



Sectoral Social Dialogue Committee "Extractive Industry"



APEP



EURACOAL
European Association
for Coal and Lignite



GOBIERNO DEL
PRINCIPADO DE ASTURIAS



REGIONS IN TRANSITION: A REGIONAL GOVERNMENT PERSPECTIVE

***María Belarmina Díaz Aguado
Director General Energy, Mining & Reactivation
Government of Asturias***

December 4th 2020

Asturias. WHERE DO WE COME FROM?



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

Asturias and coal

- More than 400,000 workers in history, in 2000 >7,500 workers, but in 2017 only 1.468 workers.
- 48% of coal was produced in Asturias



Power generation

- 3.277 MW in thermal power plants (2.222 MW coal power plants in 2017, 49 % of installed power) of a total 4.574 MW
- From 2012 to 2017, thermal power production has been 73,4% of regional Energy mix.
- Coal: 80% of coal in was used in the coal plants in the region.



Industry

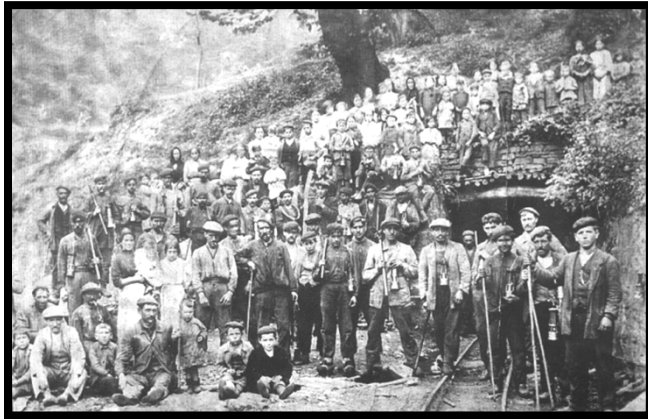
- In 2017 it was 23% of regional GDP
- Industry with high energy consumption (20% of regional industry is intensive in energy)
- Energy consumption: 69% for industry



Asturias. WHERE DO WE COME FROM?



GOBIERNO DEL
PRINCIPADO DE ASTURIAS



Past

- *Mining with centuries of history. Arnao Mine (1591 - 1915), First coal mine in Spain*
- *More than 2,000 mountain mines*
- *More than 73 mining vertical shafts*
- *Affected surfaces (hundreds of hectares) and problems of environmental affection*
- *Infinite (eternal) costs: water pumping, subsidence.*



Still important for us

Significant and strategic activity in Asturias:

- ▶ *Coal and Metal mining: gold, silver, copper.*
- ▶ *Rocks and industrial minerals: limestone, kaolin, fluorspa*
- ▶ *Other mineral resources:*
 1. *Mineral and thermal water*
 2. *Mine water geothermal energy*



Coal Mine Closure



WHERE ARE WE GOING?

- SCENARIO BY 2030 COMPARED TO 2017
- Power capacity (MW): -26,4 %
- Energy generation (MWh): - 54,2 %
- CO2 emissions (t CO2/year): -96,5 %

Uncertainty + certain risks: VERTIGO



DECARBONISED

Transition

Asturias: triple transition

- Closure of Coal extractive industry
- Coal power plants phase out
- Transition in industry intensive in Energy
- consumption and CO2 emissions

The success of Asturias regional transition will be a model to be replicated in other regions in Spain and Europe

**Who?
What?
Why?**

**When?
How?**

**Economic diversification
and transformation**

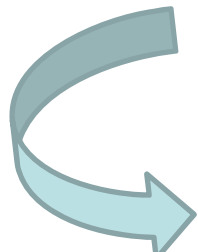
Technological disruption

Sustainability



WHERE ARE WE GOING?

Transition of the existing industrial model in this coal mining region to a new model



SPECIFIC AREAS WITH DIFFICULTIES



WHERE ARE WE GOING?



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

4-pillar approach



***Return hope
Last chance as region***

“People at the centre”



WHERE ARE WE GOING?

- *Identification and contact with relevant stakeholders.*
- ***Social dialogue.***
- *Workshops and meetings.*
- *Cooperation between different entities, associations and administrations.*
- *To receive proposals with different approaches.*

TRANSITION = MOTOR FOR REACTIVATION

- 1. INSTITUTIONAL LEVEL**
- 2. STRATEGIC LEVEL**
- 3. FINANCING MECHANISMS: DESIGN OF CALLS AND FUNDING OPPORTUNITIES**
- 4. IDENTIFICATION AND PRIORITIZATION OF PROJECTS**



GOBIERNO DEL PRINCIPADO DE ASTURIAS

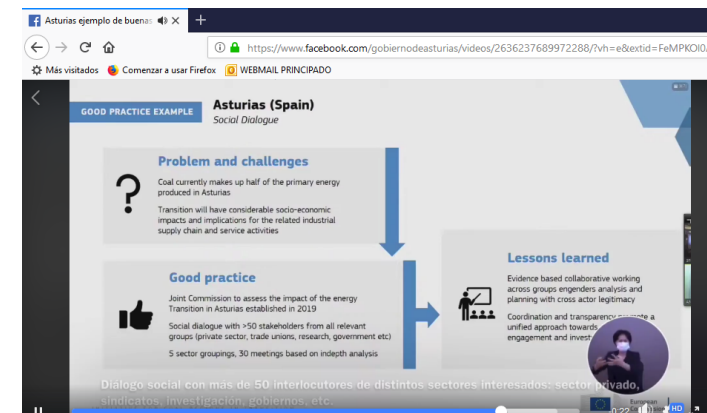
1. INSTITUTIONAL LEVEL

STRENGTHS

SUPPORT FROM UE AND SPANISH GOVERNMENT



- EUROPEAN PLATFORMS: COAL PLATFORM, JUST TRANSITION PLATFORM, **S3 Platform Mining on Industry Modernisation**, CLEAN HYDROGEN ALLIANCE



2. STRATEGIC LEVEL

➤ **Regional Committee to evaluate the impact of energy transition in Asturias.**

COOPERATION

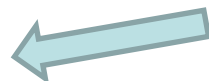


- *Involvement regional stakeholders*
- *Document -Executive Summary*
- *Public consultation*
- *Regional position paper in energy transition*

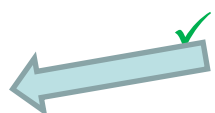
• **LESSONS LEARNED**

- ✓ *Knowledge of situation.*
- ✓ *weaknesses and threats*
- ✓ *Assesment of potential, capabilities and strengths*
- ✓ *Identification of opportunities:
Turning transition into an opportunity*
- ✓ *Never walk alone: being together through social dialogue*

Economic diversification and transformation



Support for workers



Need for re-skilling: formative itinerary

Recomendations



1. Energy strategy

- ENERGY STRATEGY: PLATFORM AND DG ENER
- JUST TRANSITION PLAN: DG REFORM
- RAW MATERIALS STRATEGY

Objetives

SUSTAINABLE TRANSFORMATION OF THE REGION REINFORCING THE REGIONAL INDUSTRY

GUARANTEE AND QUALITY OF ENERGY SUPPLY

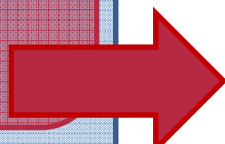
ALIGNMENT WITH EUROPE AND MADRID





3. FINANCING MECHANISMS AND 4. OPPORTUNITIES

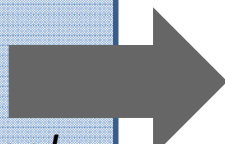
- A1. E-mobility
- A2. Gas mobility
- A3. Industrial residual heat
- A4. Hydrogen



**Private-public cooperation:
REGIONAL GROUPS**



- A5. Energy storage
- A6. Energy efficiency
- A7. Energy diversification: offshore, biomethane
- A8. Biomass
- A9. Rehabilitation of buildings



**Bilateral meetings
HUBS OF KNOWLEDGE**

- A10. Mine reclamation and coal plant areas/ uses with added value
- A11.HUNOSA: geothermal/ district heating or hibridation of Pereda
- A11. Circular economy

**GREEN DEAL
Next Generation EU**

REACT-UE: National Plan of Recovery, Transformation and Resilience
Just Transition Fund: JTF

EUROPEAN FUNDING

National funding: agreements for just transition

REGIONAL FUNDING

Why can transition become the motor of reactivation?



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

Asturias: industrial region

Infrastructures: energy and transport

Ecosystem of innovation

*Availability of raw materials (steel,
aluminium and zinc)*

*Strong sector of services, engineering
and capital goods*

*Mining and industrial culture: high
qualification professionals and
experience*

After coal mining ...

“NEW MINING RESOURCES”:



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

- Former mines as land and location for projects
- Mine water for hydraulical energy
- Mining knowledge
- Technology and equipment



STRENGTHS

BRIGADA DE SALVAMENTO MINERO



GOBIERNO DEL
PRINCIPADO DE ASTURIAS



Why can transition become the motor of reactivation?



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

Asturias: industrial region

Infrastructures: energy and transport

Ecosystem of innovation

*Availability of raw materials (steel,
aluminium and zinc)*

*Strong sector of services, engineering
and capital goods*

*Mining and industrial culture: high
qualification professionals and
experience*

*Actives related to mining activity: La
Pereda, geothermal, voids*

Mining and industrial heritage

GEOHERMAL ENERGY HUNOSA



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

“The future geothermal heat network project in Barredo will install an additional 2MWt, which will mean a total power of close to 6MWt, making up the first geothermal district heating in Spain” MIERES



1- Hospital Álvarez-Buylla



2- Edificio Campus Universitario



3- Fundación Asturiana Energía



4- Instituto Bernaldo Quiros



5- Edificio M9 - Mayocina



6- Edificio M10 - Mayocina



7- Escuela Pública Mieres

PRODUCTION IN 2016:

» RESEARCH CENTER: 201.393 kWh/año.

» Hospital Vital Álvarez Buylla 3.983.385 kWh/año.



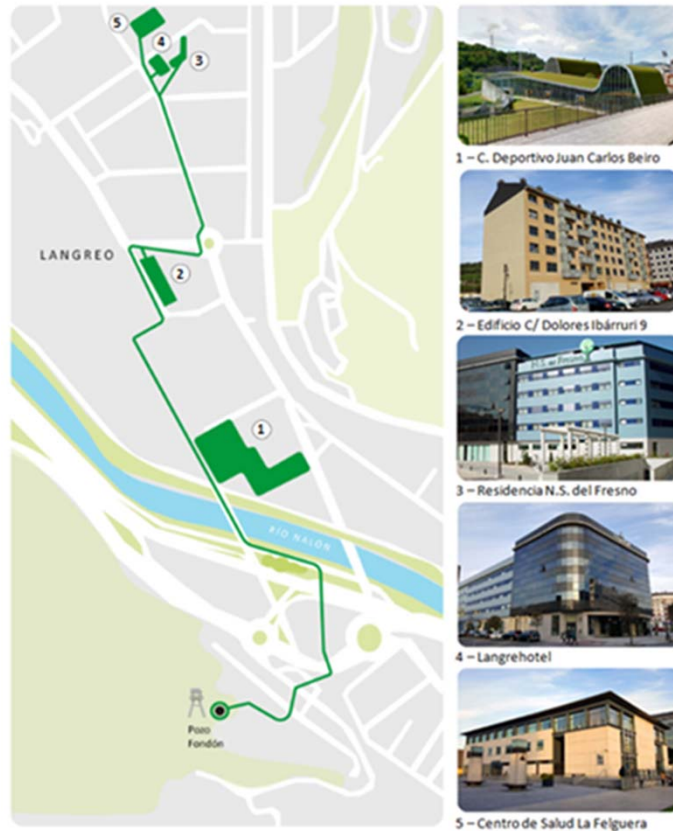
GEOHERMAL ENERGY HUNOSA



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

Langreo

FONDÓN DISTRICT HEATING: FUTURE



Pumping capacity: 200 m³/h
Power to be installed: 1,2 MWt

Requirements:

Sport center "Juan Carlos Beiro":	700 kW
Buildings (45 flats):	200 kW
Hotel + Geriatric care home:	700kW
Health centre area 8:	500 kW

Year 2018: DG Mining and Energy, Low Carbon european fund for regional development (EFRD) funding: 1.100.000 € for total investment of 1.700.000 €.

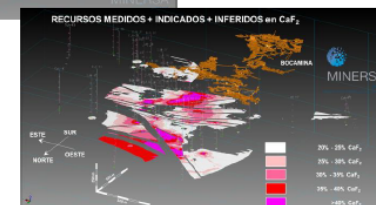
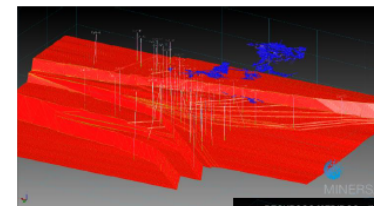
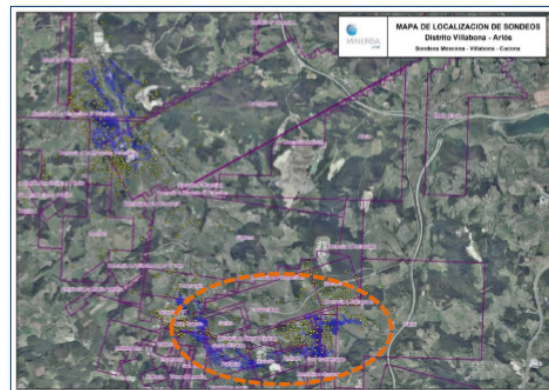
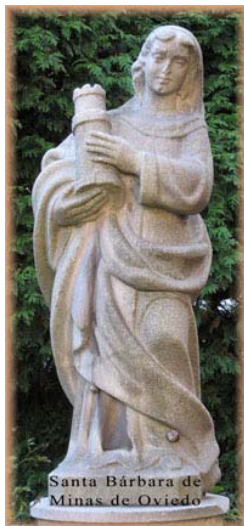




INDUSTRIAL MINING HERITAGE



TOWARDS MINING 4.0 AND INDUSTRY 4.0





Coal Mine Closure - Solutions in Asturias

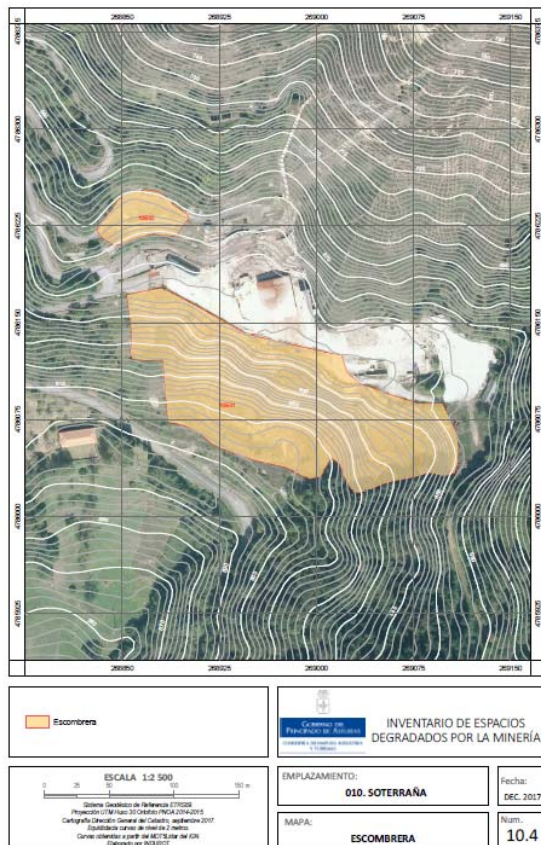


ALREADY RECLAIMED AREAS



Coal Mine Closure - Solutions in Asturias

INVENTORIES OF ABANDONED MINES



GOBIERNO DEL PRINCIPADO DE ASTURIAS
 CONSEJERÍA DE EMPLEO, INDUSTRIA Y FURBESM

INVENTARIO DE ESPACIOS DEGRADADOS POR MINERÍA

CÓDIGO	10	NOMBRE	La Soterraña
--------	----	--------	--------------

DATOS GENERALES

MUNICIPIO	33033	Lena			
COORDENADAS	Huza	XUTM	YUTM	LONGITUD	LATITUD
	30	269 131.8	4 786 214.1	-5.84	43.19
<small>El sistema de Referencia UTM/ETRS89 sobre el EPSG:31430 - Coordenadas Geográficas WGS84 (EPSG:4326)</small>					
REF. CATASTRAL	33033A04900173 / 33033A04911173				
PROPIETARIO	Siderfluor SA				
RECURSO	Sección	Mineral	Sustancia		
	C	Cinabrio	Mercurio		

DESCRIPCIÓN

Las labores correspondientes a la mina de mercurio de La Soterraña, se sitúan en la ladera sudoeste del monte Campuzas, a unos 600 m. al noreste del pueblo de Muñón Cimero y cerca del límite septentrional del término municipal de Lena.

Las labores mineras se centran principalmente por debajo de la cota 650 y las escombreras se encuentran en las inmediaciones, en una zona de ladera.

FOTOGRAFÍAS

Parque Cimero

Campuzas

San Juan



Coal Mine Closure - Solutions in Asturias

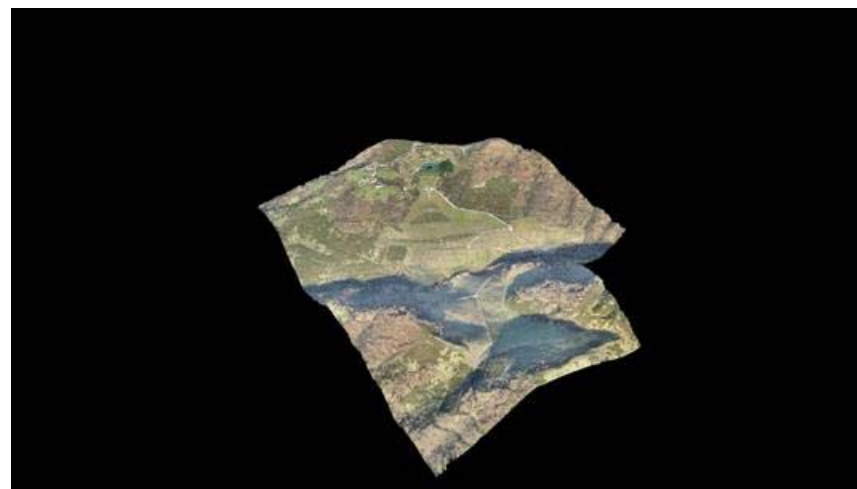
INVENTORIES OF ABANDONED MINES. RECLAMATION PLANS.





Coal Mine Closure - Solutions in Asturias

INVENTORIES OF ABANDONED MINES. DRONE FLIGHTS.



SUSTAINABLE MOBILITY



GOBIERNO DEL PRINCIPADO DE ASTURIAS

ELECTRICAL MOBILITY

Desarrollo de las estaciones de recarga FAEN

Instalación fija

Baterías de acumulación

Instalación aislada

Hibridación de soluciones

Experimentación



GAS AND H₂

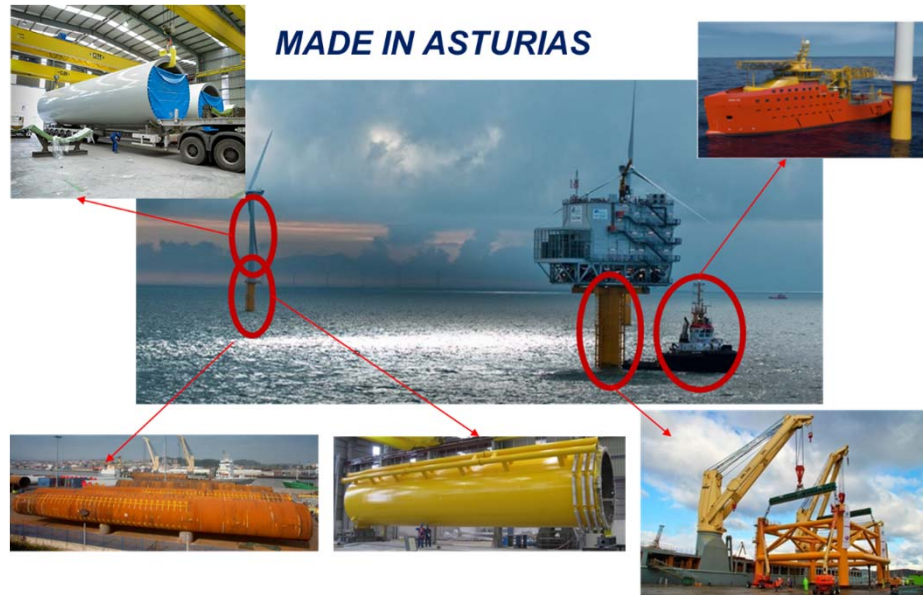


EMERGING TECHNOLOGIES



GOBIERNO DEL
PRINCIPADO DE ASTURIAS

Hub RENEWABLE ENERGIES Offshore



Hub SOLAR Energy





Summary:

- *Energy transition as an opportunity: new business models and stakeholders*
- Urgent strategies based on social cooperation
- *Aiming products and services with added value. Innovation and cooperation among sectors*
- *Identifying opportunities from our roots:*
- *Natural resources, sea, wind, experience*
- *as miners and energy producers*
- *Improve cooperation and governance between local, regional, National and European Authorities*
- *Public-private partnerships: social dialogue*
- *Pipeline of projects and Flag projects with added value: no magic solution*
- *To give our territories their own tools to diversify*
- *Good conditions and funding available*
- *Good flag projects*
- *Need to succeed: key moment*



REGIONS IN TRANSITION: A REGIONAL GOVERNMENT PERSPECTIVE

Thank you!!!!

María Belarmina Díaz Aguado
Director General Energy, Mining & Reactivation
Government of Asturias

December 4th 2020