JUSTEM

BRIEF

REGIONAL ENERGY TRANSITION

ASTURIAS

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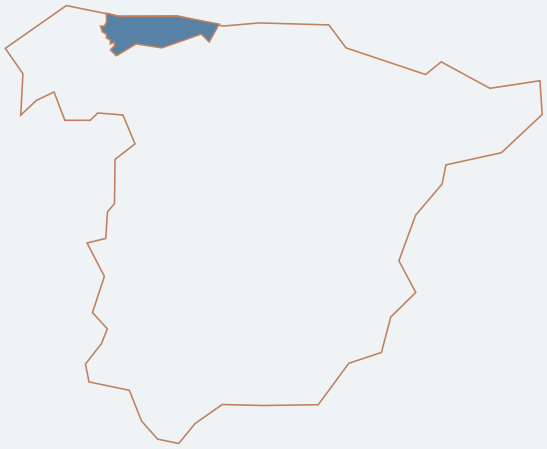
Region overview



Country: Spain

Region name: Asturias

NUTS2 code: ES12 Principality of Asturias

NUTS3 code: ES120 Asturias

Main urban centers in the region:

- Oviedo (population 220 020)
- Gijón (population 271 843)
- Avilés (population 78 715)

Area of the region	10 603,57 km²	2.1% of country
Population (2022)	1 005 397 persons	2.1% of country
GDP (2022)	23 441 mln. euros	1.94% of national GDP
Age distribution (2022)	61.52% under working age	63.93% in working age

The region of Asturias

Description of the region

Asturias region is currently surfing the challenge to lead one of the hardest energy and just transition processes in Europe. Asturias is situated in north-west Spain and the region's coal mining industry was concentrated in the south-west and central areas of the region, where the region's coal power plants are also located. The region is composed of 78 municipalities, of which 57 are severely or directly affected by coal mine closures and the phase out of coal power plants.

Asturias population represents 2.1% of the national population. The 57 municipalities affected by the coal mine closure and phase out process have a combined population of over 940 thousand, which represents more than 90% of the regional population. According to a projection study by the National Statistical Office in 2014, the the Spanish population is set to decrease in the coming 15 years by 2.2%, partly due to demographic ageing and a negative natural growth rate, as well as a negative migratory balance. Asturias is equally affected by population decline and ageing, and the situation is particularly acute in peripheral communities.

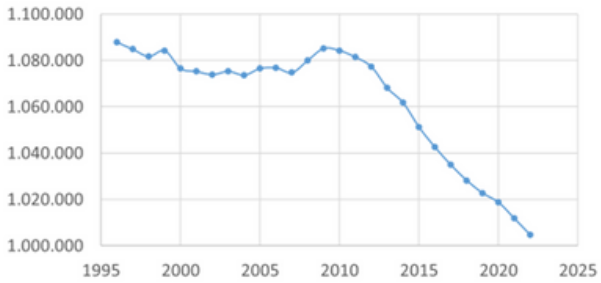


Figure 2 : Asturias Population Trend. Source (INE P. , Statistical Spanish Institute (INE), 2022)

Administrative structure

The Government of the Principality of Asturias, also known as the Council of Government of the Principality of Asturias, is the executive branch of the General Junta of Asturias, one of the autonomous communities of Spain. It is responsible for the political action, regulation and administration of the government of the autonomous region.

Based on the projected trends, Asturias could register one of the greatest decreases in population in relative terms by 2029 in Spain (–8.3%, preceded only by the region Castilla y Leon with -9%). In terms of an ageing population, the Asturias dependency ratio (i.e. ratio between the number of children plus people aged 65 and over and the number aged 15–64) is increasing to 39.12% by 2022, from 33.45% in 2006.

The evolution of the GDP in Asturias during las 20 years showed an incremental trend up to the financial crisis (2008), afterwards was slightly decreasing during 5 years and from 2014 has experimented a slight growth, only stopped by the COVID crisis, having the Asturias economy recovered the previous growing trend in 2021.

Coal mining

The rich coal supplies of Asturias were first mined at an industrial scale towards the end of the eighteenth century, yet this activity reached its full development in the second half of the following century. The proliferation of mining activity during the second half of the twentieth century leveraged the construction of a significant number of coal power plants in the region, Lada (1949), Soto de Ribera (1962), Soto de la Barca (1965), Aboño (1974), La Pereda (1990), and consequently, attracting the electro-intensive industrial sector to Asturias, where a multitude of industries from sectors like steel, cement, ceramics, chemicals or pulp and paper were set up and currently are in operation and contributing to the regional industry and GDP (Suárez, 2023).

Asturias has two coal-mining basins, known as the Central Asturian and Western Asturian. The closure of coal mines in Asturias is almost complete, only one remains open (Pozo San Nicolás), which is scheduled to close in 2023. The 5 coal-fired power plants were located in the centre of the region, where 80% of the population and most economic activity are concentrated. Coal-fired power generation capacity is being phased-out rapidly. In 2023, there are 3 coal-fired generation units in operation or available for operation. These remaining units are to be closed by 2030, yet earlier closures are possible. The decommissioning of regional coal power plants is significant not only from the perspective of electricity supply but also in terms of the service supplied by the grid – e.g. security and quality of supply – that are of importance for the region's industrial base, much of which is electro-intensive and dependent on reliable and affordable electricity supplies. Notably, it will affect the port of Gijon, which is the largest port in Spain for solid bulk cargoes, with an estimated 100,000 annual truck movements to transport coal from ports to power plants.

The closure of coal mines occurred on December 31, 2018, as a result of Council Decision 2010/787/EU, which forced mining companies to close non-competitive activity or return the aid received. Additionally, the Spanish NECP provided for the closure of all coal-fired electricity generation by 2030. Thus, Asturias, in addition to the closure of mines, is suffering or will, to undergo the closure process of four coal-fired thermal power plants (TPP): Lada (Langreo) (2020), Soto de la Barca (Narcea, Tineo) (2020) and Soto de Ribera (Ribera de Arriba) and Aboño (Gijón- Carreño) (closure plan before 2025). The closure process of these thermal power plants involves the closure of 2,222 MW of coal, 48,6% of the installed capacity in the region in 2017. During 2021, the installed capacity was 1.333 MW (36,25% of the total in the region). The objective for the year 2030 is that the new generation capacity installed will be mainly wind, both on land and offshore, and from other renewables, such as biomass and photovoltaics (FAEN, 2022).

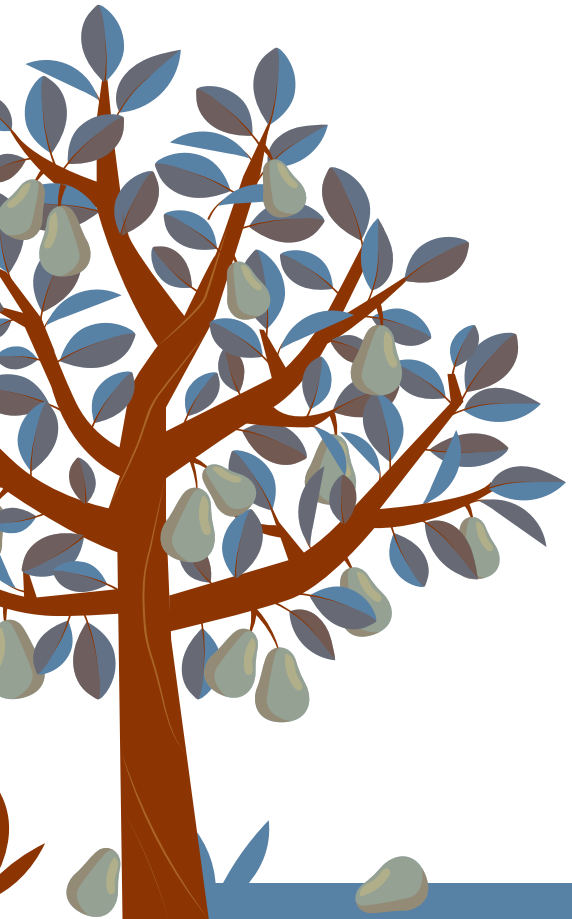
Coal-related environmental problems and land reclamation needs

The energy transition must not only guarantee the preservation of the Asturian natural heritage but also contribute to alleviating the negative effects of the activity linked to coal, thermoelectric generation and associated industries and make these areas pleasant places to live and with possibilities of developing new activities. For this, the territorial Just Transition Plan developed in Asturias aims actions, including but not limited to:

- Decontamination projects for degraded spaces and rehabilitation of mining, industrial and energy spaces and associated facilities, respect the principle of "whoever pollutes pays" and the adaptation for new uses and/or transformations to natural carbon sinks.

- Tourist-cultural enhancement of the mining-industrial heritage of the region, supporting initiatives for the adaptation of mining operations, thermal power plants or associated facilities, for their use for new uses: co-working, reactivation and revitalization projects, etc. under the criteria of the New European Bauhaus.

- Development of green infrastructures, associated with reactivation projects and sustainable tourism, in those territories most affected by the closure of mining activity and thermal generation.



Social aspects and employment

In the 1950s, 100.000 people were employed in the coal industry in Asturias. High extraction costs have since led to a gradual closure of mines in Spain, particularly in the region of Asturias. By 2022, the rate of employment in the coal industry had fallen to less than 850. The planned closures of the remaining coal mine and thermal power plants in the coming years puts the remaining direct jobs at risk.

Unemployment in the region (2023)	13,6%
Direct employees in the coal mining activity (2023)	829
• **of which with higher education**	141
Indirect employees in the coal sector (est.), (2022)	15.672 (est.)

Safe and stable coal-based electricity supply in Asturias has supported the development of an important electro-intensive industry, with the industrial sector having become the main regional economic activity. The cessation of the mining activity is thus expected to have a negative impact on the mainly electro-intensive industry with consequences for the related supply chain and service activities, notably port infrastructure, transport and logistics.

Asturias has a relatively low employment rate of 43,22 % (INE_EPA_Q1, 2023), compared to the national employment rate of 50.78%. The unemployment rate in Asturias was 13.1% in 2023 (Q1), compared to the national rate of 13.26% which is among one of the highest unemployment rates in the European Union at 6.2% (2022). Asturias has also a high youth unemployment rate of 37.8% (of 15 – 24-year-olds) in 2022, compared to the EU average of 14.5%, based on Eurostat (EUROSTAT, 2023). These trends are partly a consequence of different and continuous economic transitions.

Characteristics, trends and challenges of coal-related locations and communities

The population of Asturias is concentrated in the core (central) metropolitan area, formed by Gijon, Oviedo, Aviles, Siero, Langreo, and Mieres. The population is ageing with a slight decreasing trend, particularly acute in the peripheral communities, where the population density is low. The downturn of economic activity and lack of employment opportunities has led to an emigration of young people to other regions of Spain. Coal extraction was one of the major economic activities for the Asturias Region as a whole. The phase-out of coal mining and coal-related activities is expected to have a differential impact across the region. Of the 57 mining municipalities directly or indirectly impacted by the cessation of coal mining, 21 municipalities are expected to be severely and directly impacted by the energy transition.

Reskilling needs and vulnerable groups

The transformation of the economy will demand new professional profiles, which implies the need for requalification and/or training of the people most affected by the closures and especially young people, over 55 years of age and women. It seeks to promote socially necessary and environmentally acceptable jobs. It will be necessary to support actions (stated at TJTP of Spain, action AST6):

- Training in areas such as renewable energy and energy efficiency, green and circular economy, including decontamination and waste management or forest exploitation, sustainable and electromechanical mobility; and digital transformation, artificial intelligence and cybersecurity.
- Training in the field of entities immersed in ecological transition or digitization, in upskilling and reskilling and actions aimed at the acquisition of soft skills that complement the previous ones.
- Youth employment and socioeconomic integration of young people through aid programs aimed at promoting job creation through aid to companies to hire young people in sectors/territories directly related to the Transition.

Policies for the regional transition

Policy overview

The decarbonisation of the Spanish economy is set within a framework of 3 national strategies (see section on current strategies). These strategies refer to a phase-out by 2030 in the electricity market and the closure of the least productive coal mines in 2019.

In the case of Asturias, most of the coal mines ceased to operate in December 2018, and the closure of thermal coal power stations was in 2020. The other thermal coal power stations (1333 MW, generating more than 4500 GWh) are set to close before 2030. There has been a reduction in coal power plant activity due to an increased share of renewable technologies in the Spanish market. Moreover, the COVID-19 pandemic and related economic downturn is having an immediate effect on energy demand which will probably continue in the longer term. Therefore, the context for transition is uncertain and rapidly changing.

Main KPI for the transition

Reduce greenhouse gas emissions by 90% by 2050

Increase the share of renewables in final consumption to 42%

Increase energy efficiency by 39,6%

The resulting Territorial Plan for Just Transformation of Asturias 2030 is consistent with both national and regional documents. This plan considers the region's economic development, reducing the region's negative impact on the environment, and supporting residents in the energy transition. All documents created are consistent and aim at achieving the European Union's goal of climate neutrality by 2050.

Partners

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