



European
Commission

Regional Profile

Asturias, Spain

Initiative for coal regions in transition

EUROPEAN COMMISSION

Directorate-General for Energy

Directorate B – Just Transition, Consumers, Energy Security, Efficiency and Innovation

Unit B.1 - Consumers, Local Initiatives, Just Transition

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Asturias, Spain

GENERAL INFORMATION

Country: Spain

Region Name: Asturias

Region NUTS2 code: ES12

Region NUTS3 code: ES120

Main urban centres in the region¹:

Oviedo (population: 217,548)

Gijón (population: 268,313)

Avilés (population: 75,518)



1. National Statistics Institute (INE) – Data as of 2023: [Asturias: Población por municipios y sexo \(2886\) \(ine.es\)](#)

Regional socio-economic profile

General description of the socio-economic profile of the region

The Principality of Asturias is a region located in the north-west of Spain, which constitutes one of Spain's 17 autonomous communities. With a total population 1,006,060 inhabitants², the region represents 2.1% of the total national population³. It has a population density of 94.73 inhabitants/km²⁴, closely mirroring the national average of 94.67 inhabitants/km². However, the population density is unequally distributed throughout the region, with the central area covering the urban centres and most of the population and economic activity. Although the region possesses an ageing population, the population decrease has been mitigated by migration from South and Central America, resulting in a minor population decrease in the last 20 years⁵.

The unemployment rate (11.4%⁶) is comparable to the national average (12.3%⁷). This shows a slight decrease since 2018, when regional and national unemployment rates were 13.6%⁸ and 15.3%⁹ respectively. However, the decrease at the Asturian level has been slightly lower than the national one. With respect to employment by sector, 13% are employed in industry, 2.5% in the agricultural sector, 7.3% in construction and 71% by services, mirroring the national averages of 3.7%, 12%, 6.2% and 72% respectively¹⁰. Concerning educational attainment, the rate of population with tertiary education is relatively high (43.6%), with 25.8% and 30.6% secondary/post-secondary non-tertiary education and less than secondary education levels, respectively¹¹. The GDP per capita is lower than the national average - EUR 25,675 in Asturias compared to the Spanish level of EUR 28,162¹².

Regional coal industry profile			
Coal mining			
Type of coal (e.g. hard, lignite/brown, peat, oil shale)	Hard coal and anthracite		
Type of coal extraction (e.g. surface or deep mining)	Surface (Open-pit mining)		
Number of operating coal mines	1		
Production of coal [Mt annual]	0.0713 Mt	Year of prod. data:	
		2023 ¹³	
Main coal mining enterprises			
Name	Ownership	Number of employees	Year of employee data
HUNOSA	Public	430	2024
Total level of employment in coal mining (in the region)		Circa 150-200 ¹⁴	2024

2. National Statistics Institute (INE) – Data as of 1 January 2023: [Población residente por fecha, sexo y edad \(desde 1971\)\(56940\) \(ine.es\)](#)

3. National Statistics Institute (INE) – Data as of 1 January 2023: [Población residente por fecha, sexo y edad \(desde 1971\)\(56940\) \(ine.es\)](#)

4. Sociedad Asturiana de Estudios Económicos e Industriales (SADEI) – Data as of 2022: [Evolución e indicadores \(sadei.es\)](#)

5. Asturian Science, Competitiveness and Innovation Agency (SEKJENS): [Demografía - IDEPA](#)

6. Sociedad Asturiana de Estudios Económicos e Industriales (SADEI) – Data as of 2024: [EPA \(sadei.es\)](#)

7. Sociedad Asturiana de Estudios Económicos e Industriales (SADEI) – Data as of 2024: [Microsoft Word - EPA_2024-01.docx \(sadei.es\)](#)

8. Sociedad Asturiana de Estudios Económicos e Industriales (SADEI): [EPA \(sadei.es\)](#)

9. National Statistics Institute (INE): [Sección prensa / Encuesta de Población Activa \(EPA\) \(ine.es\)](#)

10. National Statistics Institute (INE) – Data as of 2023: [Distribución porcentual de los activos por sector económico y provincial\(3994\) \(ine.es\)](#)

11. Eurostat – Data as of 2023: [Statistics I Eurostat \(europa.eu\)](#)

12. National Statistics Institute (INE) – Data as of 2022: [INEbase / Economía / Cuentas económicas / Contabilidad regional de España / Últimos datos](#)

13. Sociedad Estatal de Participaciones Industriales (SEPI) – Data as of 2022: [sepi.es/sites/default/files/2023-11/grupo_sepi_ia_2022.pdf](#)

14. This range refers to the employees in the colliery

Regional coal power plant profile			
Coal power plants			Year of data
Number of coal power plants	3		2024 ¹⁵
Installed capacity [MW]	1,289MW		2022 ^{16,17,18}
Share of coal in regional power generation mix [%]	33% ¹⁹		2022
Main coal power plant operators			
Name	Ownership	Number of employees	Year of employee data
EDP	Private	366	2017
HUNOSA	Public	86	2017
Total level of employment in coal power plants (in the region)		452	2017

Regional and local transition strategies and plans

Status and timeline of coal transition / phase-out

With most coal mines having closed by the end of 2018, the national framework for decarbonisation of the Spanish economy foresees the phase-out of coal in the electricity market by 2030. This framework includes one key piece of legislation - the National Climate Change and Energy Transition Law²⁰ - and 3 national strategies: the Integrated National Energy and Climate Plan 2021-2030²¹, the Just Transition Strategy²², and the Long-term Decarbonisation Strategy²³. Recent economic, technical and regulatory developments have accelerated this process, so all coal-fired power plants have now either closed, are in the process of closure, or are subject to short-term closure plans, with total coal closure expected around 2025.²⁴

In the case of Asturias, most of the coal mines ceased to operate in December 2018, with only the San Nicolás Coal Mine still open in 2024. Similarly, most of the region's thermal coal power stations closed in 2020 and the three remaining coal power plants are slated for closure by 2030, with closure before this date likely. The Just Energy Transition Strategy of Asturias²⁵ does not set a specific date for coal phase-out goals but instead refers to

gradually reducing coal consumption, primarily limiting its use to the iron and steel industry, and aiming to achieve a carbon-neutral energy system by 2050²⁶.

Current regional strategies and plans for transition

Key strategies and plans for transition are:

The **national-level Territorial Just Transition Plan (TJTP)**²⁷: this national strategy includes various measures for Asturias, as Asturias has not developed its own TJTP. Key actions include:

- The **green transformation of industry**, exemplified by the use of green hydrogen in industrial processes. Sustainable mobility efforts are included, with initiatives aimed at deploying technologies that reduce fossil fuel consumption in transportation. The circular economy is promoted through the implementation of collaborative industrial symbiosis models designed to minimise resource consumption.
- Energy efficiency enhancements are part of the plan, particularly in industrial processes such as sustainable mining, to reduce energy use and emissions. The promotion of renewable energy value chains is a critical area, with support for the development of green hydrogen production and energy storage facilities.

15. La Voz de Asturias – Data as of 2024: [¿Cómo es la nueva vida de las térmicas en Asturias? \(lavozdeasturias.es\)](https://www.lavozdeasturias.es)

16. EDP: [Año | EDP España](https://www.edp.es)

17. EDP: [Centro Productor Térmico de Soto de Ribera | EDP España](https://www.edp.es)

18. Grupo HUNOSA – Data as of 2022: [HUNOSA gana la subasta de renovables para transformar la térmica de La Pereda en una central de biomasa - Grupo Hunosa, innovación, experiencia, energía](https://www.hunosa.com)

19. Red Eléctrica – Data as of 2022: [El parque de generación renovable en Asturias alcanza el 42% \(ree.es\)](https://www.ree.es)

20. BOE-A-2021-8447; [BOE-A-2021-8447 Ley 7/2021, de 20 de mayo, de cambio climático y transición energética](https://www.boe.es)

21. Ministry for the Ecological Transition and the Demographic Challenge (2020): [plannacionalintegradoenergíayclima2021-2030_tcm30-546623.pdf \(miteco.gob.es\)](https://www.miteco.gob.es)

22. Just Transition institute – ITJ (2020). Available at: [Just Transition Strategy_ENG.pdf \(transicionjusta.gob.es\)](https://www.itj.gob.es)

23. Ministry for the Ecological Transition and Demographic Challenge (2020): [ELP_2050.pdf \(miteco.gob.es\)](https://www.miteco.gob.es)

24. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2023). [Spain, 4 years towards a just energy transition](https://www.miteco.gob.es)

25. Government of the Principality of Asturias & FAEN (2021). [Just Energy Transition Strategy for Asturias](https://www.asturias.es). Available at: [Borrador Estrategia Transición Energética Justa Asturias](https://www.asturias.es)

26. Ibid.

27. Spanish Territorial Just Transition Plan 2021-2027. Available at: [PLAN_FTJ_ESP_2021-2027.pdf \(transicionjusta.gob.es\)](https://www.transicionjusta.gob.es)

- The plan includes **support for SMEs and key business projects to drive economic diversification**. This includes projects that facilitate the transition to a green and digital economy, in addition to training actions, particularly for young people and in areas facing depopulation.
- **Research, development, and innovation** are bolstered within the plan, alongside the integration of information and communication technologies (ICT) and digital transformation initiatives. For example, the plan focuses on the digital transformation of SMEs, incorporating artificial intelligence and hyper-automation technologies.
- Lastly, the TJTP emphasises **environmental rehabilitation and the promotion of sustainable tourism**. The plan includes initiatives to mitigate the negative effects of coal-related activities, turning affected areas into more liveable spaces with new development opportunities.

The Just Transition Institute (ITJ) is responsible for the implementation of two key strategies: the **Framework Agreement for a Just Transition of Coal Mining and Sustainable Development of the Coal Mining Regions for the period 2019-2027**²⁸, as well as the Just Transition Agreements. The former extended and improved the social measures covered by Decision 2010/787/EU²⁹ and also incorporated new instruments related to restoration, plans related to energy transition as well as governance, effectively introducing just transition agreements.

- The **restoration efforts** were funded through the national Recovery, Transformation, and Resilience Instrument financed by the NextGenerationEU recovery plan³⁰. Of this, EUR 82.3 million was allocated to Asturias through the national government, to be managed by the regional government. The investments from these projects aim to help soils and water bodies recover and promote economic alternatives in the affected regions. These efforts are expected to generate approximately 350 direct jobs, prioritising surplus coal mining workers who are part of the employment pool managed by the ITJ³¹.
- The **Just Transition Agreements (JTAs)** introduced by the 2019-2027 Framework Agreement: these agreements serve as a co-governance tool to

ensure commitment and coordination among public administrations at national, regional, and local levels. They propose support instruments to facilitate the revitalisation of these areas and are grounded in extensive public participation processes and the assessment of socio-economic impacts at the local level³². 3 JTAs are being implemented in three sub-regions of Asturias (Suroccidente³³, Caudal-Aboño³⁴ and Nalón³⁵)³⁶.

The regional government's Just Energy Transition Strategy of Asturias³⁷: this regional strategy includes different measures and objectives regarding economic development, industrial diversification and decarbonisation.

- **Economic development** measures focus on attracting substantial investments in energy transition-related projects, aiming for over EUR 1.9 billion by 2025 and EUR 6.5 billion by 2030, creating 3,600 jobs by 2025 and over 6,300 jobs by 2030. Support is provided to vulnerable areas through Just Transition Agreements to stimulate new economic activities and job creation, aligning with the 2019-2021 Urgent Action Plan for Coal Regions and Closing Power Plants. Rural development is promoted to mitigate depopulation and stimulate local economic growth through renewable energy projects.
- **Industrial diversification** measures include promoting diverse energy sources, such as wind, biomass, hydrogen, biogas, and alternative fuels, ensuring energy-intensive industries remain competitive, and fostering new sectors focused on emerging technologies. Enhancing R&D is targeted at advancing energy technologies and fostering innovation.
- **Decarbonisation** measures aim to reduce fossil fuel dependence by limiting coal use, increasing renewable energy use to 55% by 2025 and 72% by 2030, and improving energy efficiency with a 26% reduction in primary energy consumption by 2030. Additionally, the plan includes advancing grid electrification and digitalisation to support new energy sources and technologies.

28. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2024). Available at: [ITJ interior - EN \(transicionjusta.gob.es\)](#)

29. 2010/787/EU: Council Decision of 10 December 2010 on State aid to facilitate the closure of uncompetitive coal mines: [Decision - 2010/787 - EN - EUR-Lex \(europa.eu\)](#)

30. Government of Spain (2021). Available at: [160621-Plan Recuperacion Transformacion Resiliencia.pdf \(lamoncloa.gob.es\)](#)

31. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2024). Available at: [ITJ interior - EN \(transicionjusta.gob.es\)](#)

32. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2022). Available at: [220707_Spain_JustTransition.pdf \(transicionjusta.gob.es\)](#)

33. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2020). Available at: [CaracterizacionDiagnostico_SuroccidenteAsturias.pdf \(transicionjusta.gob.es\)](#)

34. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2020). Available at: [Caracterizacion Diagnostico ValleCaudal_Aboño_Unificacion_abril23.pdf \(transicionjusta.gob.es\)](#)

35. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2020). Available at: [CaracterizacionDiagnostico_ValleNalon.pdf \(transicionjusta.gob.es\)](#)

36. Ministry for the Ecological Transition and Demographic Challenge and ITJ (2024). Available at: [ITJ interior - EN \(transicionjusta.gob.es\)](#)

37. Ibid.

Principal actors in development and implementation of transition strategies and plans

At national level:

- Ministry for the Ecological Transition and Demographic Challenge
- National Institute for Diversification and Energy Improvement
- Institute for Just Transition (ITJ)

At the regional level:

- Asturian Just Transition Observatory (OTJA)
- Regional Ministry for the Ecological Transition, Industry and Economic Development
 - Directorate-General for Energy and Mining (DGEM)
- Asturian Energy Agency (FAEN)
- Asturian Science, Competitiveness and Innovation Agency (SEKUENS)
- Federation of Asturian Companies (FADE)
- Federation of Asturian Metal Companies (FEMETAL)
- Asturian Federation of Municipalities (FACC)
- Chambers of Commerce (Oviedo, Gijón, Avilés)
- HUNOSA Group
- EDP
- Trade Unions:
 - Unión General de Trabajadores (UGT)
 - Comisiones Obreras (CCOO)
 - Sindicato de los Obreros Mineros de Asturias (SOMA)

At the local level:

- Chambers of Commerce (Oviedo, Gijón, Avilés)
- School of Engineering of Mines, Energy and Materials from the University of Oviedo
- Municipality of Oviedo
- Municipalities of the Caudal and Aboño JTA: *Aller, Lena, Mieres, Morcín, Quirós, Ribera de Arriba, Riosa, Teverga, Gozón, Carreño, Corvera de Asturias, Llanera, Gijón and Villaviciosa.*
- Municipalities of the Southwest JTA: *Degaña, Tineo, Cangas del Narcea, Salas, Allande e Ibias.*
- Municipalities of the Nalón JTA: *Langreo, Laviana, San Martín del Rey Aurelio, Bimenes, Caso, Piloña y Sobrescobio.*

Regional and local transition projects and initiatives

Notable ongoing and recent transition-related initiatives and projects

Key ongoing initiatives and projects are:

- The Asturian Hydrogen Valley: this project encompasses the HyDeal project by ArcelorMittal³⁸, which is central to the region's shift from coal to hydrogen. The ReCoDe initiative further supports this transition by focusing on competitive decarbonisation³⁹. A key infrastructural development within this project is the Gijon Aviles distribution network, a 20 km hydrogen distribution network. Additionally, various hydrogen generation projects are supported by EDP⁴⁰ and IPCE⁴¹, marking significant steps towards renewable energy sources.
- Infrastructure Projects Programme for Mining Municipalities: with a total budget of EUR 101 million, this programme funds 57 projects aimed at revitalising mining areas. The funding structure includes 75% from the national-level Just Transition Institute (ITJ) and 25% from the Asturias regional budget, with the programme set to run until 2026. In conjunction with infrastructure projects, mining reclamation projects are also underway, with EUR 93.4 million allocated for seven reclamation projects. These projects prioritise employment for miners and local residents, contributing to both environmental restoration and social stability.
- FAEN's citizen energy community projects⁴²: these provide support for the establishment and management of community energy initiatives and has collaborated in a study about the effect of RES projects with the Juan Carlos I University in Madrid. Through these efforts, FAEN aims to enhance local energy independence and sustainability through citizen involvement. In addition, FAEN's Biowind INTERREG project aims to improve energy transition strategies and increase social acceptance of wind projects⁴³. This project involves setting up regional stakeholder groups to address main barriers and find solutions.

38. Eshidrogeno (2023): [Nueva planificación de Hydeal para la producción de hidrógeno verde - eshidrogeno](#)

39. Government of Asturias (2022): [El Instituto de la Energía impulsa con cerca de 40 millones cuatro proyectos asturianos para la producción de hidrógeno verde - El Instituto de la Energía impulsa con cerca de 40 millones cuatro proyectos asturianos para la producción de hidrógeno verde - Actualidad \(asturias.es\)](#)

40. EDP: [Asturias H2 Valley | EDP España](#)

41. IPCE: [EDP - Asturias H2 Valley \(ES4B\) - IPCEI Hydrogen \(ipcei-hydrogen.eu\)](#)

42. FAEN: [Proyectos archivo - Faen](#)

43. FAEN: [BIOWIND \(faen.es\)](#)

- Hunosa's transition and mine shaft repurposing projects: Hunosa's transition projects represent a broad spectrum of renewable energy and repurposing initiatives. Biomass projects, such as the LIFE project "Carbon2mine"⁴⁴ and the conversion of a thermal power plant to a 50 mw biomass power plant⁴⁵, are key components. Additionally, a biomass cluster is being developed to foster sector growth⁴⁶. Solar projects include the development of photovoltaic parks on restored mining lands, with a combined capacity of 13 MW⁴⁷. Mine water projects feature mini hydraulic power generation for self-consumption and district heating systems using mine water. Moreover, Hunosa is developing hydrogen generation from mine water, including a 2.5 mw hydrogen generation project that utilises remaining heat for district heating. Lastly, Hunosa's mine shaft repurposing projects are transforming old mine shafts for new uses, such as tourism, professional training/defence purposes, and agri-food activities, demonstrating innovative approaches by making use of existing infrastructure⁴⁸.

Notable planned transition-related initiatives and projects

Beyond the current initiatives, HUNOSA is planning a variety of renewable energy projects in the areas of geothermal, solar, biomass, and hydroelectric energy⁴⁹. In addition, HUNOSA also plans future projects aimed at fostering energy efficiency measures and generating hydrogen to help decarbonise the transport sector⁵⁰. This organisation plans to expand their current operations and increase the number of employees to close to 500.

The OTJA plans to develop new indicators and monitoring mechanisms to track the progress of transition projects, with planned updates and revisions set for June 2024 in line with the 2021-2030 Integrated National Energy and Climate Plan.

Regional and local transition challenges and opportunities

Nature and scale of key transition challenges

The Spanish model, which relies on Just Transition Agreements, aims to encourage projects that start within the region⁵¹. However, the fast-paced move away from coal conflicts with the time it takes to develop sustainable local innovation, highlighting the challenge of balancing the urgent need for political action with the slower pace of creating innovation hubs in vulnerable areas (see examples of some ongoing and planned projects above). Spanish coal regions often heavily rely on outside resources such as skills, investments, technologies and workforce⁵². In this context, the region is facing a series of **economic & industry-related, financing, strategic implementation, social & demographic challenges**, as well as challenges related to **indicators and monitoring**.

Economic & industry-related challenges include dependence on large companies and the lack of capacities of SMEs and micro-enterprises. On the one hand, Asturias' economy is heavily reliant on large companies in the energy and metal sectors. There is concern that these companies might relocate or reduce operations, jeopardising the transition process. At the same time, micro-enterprises which make up the majority of companies in Asturias (96%) and SMEs (3.9%)⁵³ face difficulties in accessing funding and meeting complex regulatory and administrative requirements (e.g. short deadlines).

Building on this, SMEs, micro-enterprises and municipalities in Asturias are also facing strategic **implementation challenges**. The fact that these firms lack the experience and capacity to apply for funds effectively creates a complex environment that is difficult for them to navigate. Projects often do not survive beyond initial aid, and there is a need to improve the quality of business plans and cash flow understanding among SMEs. In addition, SMEs, together with municipalities, require capacity building to prepare and execute just transition projects.

44. Carbon2Mine: [Carbon2Mine LIFE | EL PROYECTO](#)

45. Grupo Hunosa (2023): [HUNOSA adjudica el proyecto y obra de la transformación a la biomasa de la central de La Pereda - Grupo Hunosa, innovación, experiencia, energía](#)

46. SEKJENS (2021): [Nace el Polo Tecnológico y Empresarial de la Biomasa en Asturias, liderado por HUNOSA con el apoyo de más de treinta entidades - IDEPA](#)

47. La Nueva España (2022): [Hunosa instalará en la escombrera de Pumardongo una de las mayores plantas solares de Asturias - La Nueva España \(lne.es\)](#)

48. Grupo HUNOSA: [Energía - Grupo Hunosa, innovación, experiencia, energía](#)

49. Ibid.

50. Grupo HUNOSA (2024): [La UE impulsa el proyecto de planta de hidrógeno verde en el pozo Fondón de Langreo con 9 millones de euros - Grupo Hunosa, innovación, experiencia, energía](#)

51. Sanz-Hernández, A., Ferrer, C., López-Rodríguez, M. E., & Marco-Fondevila, M. (2020). Visions, innovations, and justice? Transition contracts in Spain as policy mix instruments. *Energy Research & Social Science*, 70, 101762. Available at: [Visions, innovations, and justice? Transition contracts in Spain as policy mix instruments - ScienceDirect](#)

52. Sanz-Hernández, A. (2024). Temporal negotiations and injustices in the energy transition: Perspectives from a Spanish coal region. *Energy Research & Social Science*, 110, 103453. Available at: [Temporal negotiations and injustices in the energy transition: Perspectives from a Spanish coal region - ScienceDirect](#)

53. SEKJENS. Data as of December 2023: [Tejido empresarial - IDEPA](#)

In addition to the difficulties SMEs face in accessing funding, **financing challenges** are particularly relevant for Asturias' residential sector, as this is a highly heterogeneous sector, making it challenging to propose a common strategy. Its role is primarily that of an energy consumer, with limited negotiation capacity and difficulties in accessing financing⁵⁴. In addition, technological (co-) financing challenges arise from adopting new and often immature technologies, requiring substantial investment and co-financing. In fact, some actors have raised concerns that co-financing 20% of the needed investments for projects under the Just Transition Fund may be insufficient and that technical requirements are difficult to achieve within short deadlines.

Social and demographic challenges resulting from the ageing population and depopulation of rural areas of Asturias are also complicating efforts to create and sustain employment. Moreover, there is resistance from the local community to new energy projects due to concerns about the commitment of companies and the impact on the community.

Lastly, concerning **monitoring and indicators**, better monitoring and evaluation of transition projects are needed through relevant indicators that can be regularly updated to provide transparency on the progress and impact of the transition. This is particularly relevant for the work of the OTJA.

Nature and scale of key transition opportunities

Asturias has significant opportunities for energy production, leveraging renewable resources like onshore and offshore wind, as well as biomass resources from forests. The region also has facilities for energy recovery from industrial waste and existing infrastructures that can be repurposed for new energy uses. This includes the Musel gas plant, just transition nodes^{55,56}, and former mining and hydraulic sites for energy storage. A network of auxiliary companies is ready to support these initiatives⁵⁷.

In addition, Asturias' electro-intensive industry can play a crucial role in demand management within the new energy model where consumers are more active. This industry demands extensive electric grid services, leading to a robust network in the region's centre. Building on this, the region's industrial sector can capitalise on the energy transition. Specialising in metal manufacturing and industrial plant engineering, Asturias is well-equipped to develop components for photovoltaic, solar thermal, and marine renewable energies. These capabilities are under threat from non-EU imports and should be enhanced through innovation and value-added improvements.

New markets like green hydrogen, energy storage, and alternative mobility are emerging. Asturian companies are already positioning themselves in these areas. Complementing industrial capacities is a strong regional knowledge network, with specialised energy research groups. Their work can drive the technological renewal needed for the energy model and the specialisation of the energy and industrial sectors.

Asturias' industrial capabilities and research organisations provide a highly qualified workforce, essential for competitive projects that attract investment and generate activity. This can drive the region's economic revitalisation while ensuring a just energy transition on the ground^{58,59}.

54. Joint Commission to Evaluate the Impact of the Energy Transition in Asturias (2021), Executive document: Current situation, forecasts and recommendations. Available at: [Comisión Mixta para Evaluar el Impacto de la Transición Energética en Asturias](#)

55. The so-called just transition nodes are those where the access capacity to the electrical grid, freed up after the closure of thermal or nuclear power plants, is allocated through a tender process to be used by new renewable energy plants that connect to the node. The access capacity is granted based on criteria of socio-economic and environmental benefit for the areas affected by the closures.

56. Ministry for the Ecological Transition and Demographic Challenge and ITJ. Available at: [Páginas - Nudos de transición justa \(transicionjusta.gob.es\)](#)

57. Joint Commission to Evaluate the Impact of the Energy Transition in Asturias (2021), Executive document: Current situation, forecasts and recommendations. Available at: [Comisión Mixta para Evaluar el Impacto de la Transición Energética en Asturias](#)

58. Government of the Principality of Asturias & FAEN (2021). Just Energy Transition Strategy for Asturias. Available at: [Borrador Estrategia Transición Energética Justa Asturias](#)

59. Joint Commission to Evaluate the Impact of the Energy Transition in Asturias (2021), Executive document: Current situation, forecasts and recommendations. Available at: [Comisión Mixta para Evaluar el Impacto de la Transición Energética en Asturias](#)

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Initiative for coal regions in transition

The Initiative for coal regions in transition is led by the European Commission.

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