

NEw competences for workers' representatives in a Sustainable Energy Transition

Report on the institutional framework for a just energy transition and the role of industrial relations in Europe

ADAPT

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1. INTRODUCTION

This report is intended to provide an overview on key public policies for green energy transition and the normative framework for the involvement of industrial relations in the process, in the European Union (EU) as well as in the five EU countries participating in the 'Next Step: TRANSITION' project, namely Italy, Spain, Germany, Belgium and Bulgaria. Data and information included in this report have been mainly extracted via online documentary research as well as semi-structured interviews conducted with 12 national trade unionists operating in the energy sector and 9 national experts from Italy (2 unionists and 2 experts), Spain (2 unionists and 1 expert), Germany (2 unionists and 2 experts), as well as with 4 EU-level trade unionists (2 respectively from IndustriAll Europe and EPSU) and experts (2).

The report is therefore structured in three main parts: the first covering public policies for green energy transition at the EU level; the second comparing Italy, Spain, Germany, Belgium and Bulgaria as for their respective energy profiles and public initiatives for green transition; the third focusing on the institutional framework for the involvement of industrial relations in green transition processes at the EU level and in the five considered countries.

2. A JUST TRANSITION IN THE EU AT THE INTERSECTION BETWEEN ENVIRONMENTAL ISSUES AND HEALTH AND SAFETY

2.1. The green transition and climate agenda at the EU level

The preservation and improvement of the quality of the environment and the protection of human health are central issues that the European Union (EU) must address (Article 191, Treaty on the Functioning of the European Union – TFEU). The TFEU underlines, also, the importance of careful and rational use of natural resources and on precautionary and preventive actions, while promoting measures at the international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

In accordance with these objectives, since the 1970s, the European Commission has issued multiannual **Environment Action Programmes** (EAPs), setting out forthcoming legislative proposals and goals for EU environment policy, also underlining the need for reducing environmental and climate pressures related to production and consumption (particularly, in the areas of energy, industry, buildings and infrastructures, mobility, tourism, international trade and the food system).

In 1999, during its <u>meeting in Helsinki</u>, the European Council set a new strategic goal for the Union underlining the importance "to actively promote more widespread use of new technologies and develop the information society to support competitiveness,





















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employment and social cohesion". In this sense, the European Council also invited the European Commission "to prepare a proposal for a long-term strategy dovetailing policies for economically, socially and ecologically sustainable development to be presented to the European Council in June 2001". Therefore, the first European Commission's <u>Sustainable Development Strategy</u> was approved in 2001, outlining overall objectives and actions to achieve a continuous long-term improvement of quality of life.

However, it is only in December 2019 that the European Commission set out its major commitment to tackling climate and environmental-related challenges. The **EU Green Deal** is the new growth strategy which aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy, setting the goal to reduce emissions by at least 55% by 2030, compared to 1990 levels, with the final aim of completely eliminating emissions by 2050.

The climate action of the EU was further developed in the 2021 Regulation establishing the framework for achieving climate neutrality ('European Climate Law'), which translates into legally binding goals the scenario set out in the EU Green Deal. In particular, it establishes a legally binding target of net zero greenhouse gas emissions by 2050, as well as other ambitious targets for 2030, in order to set Europe on a responsible and effective path towards climate neutrality. This regulation provides also for a system of measures to keep track of progress and adjust the actions, or to take them further if needed, based on Member States' National Energy and Climate Plans. The latter are meant to specify how EU Member States intend to address issues, such as: energy efficiency; renewables energy; greenhouse gas emissions reductions; interconnections between the twin digital and green transitions and the reconversion of different territories and sectors; the specific national commitments in research and innovation. They were introduced in 2018 by the Regulation on the governance of the energy union and climate action, and then integrated in the Clean energy for all Europeans package, adopted in 2019.

As seen in the description of the above policy initiatives and regulations, inevitably linked to the objective of climate neutrality, are energy supply, transformation and consumption. In this regard, through the 2019 'Clean Energy for All Europeans' package, the EU has also set up an ambitious decarbonisation agenda, by entailing, in particular, the construction of a robust energy union and the achievement of the 2030 goals for energy efficiency and deployment of renewable energy. The package consists of eight new laws regarding: energy performance in buildings; renewable energy; energy efficiency; governance regulation; electricity market design; adoption process for the legal acts.

Also, the European Union has set the path and the objectives to cut greenhouse gas emissions by 2030 and evolve towards more sustainable energy sources, finalising the so-called 'Fit for 55' package, including in particular drafts of EU climate and energy legislation to underpin the bloc's political pledge to cut greenhouse-gas emissions by at least 55% in 2030 compared with 1990 levels. Released in two batches in July and December 2021, it is the biggest revision of climate and energy legislation to date. It includes a proposal for a revision of the renewable energy directive, to increase the

























current EU-level target of at least 32% of renewable energy sources in the overall energy mix to at least 40% by 2030; it contains a specific focus on energy efficiency, aiming to revise the current energy efficiency directive by increasing the current EU-level target for energy efficiency from 32.5% to 36% for final, and 39% for primary energy consumption; it proposes a revision of the Council directive on the taxation of energy products and electricity, aiming to align the taxation of energy products and electricity with the EU's energy, environment and climate policies preserve and improve the EU internal market by updating the scope of energy products and the structure of rates and by rationalising the use of tax exemptions and reductions by member states.

2.2 For a just green transition in the EU energy sector

If accelerating the energy transition seems to be one of the essential tools to be implemented in response to the climate crisis, it is equally undoubted how this acceleration towards more sustainable production models must be accompanied by social justice objectives. In this sense, it is worth mentioning the <u>2030 Agenda for Sustainable Development</u>, adopted by the United Nations in September 2015, which, at Goal 7, affirms the need to "ensure access to affordable, reliable, sustainable and modern energy for all".

Consistently, in November 2016, the European Commission released the Communication 'Next steps for a sustainable European future – European action for sustainability', outlining how to integrate the Sustainable Development Goals (SDGs) into EU policy priorities and Commission priorities, also assessing the state of the European Union, while identifying the most relevant sustainable concerns and challenges and ensuring the effectiveness of EU actions, initiatives and policies.

Moreover, at the beginning of 2019, the Commission presented the paper 'Towards a Sustainable Europe by 2030', launching a debate on the EU's sustainable development vision and programmes. Following this public discussion, in 2021, the EU, along with other fourteen governments, adopted the **Just Transition pledge**, setting the framework for an equitable transition to a climate resilient future, and in particular underlining the need to support workers in the transition to new jobs; the importance to support and promote social dialogue and stakeholder engagement; the centrality to enable frameworks and wider economic and industrial support for workers, enterprises and communities.

With specific reference to energy transition, it is worth mentioning that in February 2015, the European Commission launched the Energy Union Strategy to provide secure, sustainable, competitive and affordable energy. This goal was outlined in detail in 'A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy', which specifies five areas of intervention:

- Energy security, solidarity and trust;
- A fully integrated European energy market;
- Energy efficiency contributing to moderation of demand;
- Decarbonising the economy;



















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Research, innovation and competitiveness.

Moreover, the Commission stressed in the document the importance of assessing, monitoring and responding to the social challenges inevitably arising from the energy transition. "Change also means that some sectors, business models or job profiles will have to adjust. An energy transition that is just and fair will therefore require retraining or up-skilling of employees in certain sectors and, where needed, social measures at the appropriate level".

In 2018, the European Parliament and the Council of the European Union adopted the 'Regulation on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action', clarifying the EU Member States' obligations to meet the EU target of reducing greenhouse gas emissions by 30% by 2030, as well as the rules on annual emission allocations and the ways to measure progress. In the document, it is also stated that ensuring the green transition of the energy sector means also to "benefit the environment and health", hinting at the connections between environmental issues and human health.

In 2021, the European Commission also adopted the Regulation establishing the Just Transition Fund (JTF), aiming to support people, economies and territories that face serious socio-economic challenges in the shift towards a climate-neutral EU. In the energy domain, the JTF supports sustainable investments in renewable energy and energy efficiency, including clean energy technologies, emission reduction, industrial sites' rehabilitation and professional enhancement. All Member States are required to develop Territorial Just Transition Plans (TJTPs) in order to access funding from the Just Transition Fund. These local-level strategies must be developed in public consultation with all relevant stakeholders, including civil society and local community representatives, and should be addressed to those territories most negatively affected, based on the economic and social impacts resulting from the transition, in particular with regard to the expected adaptation of workers or job losses in fossil fuel production and use and the transformation needs of the production processes of industrial facilities with the highest greenhouse gas intensity. The identification of these territories is carried out through a dialogue with the Commission. The plans must be submitted by each Member State either as a single country-wide TJTP or several region-specific TJTPs to the European Commission, following adequate public consultations with civil society. These plans set out the challenges in each territory, as well as the development needs and objectives to be met by 2030.

2.3 Spaces of integration between occupational health and safety and environmental policies

The green transition, also understood in terms of less use of carbon dioxide sources and a simultaneous increase in sustainable sources, has serious implications in terms of workers' health and safety. When looking particularly at the energy sector, possible risks have been reported in relation to almost all sustainable sources. Solar energy requires



















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the worker to interact with numerous hazardous materials in the construction of the plants; when the solar energy systems are installed, physical hazards related, for instance, to manual handling and working with high temperatures and within confined spaces, etc., have been detected as well. Furthermore, wind energy subjects the worker to risks such as chemical hazards and solvents, harmful gases, vapors, as well as physical hazards, dusts and fumes; whereas hydroelectricity has been found to have implications for health and safety both during the construction and the maintenance of plants. Alongside the pressing need to consider the health and safety implications of green energy transition, there is an increasing attention among experts to orient occupational health and safety (OHS) legislation to prevent the risks of work activities not only within space-limited workplaces, but also outside them, to the benefit of the overall environment.

Among the many EU environmental policy initiatives referred to above, the 2018 Regulation of the European Parliament and the Council on binding greenhouse gas emissions mentions the connections between the green energy transition and the environmental and health protection. Moreover, the European Climate Law of 2021 underlines how the transition towards climate neutrality and the elimination of fossil sources from the energy share, will have impacts not only in terms of environmental sustainability, but it will also protect biodiversity, public health and can impact on social or economic objectives. Within occupational health and safety, instead, among the various EU directives and policies that have been approved over the past years, only some make clear their impact on human health and the environment in general. Examples are: <u>Directive 2004/37/EC</u> on carcinogens, mutagens or reprotoxic substances at work, which at Article 5 (prevention and reduction of exposure) mentions the need to protect public health and the environment; and <u>Directive 013/59/Euratom</u> concerning the protection against ionising radiation, which at Article 2 explicitly refers to "long-term" human health protection", going beyond short-term protection limited to the

Despite the above exceptions, though, environmental and OHS policies at the EU level still tend to largely follow independent paths. However, as the environmental impacts of work activities are increasingly important and the boundaries of workplaces collapse also thanks to the deployment of digital technologies, also the dichotomy of environmental and OHS regulation is deemed to become more and more nuanced.



















Associated organisations









INSIGHTS INTO THE PUBLIC POLICY FRAMEWORKS OF ENERGY TRANSITION IN ITALY, SPAIN, GERMANY, BELGIUM AND BULGARIA

3.1 Italy

Energy country profile

The production, transformation and consumption of energy is at the heart of all human activities. In Italy, the consumption of fossil fuels is at the origin of 80% of greenhouse gas emissions. The Italian energy demand has increased by almost 30% from 1990 to 2005, along with the growth of gross domestic product (GDP). In the following years, the consumption fell in almost all sectors both for contingent reasons, such as the economic crisis, and for structural aspects, such as the increase in renewable sources and energy efficiency. In 2019, the national energy requirements decreased by 18% since 2005, although the GDP's contraction was less than 1% (see Figure 1). This means that the Italian economy, with the same production levels, consumes less energy and emits less greenhouse gases compared to 2005. Today, the national energy demand is satisfied by a mix of fossil fuels, renewable sources and imported electricity (see Figure 2). Among fossil fuels, oil products and natural gas make up the largest consumption share especially in the transport sector and in the energy and manufacturing industries. In 2019, the energy consumption from these sources amounted to 74% of the total (39.2% for natural gas and 34.8% for oil products): over 7 percentage point less than the share measured in 2005 (81.3%). The share of solid fuels decreased too, from around 9% in 2005 to 4.2% in 2019. On the other hand, renewable sources experienced impressive growth, going from 7.4% of the total energy consumption in 2005 to 19% in 2019. Bioenergy, largely composed of biomasses and for a small part of waste, accounts for almost 44% of the total energy consumption from renewable sources. Wind and photovoltaic energy started to be used after 2005 and in 2019, they represented 13.4% of the total renewable energy consumption, yet they satisfied little more than 2.5% of the national energy demand.

Every economic sector in Italy is characterised by specific energy consumption. Whereas industrial sectors were responsible for almost one third of the total energy consumption up to the 1990s and services accounted for less than 8%, in 2019 the industrial share of energy consumption reduced by 29.2% from 1990, while the one of services sector increased by 128.2% over the same period. Also, energy consumption in households and transport sector grew respectively by 21.3% and 8.8% compared to 1990. It must be underlined, though, that the electricity share of energy consumption, which is relevant for the mitigation of greenhouse gas emissions, increased from 18% in 1990 to 22.2% of 2019. In line with this trend, there has been a decrease in greenhouse gas emissions by 19% from 1990 to 2019. Notably, emissions from energy sectors reduced by 20.9%, while the decrease for industrial processes and agriculture amounted respectively to 16% and 17.3%. In 2019, greenhouse gas emissions from Italy accounted for 11% of the total emissions in Europe and 0.8% in the world.

Compared to the biggest EU Member States, Italy has historically high energy and economy efficiency with a significant share of renewable energy and natural gas in the energy mix, and one of the lowest emissions per capita in Europe. The energy intensity per unit of GDP in Italy (see Figure 3) is, among the biggest countries, higher only to that of the United Kingdom, while the carbon intensity per unit of GDP is higher than those of the Netherlands, France, the United Kingdom and Sweden. The carbon intensity per unit of energy consumed without the nuclear power is, among the biggest countries, higher only than those of the Netherlands and

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Sweden and comparable with that of the United Kingdom. Although some indicators show that many countries have improved their greenhouse gas emission performance, sometimes achieving better results than Italy, the following factors need to be considered:

- Countries with high shares of solid fuels or oil and petroleum products have greater potential for reducing emissions from fossil fuels than those available in Italy, where the fossil mix is mainly represented by natural gas;
- In several countries there is a significant contribution of nuclear power with emissive advantages, a source of energy which is not without controversy and which some countries intend to phase out gradually (Germany, Belgium);
- The emissive performance of a country depends closely on its economic structure. Countries with a predominance of productive activities in the service sector or with significant shares of non-energy consumption, such as the Netherlands, show lower emissions per GDP and energy consumed.

Sources: ISPRA (2021), Efficiency and decarbonization indicators for total energy consumption and power sector. A comparison among Italy and the biggest European countries. Retrieved 22 February https://www.isprambiente.gov.it/files2021/pubblicazioni/rapporti/r346-2021.pdf; ISPRA (2021), Transizione ecologica aperta. Dove va l'ambiente italiano?. Retrieved 22 February 2023 from https://www.isprambiente.gov.it/files2021/pubblicazioni/pubblicazioni-di-pregio/tea.pdf























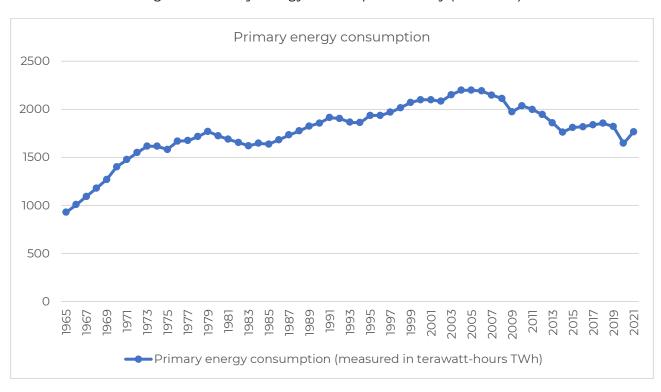






Charts1

Figure 1: Primary energy consumption in Italy (1965-2021)



¹ Data included in the charts may show slight variations from those reported in the 'Energy country profile' due to the different sources used.



















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Figure 2: Share of energy consumption by source (1965-2021)

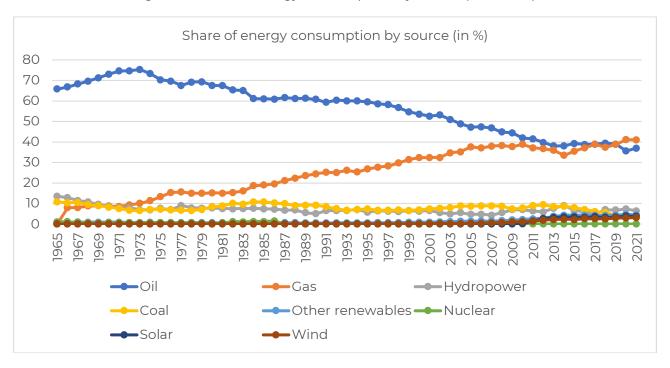
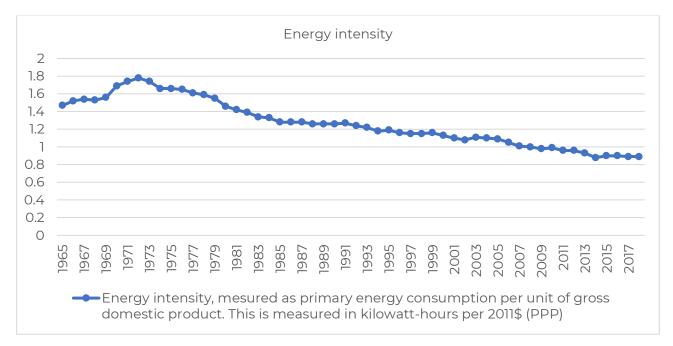


Figure 3: Energy intensity (1965-2018)



Source for all charts: Ritchie, H. & Roser, M. (2022), Italy: Energy Country Profile. Retrieved 22 February 2023 from https://ourworldindata.org/energy/country/italy









Key public policy initiatives

After an online public consultation and a strategic environmental assessment, an Integrated National Energy and Climate Plan (INECP), in its final version, was submitted to the European Commission in late 2019 and published in January 2020. The plan is a ten-year integrated document mandated by the European Commission to each of its Member States in order for the EU to meet its overall greenhouse emissions targets. It is intended to contribute to a wide-ranging transformation of the economy and addresses all five dimensions of the EU Energy Union: decarbonisation, energy efficiency, energy security, internal energy markets and research, innovation and competitiveness.

The general objectives sought by Italy are:

- To accelerate the transition from traditional fuels to renewable sources by promoting the gradual phasing out of coal for electricity generation in favour of an electricity mix based on a growing share of renewables;
- 2) To implement policies and measures in order to reduce greenhouse gases (phase out of coal, higher CO2 price, acceleration of renewables and energy efficiency in manufacturing process level);
- 3) To use a mix of fiscal, economic, regulatory and policy instruments to ensure an energy efficiency;
- 4) To become less dependent on imports by increasing renewable sources and energy efficiency and to diversify sources of supply through the use of natural gas, including liquefied natural gas (LNG);
- 5) To ensure a greater degree of market integration and the development of processes, products and knowledge for the use of renewables, energy efficiency and network technology.

Among the main climate targets, there are:

- To reach 30% share of energy from renewable sources in the gross final consumption
- 2) To reach 22% share of energy from renewable sources in the gross final consumption in the transport sector by 22%;
- 3) To reach 55% share of energy from renewable sources in the gross final consumption in the electricity sector;
- 4) To increase the share of energy from renewable sources in the gross final consumption for heating and cooling by +1.3% per year (indicative);
- 5) A 2030 reduction in greenhouse gas emissions for all sectors not covered by the EU trading system (non-ETS) by 33%, as compared to emissions in 2005.

Mission 2 of the National Recovery and Resilience Plan (NRRP), produced by the Italian government and approved by the Council of the EU in July 2021, is dedicated to green revolution and ecological transition. Among its main investments in relation to energy transition, there are:

The support to energy communities (which are organised coalitions of users who collaborate with each other to produce, consume and manage clean energy through one or more local facilities) in municipalities with fewer than 5,000 inhabitants to install

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- around 2,000 megawatt (MW) of new electrical network generation capacity, thanks to which around 2,500 gigawatt-hours (GWh) will be produced annually, and greenhouse gas emissions will be reduced by 1.5 million tons by June 2026;
- 2) The completion by March 2026 of works on 25 integrated water systems aimed at improving water quality, achieving higher security standards, optimising water supply and reducing leakages;
- 3) The creation by March 2026 of at least 25,000 km of new networks for the distribution of potable water and reduce water losses, especially in Southern Italy, introducing advanced and digitised control systems that allow for an optimal management of resources, reducing waste and limiting inefficiencies;
- 4) The enhancement of smart grid solutions (power grid equipped with intelligent sensors) in the distribution of renewable energy in order to provide at least 4,000 MW the amount of energy coming from renewable sources, convert to the electrification of consumables at least 1,500,000 users and open new areas in which a role could also be given to prosumers, the energy consumers-producers, by June 2026;
- 5) The development of 330 km of new efficient district heating networks and the construction of plants or connections for the recovery of 360 MW of waste heat, by March 2026, in order to save fossil primary energy and reduce greenhouse gas emissions:
- 6) The improvement of biomethane production by 2.3-2.5 billion cubic meters, which would allow a reduction in the use of greenhouse gases by 80 percent or more by June

On 6 September 2022 the Italian government released a National plan for the containment of gas consumption in order to reduce its dependency from Russian gas and limit gas deployment in general.

3.2 Spain

Energy country profile

Most of Spain's energy supply and demand is met with fossil fuels, which accounted for 72% of total energy supply and 68% of total final consumption in 2019.

Total energy supply is dominated by oil and gas, which accounted for 42% and 25% of the total, respectively, in 2019. Only one-quarter of total energy supply was produced domestically in 2019; the remainder was imported. Total energy supply in Spain peaked in 2007, before dropping in the following years as a consequence of the financial crisis. Between 2014 and 2017, however, it started to increase again, rebounding by 10% in three years, to compensate for half of the 20% drop experienced between 2007 and 2014. In 2019, it again fell to 121 million tons of oil equivalent (MTOE) from 126 MTOE in 2017.

As opposed to total energy supply, domestic energy production increased by 12% in Spain between 2009 and 2019. It now consists mostly of nuclear energy (45% of total production) as well as bioenergy and waste and other renewables, notably wind and solar. Energy from coal

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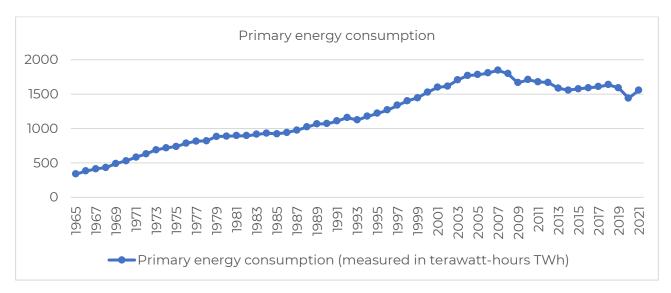
decreased by almost 80% between 2008 and 2018; production ceased entirely in 2019. Production of renewable energy increased by 47% between 2009 and 2019 to cover more than half of total domestic production in 2019 (55%).

Transport and industry are the highest energy-consuming sectors, accounting for 38% and 29% of total final consumption, respectively, followed by the residential (17%) and services (16%) sectors. After peaking in 2007, total final consumption decreases in Spain as a consequence of the economic crisis, until 2014, when it started to increase again. In that year, total final consumption was 86 MTOE, with high shares of oil (51%) and gas (17%). More than 90% of transport consumption constituted oil, with a small share of biofuels, while final consumption in the industry sector is almost equally provided by gas, oil and electricity. The latter is largely used in the services (53%) and residential (43%) sectors. Bioenergy and waste are also a significant source of energy for residential consumption in 2019, accounting for 18% of total final consumption in the sector.

Source: International Energy Agency (2021), Spain 2021. Energy policy review. Retrieved 22 February 2023 from https://iea.blob.core.windows.net/assets/2f405ae0-4617-4e16-884c-7956d1945f64/Spain2021.pdf

Charts²

Figure 4: Primary energy consumption in Spain (1965-2021)



² Data included in the charts may show slight variations from those reported in the 'Energy country profile' due to the different sources used.





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Figure 5: Share of energy consumption by source (1965-2021)

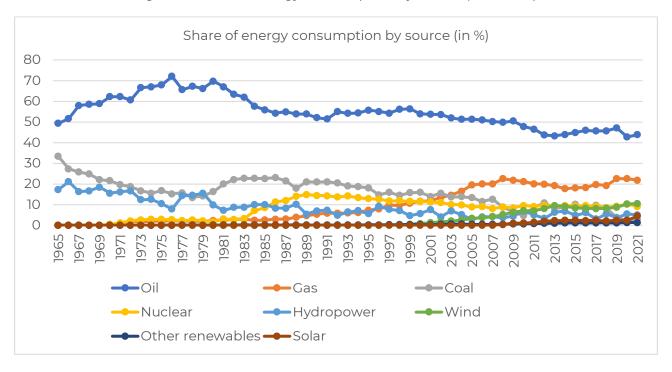
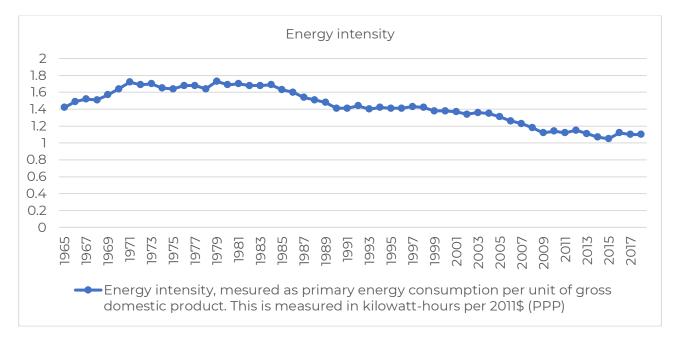


Figure 6: Energy intensity (1965-2018)



Source for all charts: Ritchie, H. & Roser, R. (2022), Spain: Energy Country Profile. Retrieved 22 February 2023 from https://iea.blob.core.windows.net/assets/2f405ae0-4617-4e16-884c-7956d1945f64/Spain2021.pdf









Key public policy initiatives

Spanish Strategic Energy and Climate Framework, presented by the government in February 2019, seeks to facilitate the modernisation of the economy and move towards a sustainable and competitive model. It is shaped by the following pillars:

- The Climate Change and Energy Transition Law:
- The Integrated National Energy and Climate Plan;
- The Just Transition Strategy.

The Climate Change and Energy Transition Law (Law No. 7/2021) entered into force on 20 May 2021. This law enshrines into Spanish normative the target of reaching climate neutrality by 2050 at the latest. More immediate targets which should help to fully decarbonise the economy include:

- Cutting the nation's total greenhouse gas emissions by at least 23% compared to 1990 levels by 2030;
- The share of renewables in the final energy consumption should reach at least 42% by
- The electricity system should produce at least 74% of power using renewable sources by 2030;
- energy efficiency should be improved by at least 39.5%.

These goals will be reviewed upward periodically starting in 2023. Other measures include:

- Before 2023, all municipalities and island territories with population levels of above 50,000 should designate zones of low emissions to improve air quality. These areas will be required to implement initiatives to promote sustainable commute - bicycles, electrified public transport, walking - and establish intra-urban green corridors;
- In about 21-27 months after the bill enters into force, filling station owners which recorded high annual sales of petrol and diesel in 2019 should have at least one charging station for electric vehicles for each petrol station. By 2040, new passenger cars and light commercial vehicles must be emissions free;
- No new exploration authorisations will be allocated for hydrocarbon research permits or exploitation concessions. Existing concessions cannot be extended beyond 31 December 2042, but requests for the exploration or mining radioactive minerals will no longer be admitted nor extended;
- Tax benefits for energy products of fossil origin can only be granted if there are strong social and economic interests justifying them, or if technological alternatives lack.

The Spanish Integrated National Energy and Climate Plan (INECP), approved in 2020, sets out the following results to be achieved in 2030:

- 23% reduction in greenhouse gas emissions compared to 1990;
- 42% share of renewables in energy end-use;
- 39.5% improvement in energy efficiency;
- 74% share of renewable energy in electricity generation.

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These results will enable progress to be made towards the longer-term objective that has guided the preparation of this Plan, namely to achieve greenhouse gas emission neutrality in Spain by 2050, in line with the positions adopted by the European Commission and the majority of Member States. This objective represents a reduction of at least 90% in total gross greenhouse gas emissions by 2050 compared to 1990. In addition, the aim is to achieve a 100% renewable electricity system by the same date.

In Spain, the closure of coal mines in 2018 is complemented with the shutdown of coal-fired thermal power plants. Therefore, the energy transition is at a highly advanced stage and likely to engender serious impacts on local areas and people. Against this backdrop, in February 2019, the Spanish government launched a Just Transition Strategy with an Urgent Action Plan to address the social implications experienced in coal-producing regions and the shutdown of power plants.

Notably, the Strategy implies:

- The creation of a Just Transition Institute as an independent governmental body attached to the Ministry for Ecological Transition and Demographic Challenge;
- The establishment of Urgent Action Plans intended to deal with the social impacts which coal regions are suffering.

The first manifestation into real action of the Just Transition Strategy was the signing of tripartite agreements between the government, trade unions and the companies involved in mine and plant closures, with the aim of ensuring that closures take the workers into consideration and provide them with vocational training and new jobs. Specifically, these agreements are:

- Framework Agreement for a Just Transition for Coal Mining and Sustainable Development of the Mining Regions for the Period 2019-2027, signed in October 2018 by the Ministry for Ecological Transition UGT-FICA, CCOO Industry, the Industry Federation of USO and CARBUNIÓN, the employers' association for the sector;
- Agreement for a Just Energy Transition for thermal power plants in closure, signed in April 2020 between the General State Government (Ministry for Ecological Transition and Demographic Challenge and Ministry of Labour), the companies with thermal power plants which were closing (Endesa, Iberdrola, Naturgy and EDP, the latter in March 2021) and the trade unions (CCOO Industry, UGT FICA).

In order to coordinate and verify compliance with the commitments made, the agreements stipulate structures of governance that bring all the parties together on a regular basis. Beyond sectoral agreements between workers and companies, in order to respond to the socio-economic impacts of the affected areas, the Just Transition Institute has launched the Just Transition Agreements (JTAs): a tool for co-governance aimed at guaranteeing the commitment and coordination of public administrations and proposing support instruments in the just transition process. While sectoral tripartite agreements exist at the state level and focus on companies and workers, just transition agreements focus on the actual area or region. They begin with an assessment of potential job losses and formulate a series of





















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commitments, with a final list of measures to maintain employment and population. There are currently 13 Just Transition Agreements linked to coal closure in place.

Among the main further support measures included in the Just Transition Strategy, there are:

- Two "job banks" for workers affected by closures of mines and coal-fired power stations, both run by the Just Transition Institute;
- For mine workers, a programme to improve their employability as well as labour insertion and social aid in the form of early retirement or incentivised leave;
- Calls for grants for business projects in vulnerable areas through the Just Transition Institute
- Just Transition tenders which will prioritise renewable energy projects maximising the socio-economic and environmental benefits for transition areas, before granting grid access permits;
- A plan to support municipal and infrastructure projects in mining areas, with the aim of providing adequate services so that citizens and businesses can carry on living and working in their area.

A specific component for Just Transition has been included into the Recovery, Transformation and Resilience Plan, approved in April 2021 by the Spanish government. Its four specific objectives are:

- Environmental restoration of areas degraded by mining or coal-fired generation activities:
- Support for the improvement of environmental, digital and social infrastructures in areas affected by closures;
- Promoting energy storage and energy efficiency projects in Just Transition areas;
- Favouring professional transition and improving the employability of workers and the population directly affected by the energy transition.

3.3 Germany

Energy country profile

Despite many years of expansion of renewable energies, Germany is still dependent on fossil fuels (see Figure 8, although there might be slight differences given the different sources used). In 2021, 76.4% of total primary energy demand in Germany was based on fossil fuels. Mineral oil is the most important source of energy (31.8%), followed by natural gas (26.7%), lignite (9.3%) and hard coal (8.6%). All renewables had a share of 16.1% in total primary energy demand with bio energies (e.g., wood for heating and biofuels for mobility purposes) accounting for more than 50% of renewables' total contribution, followed by wind energy. Nuclear energy had a share of 6.2% in total primary demand in 2021.

Primary energy demand has been experiencing a downward trend since 1990, further exacerbated with the Covid-19 crisis (see Figure 7). Notwithstanding the rebound effect following the pandemic, analysts expect primary energy demand in Germany to continue decreasing in the coming years. This is explained by further advances in energy efficiency and

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Associated organisations







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the fact that industries with large energy requirements (e.g., metals, chemicals, building materials) are likely to lose importance in Germany, as well as by further increases in the share of renewables and more electrification in the power, mobility and heating sectors.

Germany is one of the largest energy consumers in Europe and its greenhouse gas emissions per capita are high compared with other European countries. With reference to final energy consumption, it amounted to 8,340 petajoule (PJ) in 2020, which was the lowest number since German reunification. In terms of energy sources, liquid fossil fuels (e.g., gasoline and diesel for mobility, heating oil) had the highest share in total final energy consumption (34%), followed by natural gas (heating, industrial processes) with a share of 26.4%. Electricity accounted for another 20.9%; coal, gas and other energy sources that are used for power generation are included in this number.

Regarding energy consumption by sector or usage, private households had the largest share in total final energy consumption in 2020 (28.9%), followed by industry (28.3%) and mobility (27.5%). Trade and services accounted for the remaining 15.3%. Before the coronavirus pandemic, the shares of the mobility sector and industry had been higher. Differences are therefore detectable in the energy mix of different economic sectors:

- In the heating market, 69.6% of final energy consumption is based on natural gas and oil. Other important energy sources are renewables (mainly wood and other solid bioenergies) and district heating;
- The mobility sector is still dependent on mineral oil. Almost 92% of final energy consumption is based on liquid fossil fuels (gasoline and diesel);
- In power generation, renewable energies were the most important source of energy in 2021 (amounting to 40.5% in gross electricity generation). Wind power (onshore and offshore combined) ranked 1st place with a 20% share. Natural gas (share in 2021: 15.2%) and hard coal (9.3%) are still important energy sources;
- Final energy consumption in the German industry is mainly based on gas (2020: 35%), electricity (31%) and hard coal (13%). Industrial consumption of natural gas is dominated by the chemical industry, metal industry, building materials, pulp and paper and the food industry. The large German capital goods producers (automotive, mechanical, and electrical engineering) are less energy-intensive and are more reliant on a stable electricity supply.

Germany is heavily dependent on energy imports. Some 70% of all energy sources are imported. Germany imports more than 90% of its mineral oil and natural gas and 100% of its nuclear fuel rods. Russia is the most important source for German energy imports. Russia's war against Ukraine has led to a historical turning point in German energy supply. Germany aims to reduce its dependency on energy imports from Russia as fast as possible.

Source: Deutsche Bank Research (2022), German energy supply at a historical turning point. Retrieved **February** 2023 from https://www.dbresearch.com/PROD/RPS_EN-PROD/PROD0000000000522499/German_energy_supply_at_a_historical_turning_point.pdf ?undefined&realload=AK5wKthgwfh/wLwVLlgoknpkBobu5M/0s4Qc6cz9gN4nwLOnrBnZYh BIplNo0fqq





















NEw competences for workers' representatives in a Sustainable Energy Transition



Charts³

Figure 7: Primary energy consumption in Germany (1965-2021)

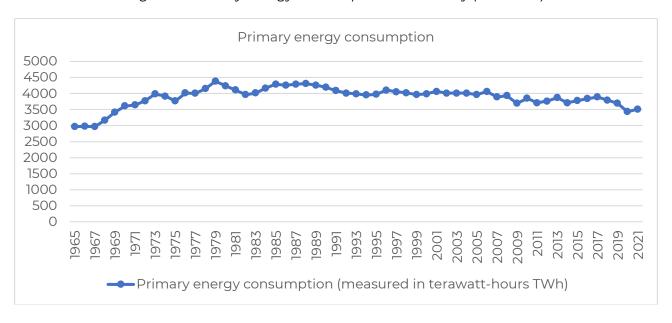
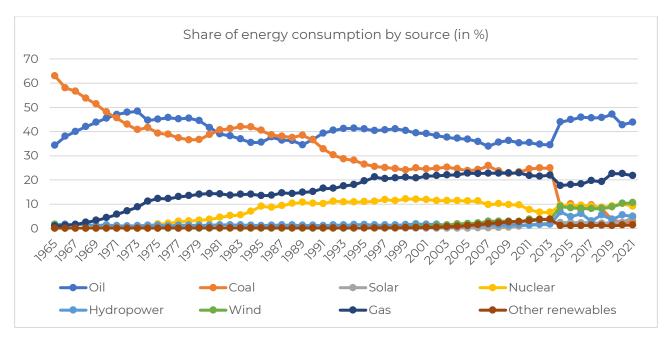


Figure 8: Share of energy consumption by source (1965-2021)



³ Data included in the charts may show slight variations from those reported in the 'Energy country profile' due to the different sources used.

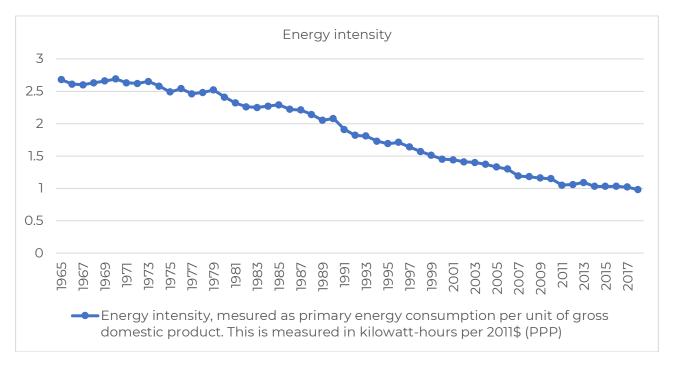




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Source for all charts: Ritchie, H. & Roser, M. (2022), Germany: Energy Country Profile. Retrieved 22 February 2023 from https://ourworldindata.org/energy/country/germany

Key public policy initiatives

Germany's energy transition, called the **Energiewende**, is a major plan for transforming the energy system into a more efficient one supplied by renewable energy sources. In 2010, the Federal Government adopted the <u>Energy Concept document</u>, which sets out Germany's energy policy until 2050 and specifically highlights the triple goals of affordability, energy security and environmental protection. Notably, the Energy Concept lays out an objective to cut primary energy consumption by 20% by 2020 and by 50% by 2050 (from a base year of 2008). Additionally, it calls for a reduction in greenhouse gas emissions of 40% by 2020, 55% by 2030 and 80-95% by 2050 (from a base year of 1990), as well as growth in the share of electricity consumption from renewable sources to at least 35% in 2020, 50% by 2030, 65% by 2040 and 80% by 2050.

On 9 October 2019, the Federal Government passed **the <u>Climate Action Programme 2030</u>**. It contains measures for all sectors (energy, buildings, transport, industry, agriculture, land use, land-use change, forestry and waste management) and introduces a national emissions trading system for the heating and transport sectors, which are not covered by the European emissions trading system. Notably, it is composed of four key components:









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- Major investments in measures to mitigate climate change, including major public investments, large-scale funding programmes and tax incentives to ensure significant reductions in individual sectors (especially transport, buildings, manufacturing, energy and agriculture). For example, rail travel is being made cheaper and more attractive through lower VAT rates on train tickets as well as major investments in infrastructure;
- Clear legal requirements for climate action, including bans on technologies that are especially harmful to the climate, binding rules and new standards;
- A fuel emissions trading scheme launched on 1 January 2021. Germany's carbon pricing system is based on the 'user pays' principle: this means that those who do less to pollute the atmosphere also pay less. Every euro that the system takes in is paid back to individuals and businesses, for instance, in the form of funding programmes that target priorities such as energy-efficient building retrofits and the expansion of charging networks for electric cars;
- Sector-specific system to monitor compliance with climate targets. Germany's 'climate cabinet' (a committee originally set up in March 2019) is made permanent and tasked with monitoring the effectiveness, efficiency and target accuracy of the new measures.

Germany's <u>Energy Efficiency Strategy 2050</u>, adopted by the Federal Government at the end of 2019, sets out a long-term pathway for strengthening German energy efficiency policy. In this way, it also makes an appropriate contribution to achieving the EU energy efficiency target (of reducing primary and final energy consumption by least 32.5% by 2030). Notably, the Strategy:

- Sets a new energy efficiency target for 2030 which is a 30% reduction in primary energy consumption compared to 2008 and further climate targets by 2050;
- Brings together the necessary measures in a new National Energy Efficiency Action Plan (NAPE 2.0), whose aim is to reduce final energy consumption in all relevant sectors (i.e., buildings, industry and commerce, transport);
- And contains guidelines on how the dialogue process on the Energy Efficiency Roadmap 2050, with broad participation by the affected sectors, by consumers, representatives of civil society and scientists. Notably, the various actors are to discuss ways of working cross-sector in order to achieve the energy consumption reduction target for 2050 and will develop proposals for implementing them. Their job will also be to consider the impact of the identified methods of cooperation on various groups of actors, including consumers, suppliers and policymakers. At the end of the process, a final paper is to be produced that identifies political, economic and legal challenges as well as solutions and specific options for action for achieving the 2050 target.

An Integrated National Energy and Climate Plan (INECP), in its final version, was adopted by the Federal Government in early June 2020. The INECP is based on various national strategies, targets and measures such as the 2010 Energy Concept, the 2030 Climate Action Programme and the 2050 Energy Efficiency Strategy. It contains specific targets such as increasing energy efficiency by reducing primary energy consumption by 30% by 2030 (compared to 2008) and expanding the share of renewable energies to 30% of gross final energy consumption by 2030. These are also the Federal Government's target contributions

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for achieving the EU energy targets for 2030. The INECP also reaffirms the national greenhouse gas reduction target of at least 55% by 2030 (compared to 1990) and the Federal Government's commitment at the UN Climate Change Summit in autumn 2019 to pursue greenhouse gas neutrality by 2050 as a long-term goal.

3.4 Belgium

Energy country profile

Belgium's energy supply and demand are dominated by imported fossil fuels. In 2020, oil accounted for 36% of total energy supply, followed by natural gas (30%) and coal (5%). Nuclear plays a major role in Belgium, covering 18% of total energy supply in 2020.

Most of Belgium's final energy demand is covered by oil (46% of total final consumption in 2019) and natural gas (27%), followed by electricity (18%), bioenergy and waste (6%), district heating (1.2%), and coal (1%).

Industry accounts for the largest share of Belgium's energy demand (48% of total final consumption in 2020), followed by buildings (32%) and transport (20%). The industry sector relies mostly on oil (40%), natural gas (29%) and electricity (18%) and is responsible for almost all of Belgium's coal demand. Transport is the least diverse sector, with 89% of demand covered by oil, followed by small shares of biofuels (8%), electricity (2%) and natural gas (1%). Most building energy demand is covered by natural gas (40%), electricity (27%) and oil (27%) with a small use of biomass (5%) and almost no district heating (0.6%). In 2019, the share of oil in Belgium's building energy demand (24%) was the fifth highest among IEA (International Energy Agency) countries and notably higher than the IEA average of 8%. In 2019, electricity covered 18% of Belgium's total final consumption, below the IEA average of 22%.

From 2010 to 2019, Belgium's total energy supply fluctuated notably between a low of 52 MTOE in 2015 and a high of 60 MTOE in 2010, while in 2020 it dropped to 50 MTOE as a consequence of the Covid-19 pandemic. The fluctuations were driven mainly by fluctuations of nuclear availability and changes in heating demand for oil and natural gas. Renewable energy in total energy supply grew from 2010 to 2020, with bioenergy and waste increasing from 3.5 MTOE to 3.8 MTOE, wind from 0.1 MTOE to 1.1 MTOE, and solar from 0.06 MTOE to 0.5 MTOE. From 2010 to 2020, the share of fossil fuels in total final consumption decreased slightly, from 75% to 74%. From 2010 to 2020, oil demand fluctuated between a high of 21 MTOE in 2010 and a historic low of 17 MTOE in 2019. Gas demand also fluctuated, from a high of 11 MTOE in 2010 to a low of 9.2 MTOE in 2014 and was 10.2 MTOE in 2020. Demand for electricity was stable, at around 7 MTOE from 2010 to 2020.

Source: International Energy Agency (2022), Belgium 2022. Energy Policy Review. Retrieved 22 February 2023 from https://iea.blob.core.windows.net/assets/638cb377-ca57-4c16-847d-ea4d96218d35/Belgium2022_EnergyPolicyReview.pdf

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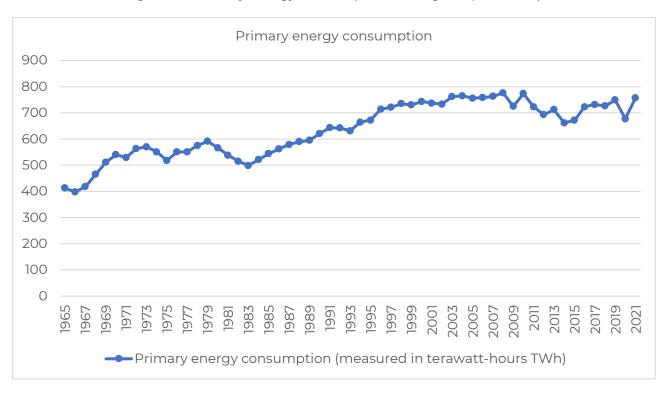






Charts⁴

Figure 10: Primary energy consumption in Belgium (1965-2021)



⁴ The data included in the charts may show slight variations from those reported in the 'Energy country profile' due to the different sources used.













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Figure 11: Share of energy consumption by source (1965-2021)

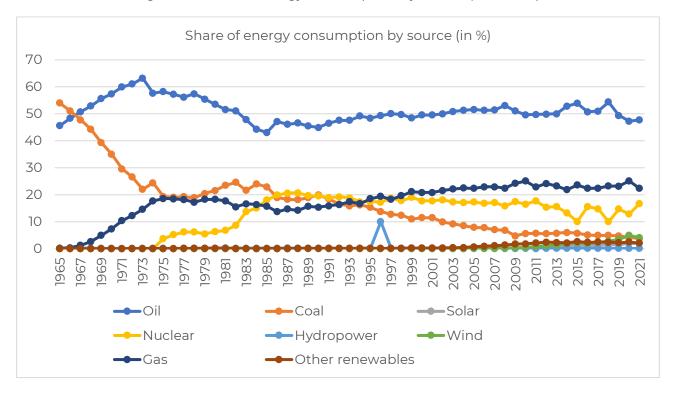
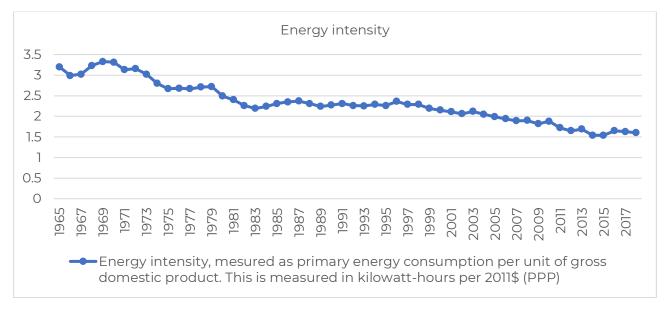


Figure 12: Energy intensity (1965-2018)



Source for all charts: Ritchie, H. & Roser, M. (2022), Belgium: Energy Country Profile. Retrieved 22 February 2023 from https://ourworldindata.org/energy/country/belgium









Key public policy initiatives

Responsibility for Belgium's energy and climate policy is divided between the federal government and the regional governments of Flanders, Wallonia and the Brussels-Capital Region. The federal government is responsible for electricity transmission and large-scale generation; transport of natural gas and oil; nuclear energy; security of energy supply; price policy; consumer protection; the national rail system; transportation fuels; offshore energy; and energy research, development and demonstration (RD&D) related to its competences. Regional governments are responsible for renewable energy (except offshore energy), energy efficiency and greenhouse gas emissions (except for federal buildings and vehicles), distribution of electricity and natural gas, regulation of retail energy markets, vehicle registration, public transportation, urban and rural planning, and energy RD&D related to their competences.

Federal level

The <u>Integrated National Energy and Climate Plan</u> (INECP) was submitted by the federal government to the European Commission in December 2019. The plan aims to define measures adapted to different dimensions:

- Decarbonisation dimension: reduction of greenhouse gas emissions by 35% in 2030 compared to 2005 for non-ET sectors; a Belgian contribution of 17.4% of renewable energies compared to gross final energy consumption;
- Energy efficiency dimension: Belgium has set a contribution to the European target of 32.5% by 2030 (15% in primary energy and 12% in final energy);
- Energy security dimension: a radical shift is planned in the electricity mix due to the gradual phase-out of nuclear power by 2025;
- The internal energy market dimension: regarding energy transport infrastructure, efforts will be made in the coming years to strengthen the existing interconnections with France and the Netherlands;
- Research, Innovation and Competitiveness dimension: Belgium is committed to devoting at least 3% of its gross domestic product overall to R&D.

Belgium's National Recovery and Resilience Plan was submitted on 30 April 2021 and approved by the European Commission on 23 June 2021. The plan is supported by EUR 5.9 billion in grants. More than half of the plan's funding contributes to Belgium's climate and energy goals, including EUR 1,012 million for building renovation, EUR 672 million for modal shifts in transport and EUR 100 million for the development of an offshore energy hub. Several measures support investments in production, transportation and the use of hydrogen produced from renewable energy, with a goal for Belgium to reach at least 150 MW of electrolysis capacity by 2025. The plan also supports a legal framework for carbon capture, utilisation and storage (CCUS), including cross-border infrastructure for CO₂ transportation.

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Regional level

Wallonia

- Walloon Climate Decree of 20 February 2014, which sets the greenhouse gas emissions reduction targets at a reduction of 30% CO₂ by 2020 and 80 to 95% CO₂ by 2050. This Decree also indicates the instruments that would be implemented to achieve these objectives, including the Air Climate Energy Plan (PACE), which is to be developed by the Walloon Air and Climate Agency, in consultation with the Walloon Government;
- The draft Walloon Air Climate Energy 2021-2030 plan, adopted on 4 April 2019, with the objective of reducing its emissions by 35,9% by 2030.

Brussels-Capital Region

- Brussels Code of Air, Climate and Energy Management of 2 May 2013, which pursues a number of objectives ranging from the integration of the regional air, climate, and energy policies and the reduction of the dependence on non-renewable energy sources to the improvement of energy performance of buildings and the reduction of environmental impacts resulting from mobility needs;
- Air-Climate Regional Plan, adopted by the Brussels Government on 12 July 2018, with the objective of reducing its emissions by 32% by 2030.

Flanders

- The Flemish Climate and Energy Pact of 1 December 2016, in which the Flemish government endorses the text of the Paris Climate Agreement and recognises the need to limit the global temperature increase to well below 2°C compared to preindustrial levels, and to make efforts to limit the increase to 1.5°C compared to preindustrial levels. The Flemish Government supports the objective of reducing greenhouse gas emissions by at least 40% by 2030 and by 80 to 95% by 2050 (compared to 1990);
- The draft Flemish Climate Policy Plan 2021-2030 and the draft Flemish Energy Plan 2021-2030, approved by the Flemish Government on 21 July 2018, with the objective of reducing its emissions by 35% by 2030.

3.5 Bulgaria

Energy country profile

About 200 terawatt-hours (TWh) of energy in Bulgaria is consumed each year which is about 28 MWh per person, somewhat over the world average of 20 MWh. In 2021, the largest sources were coal and oil (standing respectively for over 28% and 25% of the total), followed by nuclear (accounting for about 19%) and gas (whose share is around 15%). Other sources were hydropower, whose proportion is about 5%, and wind and solar, which stand for approximately 1% each. As for total energy supply, in 2019 it was composed of coal (27%), oil (24%) and nuclear (23%), while gas and renewables accounted respectively for 13% and 12% of the total. Within renewable energy supply, the largest share was occupied by bioenergy (77%), followed by hydro/marine power (11%), solar (7%) and wind (6%). Annual CO₂ emissions were above 42 metric





























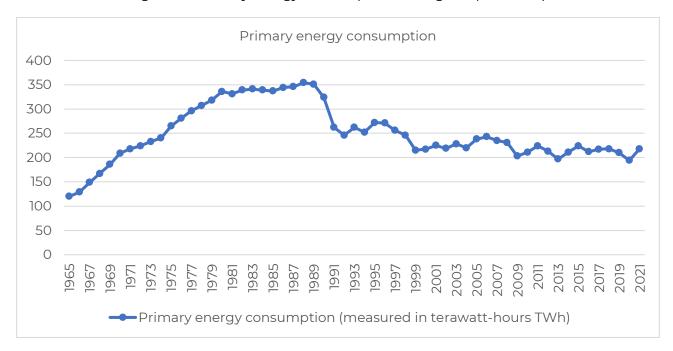
tons (MT) in 2021. Electricity and heat generation is responsible for the largest share of emissions. Notably, in the sector, 91% of CO₂ emissions come from coal.

Energy intensity, measuring the amount of energy consumed per unit of GDP, is 1.65 kilowatthours (kWh) in 2018, considerably declining from 1996, where it amounted to 4.01 kWh. Carbon intensity, which is the amount of CO_2 emitted per unit of energy, has been reducing as well from 0.39 in 1965 to 0.20 in 2021.

Sources: International Renewable Energy Agency (2022), Bulgaria Energy Profile. Retrieved 22 February 2023 from https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Europe/Bulgaria_Europe_RE_SP.pdf; Ritchie, H., & Roser, M. (2022), Bulgaria: Energy Country Profile. Retrieved 22 February 2023 from https://ourworldindata.org/energy/country/bulgaria

Charts⁵

Figure 13: Primary energy consumption in Bulgaria (1965-2021)



⁵ Data included in the charts may show slight variations from those reported in the 'Energy country profile' due to the different sources used.









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Figure 14: Share of energy consumption by source (1965-2021)

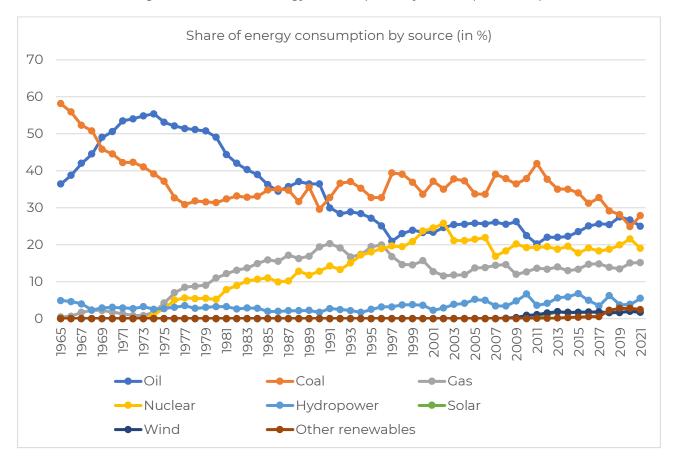
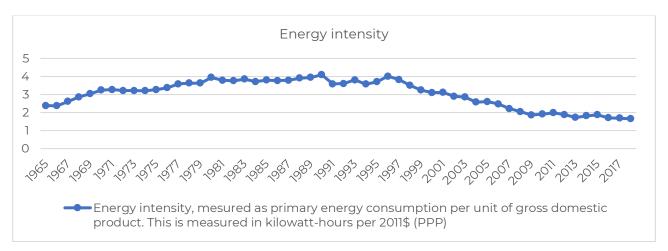


Figure 15: Energy intensity (1965-2018)



Source for all the charts: Ritchie, H., & Roser, M. (2022), Bulgaria: Energy Country Profile. Retrieved 22 February 2023 from https://ourworldindata.org/energy/country/bulgaria









Key public policy initiatives

Bulgaria's Integrated National Energy and Climate Plan (INECP), approved in 2020, sets out the following strategic goals and priorities in the area of energy and climate:

- Regarding the decarbonisation dimension, Bulgaria will make efforts to increase the share of energy from renewable sources in gross final energy consumption and reduce greenhouse gas emissions. In line with the Commission's recommendation, Bulgaria has raised the level of ambition regarding the share of energy from renewable sources in gross final energy consumption from 25% to 27.09% by 2030. As for greenhouse gas emissions, the target is 0% by 2030;
- As regards the energy efficiency dimension, Bulgaria will strive to achieve energy savings in final energy consumption, focusing on the improvement of the energy performance of buildings and on energy generation, transmission and distribution. National targets have been set for achieving a 27.89% reduction in primary energy consumption and a 31.67% reduction in final energy consumption by 2030 as compared with the PRIMES 2007 reference scenario;
- Regarding the energy security dimension, Bulgaria aims to increase its energy security by diversifying its energy supplies, making efficient use of domestic energy resources and further developing its energy infrastructure;
- Regarding the internal energy market dimension, Bulgaria will develop a competitive market by fully liberalising the market and integrating it into the regional and wider EU market, as stated in relation to the Energy Security dimension. The protection of vulnerable consumers is a key element of full liberalisation. In line with the Commission's recommendation for the development of competitive wholesale and retail markets, Bulgaria will phase out regulated electricity prices by the end of 2025 while promoting competition and transitioning to fully market conditions;
- Regarding the research, innovation and competitiveness dimension, Bulgaria is committed to promoting scientific progress in the area of innovative energy technologies, including clean power generation. Important projects promoting business innovations and digitalisation will be developed.

Bulgaria's National Recovery and Resilience Plan was submitted on 15 October 2021 and approved by the European Commission on 7 April 2022. The plan supports the green transition through ambitious reforms, including the adoption of a clear framework for the coal phaseout and binding commitments to cut greenhouse gas emissions of the power sector by 40% by 2025; accelerating the deployment of renewable energy sources; market liberalisation of the wholesale and retail electricity markets, governance reforms, as well as the removal of financial and regulatory bottlenecks for energy efficiency investments. The plan foresees EUR 1.7 billion investments in renewable energy sources, electricity storage and interconnection capacities and over EUR 1 billion in energy-efficiency renovation of the building stock. In the area of transport, the plan includes a sizeable allocation (EUR 666 million) to decarbonisation measures such as the introduction new electric rolling stock for sub-urban and inter-regional rail transport; the construction of a new section of the Sofia metro; sustainable urban mobility pilot scheme with purchase of zero-emission public transport vehicles and charging station

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infrastructure. Dedicated measures in the area of biodiversity aim to protect and restore ecosystems and natural habitats and species (EUR 48 million).

A Strategy for the Development of Power Sector in the 2023-2053 period was approved by the Council of Ministers in January 2023. Pursuant to the document, Bulgaria must remain a regional leader in electricity production and export. The protection of national and energy security, the sustainable use of local energy sources, as well as a just transition to decarbonisation for coal regions and the protection against energy poverty are other top priorities set out in the document.

The document envisages the use of indigenous lignite resources until 2030 and its gradual reduction and phase-out by 2038. This will help to maintain energy and national security, as well as the country's role as a regional leader in electricity production and export.

In the nuclear power sector, the strategy provides for the construction of four reactors which will replace those due for decommissioning. Two reactors are expected to be built at the site of the Kozloduy nuclear power plant and two more at the site of the Belene Nuclear Plant Project.

The energy strategy also focuses on the development of renewable energy projects photovoltaic and wind power and hydro power plants. The main conclusion about geothermal energy is that it can be used mainly for heating.

Hydrogen production is a key element of the sector's future development. It is expected to reduce and replace Bulgaria's reliance on imported natural gas. The country will rely on the rapid resumption of the operation of the Chaira pumped storage power station, as well as on the provision of resources for the construction of an underground pumped storage power station.

The modernization of the country's nearly 2,000 km electricity transmission network and its accompanying infrastructure, which is set out in the strategy, will help to ensure sufficient connection and transmission capacity, so that Bulgaria can maintain its leadership role in the

The projects envisaged in the new energy strategy will cost an estimated EUR 46 billion. The strategic vision will be presented to the National Assembly.

3.6 Energy profiles and public policies for energy transition compared

Figure 16: Comparison of country energy profiles and public policies for energy transition

Countries	Primary energy consumption (*)	Energy consumption by source (*)	Energy intensity (*)	Key public policy initiatives
Italy	The Italian primary energy consumption increased by almost 19% from	The national energy demand is satisfied by a mix of fossil fuels (making up the largest share), renewable	Energy intensity has experienced a significant decrease	• Integrated Energy and Climate Plan (2020)

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1990 to 2005. In the following years, the consumption fell in almost all sectors. In 2021, the national energy requirements amounted to **1,765 TWh**, with a reduction by almost 20% since 2005

sources and imported electricity. In 2021, the energy consumption from oil products and natural gas amounted to 78.02% of the total: over 6 percentage point less than the share measured in 2005. On the other hand, renewable sources (made up of hydropower, wind, solar and others) **experienced** impressive growth, going from over 6% of the total energy consumption in 2005 to over 17% in 2021

from 1972 (when it amounted to 1.78 kWh) to 2018 (when it amounted to 0.89 kWh)

- National Recovery and Resilience **Plan** (2021) with Mission 2 dedicated to green revolution and ecological transition
- National plan for the containment of gas consumption (2022) aimed at reducing Italian dependency from Russian gas and limiting gas deployment in general

Spain

The Spanish primary energy consumption increased by over 70% from 1990 to 2007. It then decreased and in 2021, it amounted **to 1,553 TWh**, with a reduction of almost 16% from 2007

In 2021, the national energy consumption from oil and gas amounted to over 65% of the total: around 7 percentage points less than the share measured in 2009. Coal share considerably declined from 1995 (39.8%) to 2010 (8.5%); it then increased up to 2017 before decreasing to 2.74% in 2021. On the other hand. renewable sources (i.e., wind and solar) experienced a growth, going from 4.18% in 2006 to 16.38% in 2021. **Nuclear power** sharply increased in the 1980s and then reduced up to 9.13% of the total in 2021

Energy intensity significantly decreased from 1979 (when it amounted to 1.73 kWh) to 2018 (when it amounted to 1.10 kWh)

• Strategic Energy and Climate Framework, composed of: 1) Climate Change and **Energy Transition Law** (2021); 2)Integrated **National Energy and** Climate Plan (2020); 3) **Just Transition Strategy** (2019) to address the social implications experienced in coal-producing regions and

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				the shutdown of power plants
Germany	The German primary energy consumption is particularly high, though experiencing a downward trend since 1990, further exacerbated with the Covid-19 crisis. In 2021, it amounted to 3,512 TWh	In 2021, the national energy consumption from fossil fuels (i.e., oil, gas and coal) amounted to over 75% of the total: around 7 percentage points less than the share measured in 2007. Notably, the deployment of coal (amounting to over 38% in the 1980s and 16.74% in 2021) was slowly replaced by gas (which is now the second source of energy consumption). Nuclear power share increased up to the end of the 1990s and then slowly decreased: in 2021, it amounted to 4.93% of the total. Renewable sources (i.e., wind, solar, biofuels) experienced a growth over the past 15 years and in 2021 they amounted to over 18% of the total energy consumption	Energy intensity significantly decreased from 1970 (when it amounted to 2.69 kWh) to 2018 (when it amounted to 0.98 kWh)	• Energy Concept (2010) which sets out Germany's energy policy until 2050 and specifically highlights the triple goals of affordability, energy security and environmental protection • Climate Action Programme 2030 (2019) • Energy Efficiency Strategy 2050 (2019) setting out a long- term pathway for strengthening German energy efficiency policy • Integrated National Energy and Climate Plan (2020)
Belgium	Primary energy consumption in Belgium experienced an upward trend until 2007 (when it amounted to 776 TWh), before experiencing a swinging trend up to 2021 (757 TWh)	In 2021, the national energy consumption from oil and gas amounted to around 70% of the total, experiencing a pretty steady trend since mid-2000s. A considerable change has characterised coal share, amounting to 24% in	Energy intensity significantly decreased from 1969 (when it amounted to 2.23 kWh) to 2018 (when it amounted to 1.6 kWh)	 Integrated National Energy and Climate Plan (2019) National Recovery and Resilience Plan (2021)

Project partners:





























		1984 and 3.79% in 2021. Nuclear power share instead experienced a swinging trend and in 2021 it still stood for 16.77% of the total. Renewable sources (i.e., wind, solar, biofuels) increased in the past decade amounting to 8.24% of the total energy consumption in 2021		• Energy and climate policies in Flanders, Wallonia and the Brussels-Capital Region
Bulgaria	Primary energy consumption in Bulgaria is pretty low compared to other countries. It increased up to 351 TWh in 1989, before moving down to 218 TWh in 2021	Coal still is the first source of primary energy consumption in Bulgaria (amounting to 27,88%), though experiencing a downward trend since 2011. It is followed by oil, amounting to over 25%, and nuclear power, standing for over 19% of the total primary energy consumption. Gas also plays a relevant role with 15.17% of the total. Oil, nuclear and gas shares did not radically change from 2009. Renewable sources (i.e., hydropower, wind and solar) increased over the last year and in 2021 they amounted to 9%	Energy intensity in Bulgaria reached its highest value in 1989 (4.09 kWh). Then it considerably decreased up to 1.65 kWh in 2021	Integrated National Energy and Climate Plan (2020) National Recovery and Resilience Plan (2022)

(*) Data included in the columns are extracted from Figures from 1 to 15, allowing for a comparison between countries given the same source used.





























4. THE NORMATIVE FRAMEWORK FOR INDUSTRIAL RELATIONS INVOLVEMENT IN **ENERGY TRANSITION IN EUROPE**

4.1 EU level

Information and consultation rights at workplace level

The <u>Directive 2002/14/EC</u> of the European Parliament and of the Council establishes a general framework for informing and consulting employees at the workplace level in the European Union. Specifically, the Directive provides for: i) information on the recent and probable development of the company or the establishment's activities and economic situation; ii) information and consultation on the employment structure and probable development, especially if there is a threat to jobs; the decisions that could lead to substantial changes in the way work is organised or in contractual relations. Therefore, no explicit reference is made to issues related to green transition, although they could be subject to information and consultation as long as they lead to substantial changes in work organisation or contractual relations. Moreover, the Directive sets general guidelines on information and consultation, leaving to individual Member States the practical arrangements (incl. the size of the companies subject to the provisions), in accordance with national law and industrial relations practices, in such a way as to ensure their effectiveness.

Another important regulation in this field is represented by the Directive 2009/38/EC of the European Parliament and of the Council, concerning the establishment of a European Works Council or a procedure in Community-scale undertakings and Community-scale groups of undertakings for the purposes of informing and consulting employees (so-called 'Recast Directive'). The Directive applies to: i) community-scale undertakings, with at least 1,000 employees within the EU Member States and 150 employees in each of at least two Member States; ii) and community-scale group of undertakings, with at least 1,000 employees within the EU Member States and at least two undertakings in different Member States, as well as one undertaking with at least a 150 employees in one Member States and at least one other undertaking with min. 150 employees in another Member State. According to the Directive, the competence of the European Works Council and the scope of the information and consultation procedure for employees is limited to transnational issues, meaning those matters which concern the entire undertaking or group or at least two Member States, and therefore which are relevant for the European workforce in terms of the scope of their potential effects. The Directive does not refer explicitly to issues linked to green transition although they could be subject to the provisions as long as they display a transnational character. Moreover, the Directive attributes to individual Member States its transposition in national law as well as to European Works Councils' founding agreements the practical arrangements in line with both the EU and national law.





























Health and safety representation at the workplace level

The Directive 89/391/EEC (so-called 'OSH Framework Directive'), complemented with later amendments, provides for measures to encourage improvements in the safety and health of workers at work. It is addressed to both public and private sectors, except for specific public service activities. It contains principles concerning the prevention of risks, the protection of safety and health, the assessment of risks, the elimination of risks and accident factors, the informing, consultation and balances participation and training of workers and their representatives. The Directive makes clear basic obligations for employers and workers in the field of occupational safety and health. Basically, it is the employer's obligation to ensure the safety and health of workers in every aspect related to work and he may not impose financial costs to workers to achieve these objectives. Specifically, the employers shall evaluate all the risks to the safety and health of workers (the choice of work equipment, the chemical substances or preparations used, the fitting-out of workplaces); implement measures to improve the level of protection while ensuring to each worker an adequate safety and health training and designating workers' figure in the workplace to carry out activities related to the protection and prevention of occupational risks. In relation to information and consultation procedures related to health and safety issues, the employer should consult workers on the introduction of new technologies and, generally, he should inform and consult workers allowing them to take part in discussions on all the issues related to safety and health at work. On their side, workers should make correct use of machinery, apparatus, tools, dangerous substances, transport equipment, while using personal protective equipment; inform the employer of any work situation presenting a serious and immediate danger, so cooperating with the management in the fulfilling of all the requirements about protection of health and safety for enabling him to ensure that the working environment and working conditions are safe and with no risks.

Although green transition is not explicitly mentioned in relation to the obligations of employers and workers in the field of occupational health and safety, the issue, along with the digital transition, is expected to impact on health and safety risks assessment, prevention and elimination procedures in workplaces.

Corporate sustainability obligations

The <u>Directive 2014/95/EU</u> of the European Parliament and of the Council as regards the disclosure of non-financial and diversity information by certain large undertakings and groups (so-called 'Non-Financial Reporting Directive' or 'NFRD') applies to large undertakings and parent undertakings of a large group, which are public-interest entities and employ more than 500 workers. According to the Directive, large undertakings shall include, in the management report, a non-financial statement containing information on the undertaking's development, performance, position and impact of its activity in relation to environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters. The same applies to parent undertakings of a large group, which shall produce a consolidated non-financial























statement concerning the group's development, performance and impact of its activity in relation to environmental, social and employee matters.

Another important regulation in this field is the **Directive 2022/2464** of the European Parliament and of the Council (so-called 'Corporate Sustainability Reporting Directive' or 'CSRD'), which underlines the need for greater employee involvement in corporate decision-making processes, in order to better integrate long-term goals and impacts. It applies to all companies with more than 250 employees, and all companies listed on regulated markets, with the exception of micro undertakings. The Directive is aimed at ensuring that investors and other stakeholders (incl. workers and their representatives) have access to information about the social and environmental impact of a company's activity. According to the Directive, addressed undertakings shall include, in the management report, information necessary to understand the undertaking's impacts on sustainability matters. Notably, the information shall contain, among other things, the resilience of the undertaking's business model and strategy in relation to risks linked to sustainability matters, the opportunities for the undertaking related to sustainability, and the plans of the undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy. Furthermore, the Directive specifies that the information reported should be in accordance with the EU sustainability reporting standards. In this regard, the Commission has entrusted the European Financial Relations Advisory Group (EFRAG) with the development of these standards, to make them consistent with the ambition of the European Green Deal and with the existing legal framework in Europe on sustainability issues. The first set of European sustainability standards will be approved and issued within the first half of 2023 and the second set, including sectoral and SME standards, within the following year. The standards will be reviewed at least every three years. The directive also highlights the sectors that will have specific standards due to the high risk and possible socio-environmental negative effects (agriculture, forestry and fishing; mining, oil, gas, minerals; manufacturing, including food and textile production; supply of electricity, gas, steam and air conditioning; water supply, sewage and waste management; buildings; wholesale and retail trade; transport and storage: real estate activities).

4.2 Italy

Information and consultation rights at the workplace level

In Italy, Legislative Decree No. 25 of 6 February 2007, implementing Directive 2002/14/EC establishing a general framework for informing and consulting employees, applies to all companies employing at least 50 workers. The legislative decree specifies that without prejudice to what is contained in collective agreements, that define the locations, times, subjects, methods and content of information and consultation rights, information and consultation shall cover: (a) the recent and foreseeable trend of the undertaking's business, as well as its economic situation; (b) the situation, structure and foreseeable trend of employment in the undertaking, as well as, in the event of a risk to employment levels, the relevant countermeasures; (c) decisions of the undertaking that

















Associated organisations:









are likely to entail significant changes in work organisation and employment contracts. Even though environmental issues are not specifically tackled by the Legislative Decree, they are sometimes mentioned as topics of information and consultation procedure by collective agreements at either national or company level.

Health and safety representation at the workplace level

The issue of occupational health and safety is regulated in Italy by Legislative Decree No. 81/2008 (Testo Unico sulla salute e sicurezza sul lavoro), later amended by Legislative Decree No. 106/2009. Article 2, letter i) regulates the figure of the workers' safety representative as "a person elected or designated to represent workers with regard to aspects of health and safety at work". According to the legislative provisions, the figure of the workers' safety representative must be elected in all companies, and the methods for its election varies according to company size and the presence or absence of trade union representatives in the company. In companies with up to 15 workers, the workers' safety representative is normally elected directly by the workers within the company; in companies with more than 15 workers, the workers' safety representative is elected by the workers or designated within the framework of the workplace labour representation body. If the workers' safety representative is not present at the company level, its functions are performed by the territorial workers' safety representative. With regard to the powers of the workers' safety representative, without prejudicing the provisions of collective bargaining, the law (Article 50) specifies that he/she: (a) has access to the workplaces where the work is carried out; (b) is consulted in advance and in a timely manner on risk assessment, identification, planning, implementation and verification of prevention in the company or production unit; (c) is consulted on the appointment of the person/s in charge of the prevention service, fire prevention activities, first aid, evacuation of workplaces and the competent doctor; (d) is consulted on the organisation of workers' training related to health and safety and must receive appropriate training (e) receives company information and documentation concerning risk assessment and the relevant prevention measures, as well as those relating to dangerous substances and preparations, machines, plants, work organisation and environments, accidents and occupational diseases; (f) promotes the development, identification and implementation of suitable prevention measures to protect the health and physical integrity of workers; (g) makes proposals concerning prevention activities; (h) warns the company manager of the risks identified in the course of his activity. He/she is therefore an active figure and protagonist in the management of the occupational health and safety system.

Several national collective bargaining agreements further specify the scope of competence of workers' safety representatives, also extending their rights and prerogatives. Importantly, some of them have recently created the figure of the Workers' Safety, Health and Environment Representative (RLSSA), which is not formally provided for and regulated by Legislative Decree No. 81/2008. The RLSSA has specific competences in the area of safeguarding and protecting the external environment, and he/she is responsible for the promotion of good practices as well as training, information and awareness-raising policies for workers on ecological issues.





























Collective bargaining rights

Even though environmental issues are not compulsorily included in collective agreements, social partners at the national and decentralised levels have adopted joint declarations and collective agreements regarding, among various issues, also green transition. In detail, as before mentioned, they have extended the responsibilities assigned to the workers' safety representatives also to the protection of the external environment; they have created joint observatories or bilateral bodies for analysing and proposing policies in relation to environmental issues; they have created variable pay schemes also linked to indicators of waste and/or emissions reduction; they have enhanced information and consultation procedures as well as awareness-raising and training initiatives on ecological issues.

Corporate sustainability obligations

On 8 February 2022, the amendments of Articles 9 and 41 of the Constitution were approved, introducing the protection of the environment, biodiversity and animals among the fundamental principles of the Italian Constitutional Charter. In particular, the reform intervened on the second paragraph of Article 41, providing that private economic activity is free, but cannot be carried out in conflict with social utility or "in such a way as to cause damage to health, the environment, to safety, to freedom, to human dignity".

Moreover, in Italy, according to Legislative Decree No. 254/2016 on the implementation of Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014, provides that the public interest entities with more than 500 employee and specific economic revenues (as defined by Article 1) must prepare the 'individual non-financial statement'. This declaration, necessary "to ensure an understanding of the company's business, its performance, its results and the impact it has produced, covers environmental, social, personnel, human rights issues, and the fight against active and passive corruption" (Article 3). In detail, among various things, the declaration must contain the following information regarding the environmental impact: "a) the use of energy resources, distinguishing between those produced from renewable and non-renewable sources, and the use of water resources; b) greenhouse gas emissions and polluting emissions into the atmosphere; c) the impact, where possible on the basis of hypotheses or realistic scenarios also in the medium term, on the environment as well as on health and safety, associated with risk factors [...] or other environmental and health risk factors" (Article 3).

Multi-stakeholder governance of just transition

The Italian legislator has recently set up a specific institutional body for the joint management of green transition processes: Article 3 of Law-Decree No. 77/2021, dedicated to the "Governance of the National Recovery and Resilience Plan and first strengthening measures of administrative structures and of acceleration and























streamlining of procedures", provides for the establishment of a **Permanent table for economic, social and territorial partnership**, composed of representatives of social partners, local authorities, regions and universities, and charged with advisory functions in matters related to the implementation of the National Recovery and Resilience Plan, which addresses, among various issues, also the green revolution and ecological transition.

4.3 Spain

Information and consultation rights at the workplace level

According to the Workers' Statute (1980), the company should provide certain information to the works council (which could be elected in workplaces with more than 10 employees) with a certain frequency. Every quarter, the company should inform the works council of: (i) the general situation of the economic sector of which the employer is a part, the situation of the employer's production and sales, its production program, and the development of the employer's employment situation; (ii) the company's economic situation and **environmental issues** that could affect employment; (iii) the employer's plans to hire new employees; and (iv) statistics of absenteeism and its causes, as well as work-related accidents and illnesses.

Health and safety representation at the workplace level

The issue of occupational health and safety is regulated in Spain by the Prevention of Occupational Risks Act of 8 November 1995.

According to the law, where there are six or more employees, health and safety representation is provided through special health and safety representatives, known as **prevention delegates** (delegados de prevención), chosen from among the existing employee representatives. In larger companies or workplaces (50 or more employees) there is also a **joint employee/employer health and safety committee** (Comité de Seguridad y Salud).

The main tasks of the prevention delegates are: (i) to work with management to improve action on risk prevention; (ii) to promote and encourage employees' cooperation in applying health and safety regulations; (iii) to monitor compliance with health and safety regulations; and (iv) to be consulted by the employer in advance about the following issues:

- Work organisation and planning in the company, including the introduction of new technology and its health and safety impact;
- The organisation of health and safety and risk prevention measures in the company, including the appointment of health and safety professionals or the use of an external health and safety agency;
- The designation of employees responsible for reacting to emergencies;
- The provision of health and safety information to employees; and
- Employees' health and safety training.























To enable prevention delegates to carry out these tasks, they have the right: (i) to accompany health and safety professionals carrying out risk assessments as well as labour inspectors monitoring health and safety compliance – the prevention delegates can point out concerns to the inspectors in the course of their visits; (ii) to have access to the appropriate documentation about working conditions; (iii) to be informed by the employer about workers' injuries or ill health and to examine the place where these have occurred; (iv) to receive information from the health and safety professionals employed by the employer; (v) to visit workplaces and talk to employees; (vi) to encourage management to take preventative measures and improve health and safety arrangements; (vii) to propose to the employee representatives that they agree to order a halt to work to avoid a serious and imminent danger, while it is the main employee representatives, rather than the prevention delegates, who have normally the right actually to halt work.

The joint health and safety committee also has a range of tasks and rights, and where there is no health and safety committee, these tasks and rights fall to the prevention delegates. The tasks are to: (i) participate in the drawing up, implementation and evaluation of risk prevention measures, involving looking at the choice of measures, the activities of external agencies contracted by the company for health and safety, work organisation, new technologies and protective equipment; and (ii) promote initiatives for effective risk prevention making proposals for improvement and to remedy failings. The rights are to: (i) have direct knowledge of the risk prevention situation in the company, through appropriate workplace visits; (ii) have knowledge of all the necessary documents about working conditions and health and safety activities in the company; (iii) know about and to analyse any negative impacts on workers' health in order to establish the causes and make proposals to avoid them; and (iv) be given the annual report and proposals for action produced by the health and safety professionals in the company.

Collective bargaining rights

The environmental clauses do not form a part of the minimum compulsory contents of the Spanish collective agreements' legislation, so the inclusion and their binding force depend on the voluntarism of the social bargaining agents.

Corporate sustainability obligations

Since January 2021, companies with more than 250 workers that meet a series of accounting criteria are required to submit a non-financial information report, as established by Law No. 11/2018 on non-financial information. The non-financial information report must contain information on the due diligence processes applied by the company and where relevant in relation to its supply chain in order to identify, prevent and mitigate existing and potential adverse environmental, social and personnel impacts, anti-corruption, human rights, etc. In detail, the report must include



















Associated organisations:









the information necessary to understand the evolution, results and situation of the company or group, and the impact of its activity, with respect to:

- General organisational issues: business model, policies and their results, main risks and non-financial key indicators;
- **Environmental issues**: Environmental management, pollution, circular economy, sustainable use of resources, climate change and biodiversity;
- Social and personnel issues: Employment, work organisation, health and safety, social relations, training, universal accessibility and equality;
- Respect for human rights: Due diligence procedures, complaints of violations, child labour and forced labour;
- Fight against corruption and bribery: measures to combat corruption, bribery and money laundering;
- Information on society: commitment to sustainable development, customer and supplier management and tax information.

In addition to any other information that may be significant to the organisation and its stakeholders.

Multi-stakeholder governance of just transition

The Just Transition Strategy of February 2019 provides for Just Transition Agreements: a tool for co-governance aimed at guaranteeing the commitment and coordination of public administrations and proposing support instruments for territories at risk from the energy and ecological transition. Just Transition Agreements begin with an assessment of potential job losses and formulate a series of commitments, with a final list of measures to maintain employment and population. Their priority objective is the maintenance and creation of business and employment, the permanence of the population in rural areas of Spain and the promotion of economic diversification in accordance with local resources. Their preparation includes participatory processes to obtain ideas, initiatives and projects for the economic reactivation of their regions from the inhabitants and social players of the territories in question.

4.4 Germany

Information and consultation rights at the workplace level

Section 80 of the Works Constitution Act assigns the works council (Betriebsrat), which can be set up in all workplaces with five or more employees, the task of promoting environmental protection in the workplace. Due to this law, the employer must inform the works council about measures in the environmental field. Moreover, under Section 106 of the Works Constitution Act, the finance committee is to be established in all companies with 100 or more permanent employees. In the committee, the works council has the right to be informed by the employer of a range of issues, including those related

























to the establishments' environmental policy and corporate due diligence in supply chains.

Health and safety representation at the workplace level

In the private sector, the works council has an important role in health and safety issues. In the public sector, the staff council (Personalrat) has a similar function.

Under Section 89 of the Works Constitution Act, the works council has to endeavour to ensure that the provisions on safety and health at work and accident prevention as well as environmental protection are observed in the establishment. It has to support the competent occupational safety and health authorities, the statutory accident insurance institutions and other relevant bodies in their efforts to eliminate safety and health hazards by offering suggestions, advice and information. The employer and the bodies referred to above are obliged to invite the works council or the members it delegates for that purpose to participate in all inspections and issues relating to safety and health at work or the prevention of accidents and inquiries into accidents. The employer also has to consult the works council concerning all inspections and issues relating to environmental protection in the company, and she has to inform it immediately of any conditions imposed and instructions given by the competent bodies relating to safety and health at work, the prevention of accidents, or environmental protection in the establishment. Moreover, at least once in every calendar year, the employer has to present a report to the works council concerning staff issues, such as environmental protection of the establishment.

In addition, in larger workplaces (more than 20 employees) a health and safety committee (Arbeitsschutzausschuß) should be set up. This is a joint employer-employee body, which includes two members of the works council/staff council and safety delegates (Sicherheitsbeauftragte), appointed by the employer. The health and safety committee should be informed and consulted on health and safety and accident prevention issues and it provides a forum in which measures to improve workplace health and safety can be developed.

Co-determination rights at the workplace level

Under Section 87 of the Works Constitution Act, the works council has a right of codetermination in several matters, including "arrangements for the prevention of accidents at work and occupational diseases and for the protection of health on the basis of legislation or safety regulations". By contrast, measures concerning the establishment's environmental policy can be dealt with in works agreements on a voluntary basis (Section 88).

Corporate sustainability obligations

Germany transposed the EU Non-Financial Reporting Directive (2014/95/EU) into national law on 19 April 2017, as the Act to Strengthen Companies' Non-financial Reporting in their Management and Group Management Reports (CSR Implementation























Act) (Gesetz zur Stärkung der nichtfinanziel- len Berichterstattung der Unternehmen in ihren Lage-und-Konzernlageberichten – CSR Umsetzungsgesetz). It applies to companies with more than 500 employees, which are capital-market oriented and fulfil certain conditions. These companies must publish, as part of their annual management report or as a separate report, a non-financial statement, including information on: environmental matters, employee matters, social matters, respect for human rights, anti-corruption and anti-bribery matters. In relation to each of these issues, the nonfinancial statement must contain: a description of the policies undertaken; the outcomes of these policies; the principal risks relating to the business of the company; the principal risks relating to the business relationships, products and services; a description of the non-financial key performance indicators relevant to the company's business.

Moreover, according to the Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, LkSG), published in the Federal Law Gazette in 2021 and entered into force from 2023, enterprises are under an obligation to exercise due regard for the human rights and environment-related due diligence obligations. The core elements of the due diligence obligations include the establishment of a risk management system to identify, prevent or minimise the risks of human rights violations and damage to the environment. The Act sets out the necessary preventive and remedial measures, makes complaint procedures mandatory and requires regular reports. The due diligence obligations apply to an enterprise's own business area, to the actions of a contractual partner and to the actions of other (indirect) suppliers. This means that an enterprise's responsibility no longer ends at its own factory gate but applies along the entire supply chain. From 2023, the Act initially applies to enterprises with at least 3,000 and, from 2024, additionally to enterprises with at least 1,000 employees in Germany.

Multi-stakeholder governance of just transition

An 'Alliance for Transformation' was set up in 2022 as a central dialogue forum involving representatives from business, trade unions, science and civil society, with the aim of establishing a solid collaboration to support the transformation process in Germany. Within this Alliance, high-level talks take place regularly on different developmental topics, including climate neutrality and resource efficiency, digital innovation and technological sovereignty, a modern and resilient state, a society open to innovation.

4.5 Belgium

Information and consultation rights at the workplace level

According to Article 14 of the Law of 20 September 1948 on the organisation of the economy as amended on 22 June 2015, works councils are to be established in all enterprises usually employing at least 50 workers. Article 15 sets out the duties and functions of the works councils, including, among the other things, the obligation of the























employer to provide the council with information at certain times during the year on the financial and economic situation of the enterprise, as well as the right for the works council to provide suggestions or objections on economic issues and any measures which are likely to impact the organisation of work, working conditions and the performance of the enterprise. Environmental issues are not expressly included among the matters of information and consultation listed in the legislative provision. However, they can be subject to information and consultation procedures as long as they fit within the above definitions.

Health and safety representation at the workplace level

Occupational safety and health at work is covered by the Law of 4 August 1996 on wellbeing of workers in the performance of their work, and its royal decrees. The main form of employee representation in health and safety matters at the workplace is through the employee members of the joint health and safety committee (Comité pour la prévention et la protection au travail or CPPT in French/Comité Preventie en Bescherming or Comité PB in Flemish). They are elected by the whole workforce, although only the unions can nominate them. Where there is no health and safety committee, its rights and duties are transferred to the trade union delegation (DS/SD in Flemish), whose powers and structures are set out in a series of collective agreements. Where there is no health and safety committee and no union delegation, the employer should consult the employees directly on health and safety issues, although this happens only rarely.

The employer is required to provide the committee with a wide range of information relating to health and safety, such as: (i) the laws and regulations relating to well-being at work that apply to the company's operations; (ii) details of the obligations imposed on the employer by the regulatory authorities; (iii) all other documents and reports relating to the employees' safety and well-being; (iv) an inventory of the machines and equipment used by the company; (v) details of the location of dangerous substances and products used by the company; (vi) details of measurements relating to air and water pollution. In addition, the employer should inform the committee of: (i) changes to production processes or working methods which might have an impact on health and safety - this could include, for example, the introduction of new computers; (ii) the introduction of new products; (iii) health and safety hazards; (iv) first-aid measures, fire prevention and evacuation arrangements; risk assessments; (v) the company's environmental policy - the company should produce an annual report on this; and (vi) regular reports on complaints raised by employees relating to violence and harassment. As well as providing information, the employer must obtain the opinion of the health and safety committee in advance in a wide range of areas. In terms of policies, these include: (i) all projects and measures which could have an impact on the well-being of employees, either directly or indirectly and in the short or long term; (ii) plans for the introduction of new technologies, which could have a health and safety impact; (iii) the company's health and safety policies, including its overall five-year policy on hazard prevention and the annual action plan to achieve the aims set out in the policy, which each company is obliged to have. More specifically, the health and safety committee





























must give its view in advance on: (i) all measures intended to adapt working methods and conditions to the needs of the worker and aiming to prevent occupational fatigue; (ii) adjustment measures for employees with disabilities; and (iii) the choice, purchase and maintenance of equipment used at work and collective and personal protective equipment.

The health and safety committee has the right to contact the national labour inspectorate at any time, and, at least once a year, a detailed inspection of the workplace to identify potential risks should be made by a delegation of the health and safety committee plus line management and the internal occupational health adviser. The health and safety committee does not have the right to instruct that work should be stopped, but where there is an imminent and serious risk or where there has been an accident a smaller group of members meets immediately to decide on the action to take.

In addition, there are other areas, such as working with screens, risks to pregnant women, biological agents and first aid-arrangements, where the health and safety committee has been given particular responsibilities.

Collective bargaining rights

The inclusion of environmental clauses in Belgian collective agreements and their binding force depend on the voluntarism of the social bargaining agents.

Corporate sustainability obligations

At federal level, in April 2006, a working group was set up within the Interdepartmental Commission for Sustainable Development (CIDD/ICDO) to develop a more structured policy on corporate social responsibility, in partnership with regional government representatives. Its work has resulted in 2006 in the 'Reference Framework - Corporate Social Responsibility in Belgium' and in 2007, in the 'Federal Action Plan on corporate social responsibility'. The plan sets out:

- Key points for corporate social responsibility;
- The importance of corporate social responsibility for companies and their stakeholders;
- An overview of key instruments and international standards.

Importantly, according to the 'Reference Framework – Corporate Social Responsibility in Belgium', corporate social responsibility implementation at the company level should be carried out in consultation with company's stakeholders, incl. worker representatives. More recently, a bill introducing a duty of vigilance and a duty of responsibility for companies throughout their value chains was tabled in the federal parliament in spring 2021. This proposal for a bill includes **the protection of the environment** (*Proposition de loi instaurant un devoir de vigilance et un devoir de responsabilité à charge des entreprises tout au long de leurs chaînes de valeur*, 2 April 2021, Doc. No. 1903/001). However, the discussion on this text has been at a standstill since autumn 2021, also due























to the pending publication of the European directive on corporate sustainability due diligence. Talks should start again in 2023.

Multi-stakeholder governance of just transition

Trade unions are part of advisory bodies at federal level, dedicated to the study and the provision of inputs on various topic, including green transition. Notably, a Federal council for sustainable development is set up with consultative functions and it is composed, in addition to public authorities, by representatives of non-government organisations, consumer and youth organisations, scientific bodies, and trade unions and employers' associations. Moreover, the federal minister for climate usually organises so-called 'environmental roundtables' with social partners to deal with issues linked to green transition. At the regional level, an important example is represented, in the Flanders, by the Mina Council endowed with powers of study, recommendation and advice for everything related to the environment and nature. It is comped of environmental organisations, socio-economic and socio-cultural organisations as well as public authorities. An Economic, Social and Environmental Council is also established in Wallonia as a consultative assembly which brings together representatives of employers, trade unions and environmental organisations. The Council participates in the definition of policies aimed at the development of Wallonia. Finally, an Environmental Council, composed of public authorities and civil society organisations, is set up in the region of Brussel, with the task to formulate opinions, on its own initiative or at the request of the government, on any draft ordinances and regulatory decrees on environmental issues concerning the region of Brussels.

4.6 Bulgaria

Information and consultation rights at the workplace level

According to the Labor Code (S.G. No. 26/1.4.1986), the workers and employees shall participate, through their representatives elected by the general meeting of the workers and employees, in the discussion on enterprise management issues only when provided by law. In particular, in Article 7, the Code provides that in enterprises with 50 or more employees, as well as in separate organisational and economic divisions of enterprises with 20 or more employees, the general meeting shall elect, among its members, representatives of the employees for the implementation of information and consultation. Moreover, Article 130 states that the employer is obliged to provide the elected workers' and employees' representatives with information regarding, among various issues: the recent and probable development of the enterprise's activities and economic situation; the situation, structure and probable development of employment within the enterprise; the number of employees with fixed-term contracts; possible substantial changes in work organisation, including in the introduction of homeworking and teleworking. Also, the same Article affirms that after providing the information, the employer must hold consultations on the matters outlined for information.























Environmental issues are not explicitly mentioned in the Code, but they could be subject of information and consultation procedures when entailing substantial changes in work organisation.

Health and safety representation at the workplace level

The Bulgarian Constitution underlines, in Article 48, the right of workers to "healthy and non-hazardous working conditions, in accordance with conditions and procedures established by law". The Bulgarian Health and Safety at Work Law (HSWL) was adopted in 1997, and since then it has been subject to several amendments. HSWL applies to all enterprises, regardless of their organisation, as well as to self-employed persons. Under the law, the employer has the obligation to assess risks to health and safety and to take measures to improve working conditions. The employer must ensure proper training and involvement of workers and to organize adequate monitoring of the implementation of planned measures. The procedure, method and frequency of risk assessment are determined by the Ministry of Labour and Social Policy and the Ministry of Health and published in an ordinance.

Importantly, the employer must consult with employees or their representatives and organisations, enabling them to participate in matters that may affect their health and safety. HSWL provides the frame for social dialogue at enterprise level as well as for the case of cooperation between enterprises for work purposes. In enterprises with 50 or more employees, Working Conditions Committees (WCC) should be established, while smaller companies (5 to 50 employees) should set up Working Conditions Groups (WCG). While the functions of WCC and WCG are similar, there are differences in their composition. WCCs include employer representatives and an equal number of workers representatives for health and safety at work. In the work of the WCC, representatives of the supervisory authorities (labour inspectorate) or the occupational health service and outside experts can be invited. The WCC Chairman is the employer or his representative and the deputy is a workers' representative. WCGs consist of the employer or the manager of the respective unit and of one employees' representative. WCC/WCG and trade union representatives are entitled to take part in the investigation of work accidents and occupational diseases.

The tasks of both WCCs and WCGs include:

- Discussing every three months all issues related to employees' health and safety and taking measures to improve the position;
- Examining the results of occupational risk assessments, studies on the health of employees, reports from specialist occupational health services and other health and safety topics;
- Discussing planned changes in technology, work organisation and job content and proposing solutions that protect the health and safety of employees;
- Monitoring the extent to which health and safety measures are implemented;
- Monitoring accidents at work and levels of occupational disease in the company
- Participating in the development of health and safety information and training programmes.





















WCCs and WCGs should work closely with the employer's occupational health services. In addition, employee representatives on working conditions committees and groups have a number of specific rights. They have access to information on working conditions, reports on accidents at work and occupational sickness, as well as the results of any investigations undertaken by the national inspectorate and any obligations they may have imposed on the employer. They should also be invited – along with the unions – to take part in the investigation of accidents at work and occupational diseases. Employee members of the committees and groups can require the employer to take appropriate measures to eliminate and mitigate hazards and make proposals to the employer as to how this might be done. They can also appeal to the national inspectorate if they consider that the measures taken by the employer are insufficient to ensure health and safety. Finally, they have a right to participate in visits made by the national inspectorate.

Collective bargaining rights

The inclusion of environmental clauses in Bulgarian collective agreements and their binding force depend on the voluntarism of the social bargaining agents.

Corporate sustainability obligations

In Bulgaria, the governance for corporate sustainability is provided by the **National Corporate Governance Code** adopted in 2007 and amended in 2012. The Code applies to all public companies as well as to all companies planning to become public. It recommends that corporate management should establish specific rules to address the interests of stakeholders. These rules should ensure **balance between company development and the economic, social and ecological improvement of the environment which the company operates in.** Moreover, under the Code, corporate management should maintain effective relations with the stakeholders. The company should periodically and in compliance with the legal provisions and good international practices for non-financial information disclosure, inform about economic, social and environmental issues of concern to stakeholders, for example anti-corruption policies; labour policies, policies regulating supplier and client relations; the company's corporate and social responsibility policies; environmental protection and nature preservation policies.

Furthermore, in 2019, the Council of Ministers of Republic of Bulgaria adopted a **Strategy on Corporate Social Responsibility** for the period 2019-2023, by which the Government presents its vision, priority objectives and the commitment to promote the ability of companies to integrate their socially responsible practices in their activities in order to increase competitiveness, business sustainability and to support the achievement of the sustainable development goals. The objectives of the document are to promote the sustainable implementation of transparent, socially responsible management and business practices, as well as to stimulate the development of a policy of socially responsible management of enterprises with state and municipal participation and in the structures of public administration. Action plans are developed for the

























implementation of the Strategy. They include some activities to be performed independently by the state institutions, and other activities - jointly with interested parties from the non-governmental sector, social partners, employers' associations, and others. The plans are drawn up after being developed and consulted by the representatives of the Corporate Social Responsibility Advisory Council of the Minister of Labour and Social Policy. The main aim of the measures envisaged is to build a culture of socially responsible behaviour and consumption of the organisations towards the community, environmental protection and the creation of quality relationships with all interested parties.

Multi-stakeholder governance of just transition

A 'Consultative Council for the Green Deal of the Council of Ministers' was set up in 2020 and renewed in 2022 as a body to design the framework for future reforms and investments for decarbonisation and modernisation of the Bulgarian economy. Departmental committees have been formed within the Council (e.g., the Committee for Energy Transition and the Committee for Energy Poverty), where all interested parties are involved, including trade unions, which can express their views as regards specific topics related to energy transition.

4.7 Industrial relations frameworks for energy transition compared

Figure 17: Comparison of country industrial relations frameworks for energy transition

Countrie s	Information and consultation rights at the workplace level	Health and safety representatio n at the workplace level	Corporate sustainability obligations	Collective bargaining or codeterminati on rights	Multi- stakeholder governance of just transition
Italy	Environmen tal issues not mentioned in the law on information and consultation. However, they can be listed as topics of information	Workers' safety representativ e regulated by law and foreseen in all companies. National collective agreements have sometimes extended his/her	amendments to the Italian constitution stressing that private economic activity cannot cause damage to the environment. Legislative Decree No. 254/2016 on 'individual non-financial	No specific collective bargaining rights on environmenta l issues	Permanent table for economic, social and territorial partnership, composed of representativ es of social partners, local authorities, regions and universities,

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	and consultation in collective agreements	competences to environmental protection	statement' to be prepared by public interest companies and regarding also the impact of business activities on the environment		and charged with advisory functions in matters related to the implementat ion of the National Recovery and Resilience Plan (incl., the green revolution and ecological transition)
Spain	According to the Workers' Statute, every quarter, the company should inform the works council of diverse issues, incl. environmen tal ones potentially affecting the employment	Prevention delegates (in companies with 6 or more employees) and a joint employer- employee health and safety committee (in companies with 50 employees or more), envisaged by law	Law No. 11/2018 on non-financial information to be provided by companies with more than 250 workers and concerning also environmental issues	No specific collective bargaining rights on environmenta l issues	Just Transition Agreements, foreseen in the Just Transition Strategy, as a tool for co- governance between social partners and public administratio ns of energy and ecological transition in territories at risk
German y	According to the Works Constitution Act, the employer must inform the works council of	The works council endowed with the task to ensure safety and health at work and accident	The CSR Implementation Act of 2017 applying to companies with more than 500 employees, which must	No codeterminat ion rights on environment al protection. Measures concerning the	Alliance for Transformati on, set up in 2022, as a central dialogue forum involving

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	any measures in the field of environmen tal protection. Moreover, within the finance committee (to be established in companies with at least 100 employees), the works council must be informed of several issues, incl. the establishme nts' environmen tal policy and corporate due diligence in supply chains	prevention as well as environmental protection in the workplace. in larger workplaces (more than 20 employees) a joint employer-employee health and safety committee should be set up	publish a non-financial statement covering also environmental matters. Under the Act on Corporate Due Diligence Obligations in Supply Chains (in force since 2023), enterprises (with at least 3,000 employees from 2023 and 1,000 employees from 2024) must establish a risk management system to identify, prevent or minimise damage to the environment	establishment 's environmenta I policy can be dealt with in works agreements on a voluntary basis	representatives from business, trade unions, science and civil society, on various issues incl. climate neutrality and resource efficiency
Belgium	Environmen tal issues not expressly included among the matters of information and consultation listed in the legislation. However,	Joint employer- employee health and safety committee envisaged by the law. Where there is no health and safety committee, its rights and	A 'Reference Framework – Corporate Social Responsibility in Belgium' and a 'Federal Action Plan on corporate social responsibility' adopted in 2006 and 2007. Since 2021, discussion on a proposal for	No specific collective bargaining rights on environmenta I issues	Trade unions are part of advisory bodies at federal and regional level, dedicated to the study and the provision of inputs on

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	they can be subject to information and consultation procedures as long as they impact the organisation of work, working conditions and the performance of the enterprise	duties are transferred to the trade union delegation. Where there is no health and safety committee and no union delegation, the employer should consult the employees directly on health and safety issues	a bill introducing a duty of responsibility for companies throughout their value chains (also incl. the protection of the environment)		various topic, including green transition
Bulgaria	Environmen tal issues not explicitly mentioned in the law, but they could be subject of information and consultation procedures when entailing substantial changes in work organisation	Joint employer- employee working conditions groups (in companies with 5 to 50 employees) and joint employer- employee working conditions committees (in companies with 50 or more employees) envisaged by the law	National Corporate Governance Code adopted in 2007 and amended in 2012, applying to all public companies and companies planning to become public, which should establish specific rules to ensure a balance between company development and the ecological improvement of the environment. A Strategy on Corporate Social Responsibility adopted in 2019 with the aim to promote companies'	No specific collective bargaining rights on environmenta l issues	Consultative Council for the Green Deal set up in 2020 and renewed in 2022, composed of different departmenta I committees where social partners are involved

























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	ability their socially and environmentally responsible practices		
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Associated organisations:





