

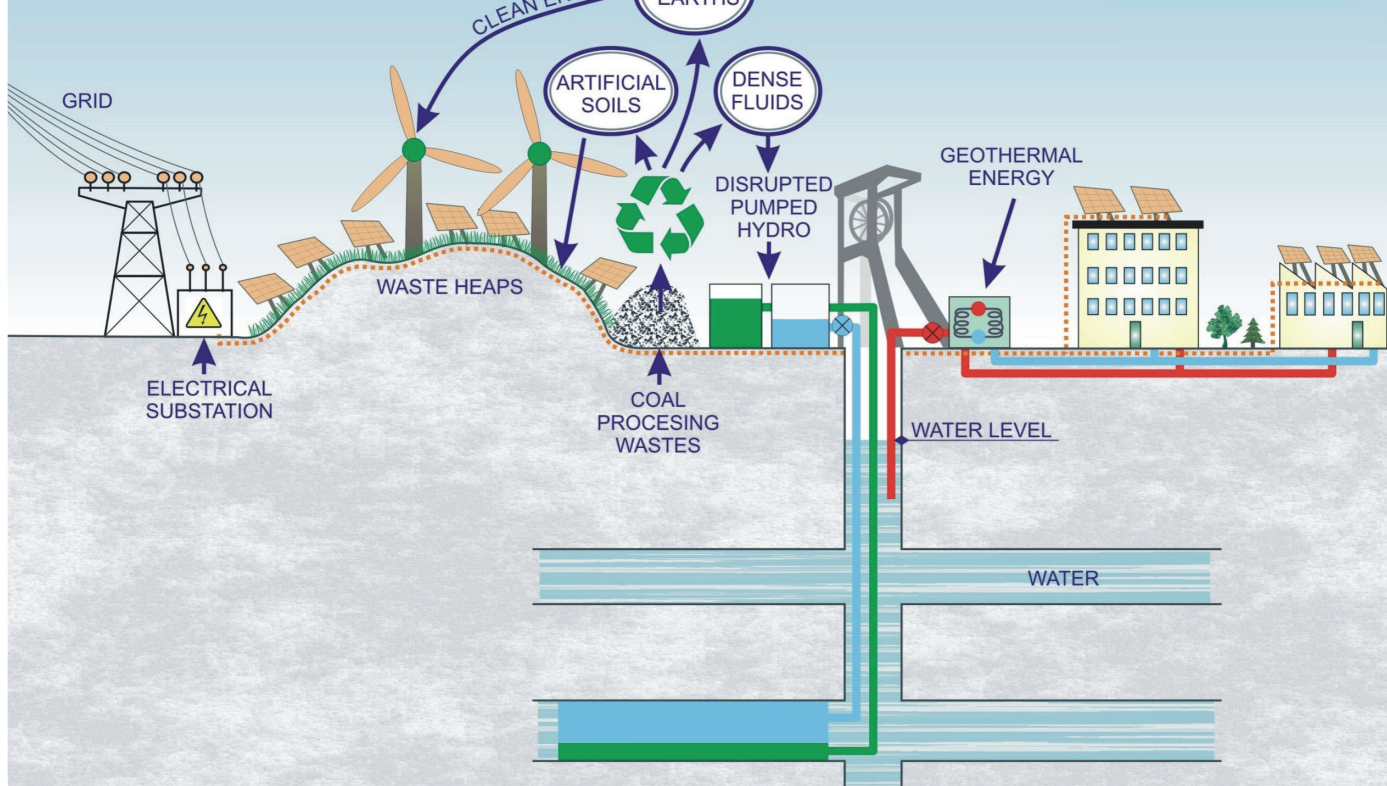


December 2022

## Project aim

**GREENJOBS AIMS TO PROVIDE MINING COMPANIES WITH INNOVATIVE BUSINESS PLANS FOR DEVELOPING NEW ACTIVITIES TAKING ADVANTAGE OF THE FORMER MINING INFRASTRUCTURES.**

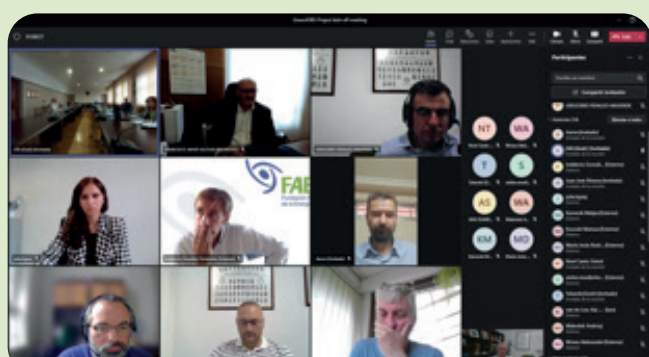
In the framework of the project will be developed a bussiness plan for a Virtual Power Plant, taking advantage of the mining areas for the production of electricity, and for a Green Hydrogen Plant where renewable hydrogen will be produced by electrolysis of mine water and green electricity.



## Partners

 Universidad de Oviedo <b>UNIVERSIDAD DE OVIEDO (UNIOVI)</b>	 GIG Research Institute <b>GLÓWNY INSTYTUT GÓRNICTWA (GIG)</b>	 FAEN Fundación Asturiana de la Energía (FAEN) <b>FUNDACIÓN ASTURIANA DE LA ENERGÍA (FAEN)</b>	 Technische Hochschule Georg Agricola <b>DMT-GESELLSCHAFT FÜR LEHRE UND BILDUNG mbH (DMT-THGA)</b>
 Magellan & Barents <b>MAGELLAN &amp; BARENTS (M&amp;B)</b>	 WEGLOKOKS KRAJ S.A. (WEGLO) <b>WEGLOKOKS KRAJ S.A. (WEGLO)</b>	 grupohunosa <b>HULLERAS DEL NORTE, S.A. (HUNOSA)</b>	 PREMOGOVIK VELENJE <b>PREMOGOVIK VELENJE d.o.o. (PV)</b>

## Launching of GreenJOBS project



The **GreenJOBS** kick-off meeting was held online on 15<sup>th</sup> of September, 2022 to introduce the partners and their roles, discuss project implementation and cooperation rules, as well as financial and administrative matters.

The structure of the project was also discussed, as well as the content, responsibilities and deadlines of Work Package 2.

## 2<sup>nd</sup> progress meeting of GreenJOBS held in Oviedo



The **GreenJOBS** project 2<sup>nd</sup> progress meeting was held on November the 30<sup>th</sup> at the School of Mining, Energy and Materials Engineering of Oviedo, Spain, to discuss project coordination and management, as well as the content, development and work structure of Work Packages 2 and 3.

On December the 1<sup>st</sup>, 2022, two alternative site visits were offered to the Partners: an underground coal mine (Pozo Sotón – HUNOSA), and a geothermal installation (Pozo Barredo – HUNOSA) and a coal-fired power plant (La Pereda – HUNOSA).

## Example of energy transition in Asturias. The case of Hunosa



Asturias is a region with an energy model based on coal and is facing a challenging energy transition process. Their companies are in a similar situation and HUNOSA, the most important mining company in the region, is the best example of this.

Hulleras del Norte S.A. S.M.E. (HUNOSA) began its operation in 1967, as a result of the joint of twenty mining companies, with a production volume of more than 3 million tons of coal per year and a workforce of more than 20,000 workers. During its 5 decades of activity, these figures even has been improved and it has accumulated a large amount of assets from mines, waste heaps, coal treatment plants and a 50 MWe coal-fired power plant.

**The decarbonisation strategies promoted by the European Commission have motivated a deep transformation in the company, turning it towards an energy and environmental services company linked to the need for energy transition from the coal activity.**

Based on its human resources and assets, HUNOSA has started new activities in the energy and environmental sectors in recent years.

In this way, taking advantage of the heat from the mine water, it has developed district heating systems, with a power that reaches almost 10 MW, from which it supplies heat and cold to urban centers of Mieres and Langreo (the main towns of the mining districts). In addition, in order to harnessing the land for producing biomass, it is also supplying heat to buildings with biomass boilers and it is going to adapt its current coal-fired thermal power station in La Pereda to convert it into a biomass thermal power plant.

Along with the adaptation of La Pereda, in the short term the company is contemplating other projects in other areas of activity in the energy sector. In this way, recently it has been approved the construction of a production plant of renewable hydrogen, in which the integration with mining assets is contemplated, for example, the use of the land of a former mine to locate the plant or the harnessing of mine water for the electrolyzers.



Another activity that the company intends to develop in the short term is the promotion of photovoltaic parks in former open pit mines or waste heaps for selling to the grid or for supplying energy to the hydrogen production plant.

In the field of the environmental sector, HUNOSA has a huge experience in land restoration affected by mining as well as CO<sub>2</sub> capture. In fact, from 2011, the company operates a CO<sub>2</sub> capture plant linked to its coal-fired power plant, developed under the technology of calcination/carbonation. Besides, regarding environmental sector, it is also initiating new activities. In this way, it participates in several projects related to study and improve the carbon capture process as well as projects aimed at analysing models of forest management to capture carbon through trees.

**Furhermore, in the renovation that is contemplated in La Pereda, it will be also adapted to be able to use solid recovered fuel, from the management of urban solid waste, for the production of electricity.**



Finally, it must be highlighted that, derived from its experience in recent years, HUNOSA has been able to specialize in the recovery of former mining and industrial spaces.

The energy transition is being faced by the company not as a threat of closure but as an opportunity for the future. The activities started and those planned to begin in the short term will allow the company to continue producing energy and providing services adapted to the new energy model.

