adjustment of the power line in Urraca Miguel was necessary due to several factors such as the power line's close proximity to the waste treatment centre, its interruption of the usual route for birds between their habitat and their hunting area and its lack of adequate protection measures against electrocution and collision.

The adjustment of the power line and the anti-electrocution measures were completed in eleven days. A total of 11 supports marked as dangerous were adjusted, and 35 state-of-the-art bird-saving reflective markers have been placed.

This initiative was carried out by EDPR following its commitment to contribute to the protection of biodiversity.



## Communication and awareness

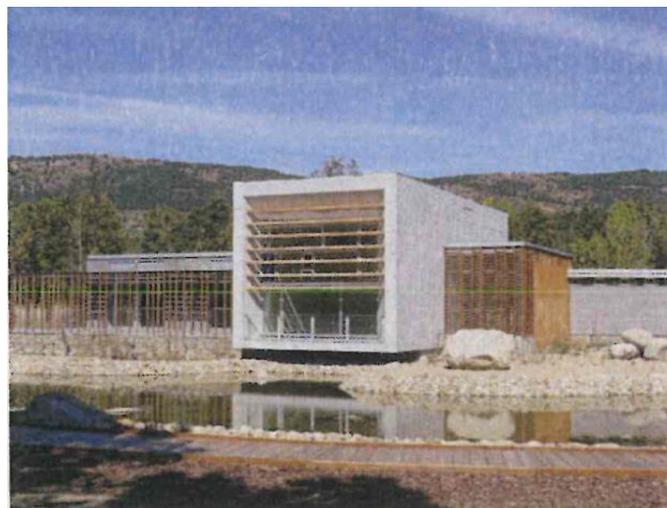
EDPR finances the construction of an environmental education centre in the Province of Ávila, Spain

As a responsible company, it is important for EDPR to bring awareness to the sensitivity of natural ecosystems and the pressures affecting biodiversity.

Accordingly, EDPR inaugurated the Aula del Río de Aliseda de Tormes educational facility in collaboration with the Fundación Patrimonio Natural de Castilla y León. Located in a river setting, the facility in Ávila, Spain, will be open to anybody and serve as a meeting point for education, display and preservation of aquatic ecosystems through the art of fishing, while respecting the environment.

At the Aula del Río de Aliseda de Tormes, everyone will have a chance to discover how river ecosystems work and learn to distinguish between the animal and plant species living in rivers and other water bodies. Skilled trainers will introduce visitors to catch-and-release fishing in a naturalized ponds or a stretch of river as well as fishing pole casting, among other activities.

Even though EDPR's business inherently implies a positive impact on the environment, the Company continues to work to hold itself to a higher standard, particularly committing to protect biodiversity through initiatives such as educational activities.





Preserve  
natural resources

## EDPR encourages circular economy and supports processes to recover wind turbine blades

Even though EDPR is in the renewable energy business, the company goes beyond its commitment with the environment by fostering a corporate culture of responsibility and rational use of resources, also promoting the recovery of waste rather than disposal through recycling and other means.

The management of wind energy waste is a significant and constant concern for EDPR. The lack of a technique to recycle wind turbine blades at the end of their useful life is recognised as one of the challenges of the industry. In this regard, EDPR supports several projects that aim to prioritise the fiberglass recycling processes and encourage circular economy.

EDPR signed a collaboration agreement with the start-up Thermal Recycling of Composites (TRC), a CSIC spin-off. TRC works in a process to obtain fibres (glass or carbon) from discarded blades suitable for reuse. As part of this agreement, EDPR yielded a blade, which was to be sent to landfill, to be introduced into the process. About six months after, the program produced its first recycled raw materials. The materials can be used for many things such as to create panels, seats or consoles for trains, urban furniture, bicycles or boats. R3FIBER – the technology used, developed by TRC in partnership with CSIC and Eurecat – allows for the transformation of resins into combustible gases and liquid fuels while obtaining glass and carbon fibres suitable for reuse. It's sustainable, generating no waste, and efficient, as it allows for maximum energy recovery.

Simultaneously, a consortium of companies from Castilla y León, Spain, are leading the LIFE REFIBRE project, which aims to use the fiberglass generated from the blades to manufacture an improved asphalt mixture for construction use. During 2018, a total of 4 blades from EDPR have been managed by the LIFE REFIBRE project.

In addition, a blade from one of EDPR's wind farm is being managed by RECICLALIA, a company also in the composite recycling business. They use a system called "Constrictor" to chop the blade at the foot of the wind turbine, avoiding additional transportation costs.

In the US, the Meridian Way wind farm and Vestas donated several tip sections of damaged blades to the Cloud County Community College (CCCC) Wind Energy Program in Concordia, Kansas. After receiving the donated blades, the students learned how to inspect and repair them. The parts of the blade that were not recycled will be sent to a local landfill where they will recycle the root end to make road culverts.

As a sustainable company, EDPR works to support programs that develop viable, maximum-efficiency alternatives for recycling blades from wind turbines in disuse. These initiatives lead to a reduced volume of landfill waste and increased energy efficiency, further contributing to the protection of the environment.

## EDPR preserves water resources by implementing rainwater collection systems

As part of one of its environmental targets within environmental management system, EDPR has conducted a series of implementations of rainwater uptake systems in several Spanish substations. The main objective of this initiative is to reduce water consumption from other less sustainable sources by taking advantage of rainwater, promoting good environmental practices and working towards a self-sufficiency model.

Although wind energy generation does not consume water in its operational processes, EDPR, as a responsible company, works to preserve water resources and protect the environment and seeks to adopt more eco-efficient practices. As a result, over 40 substations have rainwater collection and treatment systems installed to cover their own water supply needs.

## EDPR promotes energy efficiency in Poland

EDPR, as a leader in the renewable energy sector, produces clean and green energy, water-free and with low wastes generation. Even though EDPR business implies a positive impact on the environment, the Company goes beyond its commitment with the environment by fostering a corporate culture of responsibility and environmental awareness.

In this sense, EDPR organized a workshop about ecological household management for women from a local association in Korsze, Poland. The workshop was led by an expert from the University of Olsztyn, who explained how to save costs through the responsible use of water and electricity and talked about ways of protecting the environment that can be implemented in each household. The workshop helped raise awareness about responsible power consumption and environmentally friendly behaviour. The participants of the meeting were also able to learn basic information about renewable energy.

As a sustainable company, EDPR works to promote the efficient use of natural resources, within the framework of an environmental activity.

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