

ENDESA CONNECTS TO THE GRID A NEW PHOTOVOLTAIC PLANT OF AROUND 50 MW IN BADAJOZ

- *Endesa has invested 35 million euros in the construction of the Augusto solar plant, creating more than 300 jobs and carrying out training courses on renewable issues*
- *During construction, advanced technologies were employed and numerous conservation actions that will benefit the whole Extremadura region were carried out*

Badajoz, December 22nd, 2020 – Endesa, through its renewable energy company Enel Green Power España (EGPE), has completed the construction of the Augusto photovoltaic plant located in the municipality of Badajoz, Extremadura.

This 49.91 MW photovoltaic plant, in which Endesa invested 35 million euros, was built in record time, in compliance with the strictest health and safety measures, even in the most difficult moments of the global Covid-19 outbreak. For the construction of the plant, which is expected to produce around 100.45 GWh a year, equivalent to the combined annual energy consumption of towns like Merida and Almendralejo, more than 300 people have been employed, 70% of them from Extremadura. Rigorous safety protocols were implemented, in light of the ongoing pandemic and in line with the indications provided by health authorities, with the aim to ensure the necessary protection of the workers involved in the construction as well as to the communities where the plant is being installed.

Augusto features 127,980 bifacial photovoltaic panels of 390 watts peak power. The bifacial nature of these panels ensures greater use of solar energy, making them more efficient than conventional panels. To allow the solar plant to operate, Endesa, through EGPE, has built eight electricity transformation centers, one 30/66 kV electricity substation and an 18.4 kilometer underground medium and low voltage cabling network. In addition, 4.3 kilometers of high voltage lines with 16 aerial supports and a 450 meter underground section to reach the Badajoz substation were built. This setup has today allowed the first kilowatt-hours of renewable energy to be generated, and this has already reached the Extremadura electricity distribution network.

Augusto, which has just been connected to the grid, will prevent emissions into the atmosphere of approximately 46,800 tons of CO₂ annually.

Luca Capuozzo, Endesa's head of construction for Augusto, wanted to express his appreciation for “*the efforts of all the workers and the coordination with the Municipality of Badajoz that also made it possible for Extremadura to produce cleaner energy today*”.

What the build was like

The construction of the Augusto photovoltaic plant involved the latest technology, such as the use of an exoskeleton (a kind of external skeleton that allows the panels to be mounted and their weight to be lifted more easily) in order to facilitate the installation of solar modules, surveillance cameras to detect any safety breaches that may occur during construction as well as a system, that was placed on machinery, in order to detect and warn when a person is nearby and to prevent accidents.

In addition, Endesa is using virtual reality to monitor this plant through smart glasses that allow supervisors to attend remotely, without needing to physically go to the area of interest. Furthermore, the technology employed incorporates an infrared camera that takes instant photographs of what it sees, a revolution for the detailed monitoring of the state of the plant.

For the construction of Augusto, Endesa followed sustainable engineering criteria and applied Enel Green Power's "Sustainable Construction Site" model, including the installation of photovoltaic panels to meet some of the energy needs during the construction work, efficient lighting, separation of waste, the use of electric vehicles and the supply of several defibrillators to ensure workers' health. Now that the work has been completed, these measures will be donated to the municipality of Badajoz for public use.

Endesa's philosophy for building its renewable plants is part of the Enel Group's "Creating Shared Value" (CSV) model that has led Endesa to run two training courses on renewables. The first of these courses was given in June to 36 people, with the aim of training them in the assembly of solar trackers in photovoltaic plants. The second, for more than 20 people in Badajoz, most of them unemployed, is taking place online throughout December. Participants are being trained to understand the operation and maintenance work of photovoltaic plants, which is now a booming sector.

Environmental conservation measures

The construction of Augusto has also included environmental conservation measures. The measures put in place by Endesa, in collaboration with the Extremadura authorities, and entities such as the University of Porto and associations like AMUS (Action for the Wild World), have included the marking and protection of local flora and fauna, as is the case with the rescuing of Montagu's harrier chicks and the conservation of the local orchid population, that features some threatened species.



Image in Augusto of marking a little bustard with radio transmitters

What now?

The start of production at these photovoltaic plants marks the end of one phase, but the beginning of another, since Endesa has chosen this plant to undertake a pioneering and innovative project in Extremadura: photovoltaic agriculture. This initiative is part of Endesa's philosophy of sustainability and circular economy and is based on three hectares of aromatic plants being cultivated among the photovoltaic panels of the Endesa plant in Badajoz.

Agrivoltaica en PS Augusto

Objetivo del piloto

Objetivo del proyecto: desarrollo de un cultivo agrivoltaico sostenible ambiental y económicamente en la planta solar de Augusto

Enfoque sostenibilidad-CSV

Enfoque Innovación (cultivos sostenibles)

- PS Augusto
- Badajoz (Extremadura, Spain)
- 49,9 MW (potencia instalada)
- 100 Ha (superficie total de la PS)
- 3 Ha (superficie del piloto)

More solar MW in Extremadura

Renewable energy in Extremadura

Augusto will not be the only plant that Endesa develops in Extremadura through its renewable subsidiary EGPE. The Company is applying for up to 15 more photovoltaic projects in the region for a total of 1,150 MW.

These plants add to the six that Endesa launched in November 2019, which total 252 MW and account for a total investment of 200 million euros. Thanks to these Endesa facilities, the community of Extremadura managed to produce 117% more renewable energy last year than the year before.

Endesa currently operates, through EGPE, over 7,626 MW of installed renewable capacity in Spain, which include: 4,711 MW from conventional hydro; 2,362 MW from wind, 471 MW from solar, 79 MW from mini-hydro and 3 MW from other renewable sources.

Enel Green Power, within the Enel Group, is dedicated to the development and operation of renewables across the world, with a presence in Europe, the Americas, Asia, Africa and Oceania. Enel Green Power is a global leader in the green energy sector with an installed capacity of over 47 GW across a generation mix that includes wind, solar, geothermal and hydropower, and is at the forefront of integrating innovative technologies into renewable power plants.