

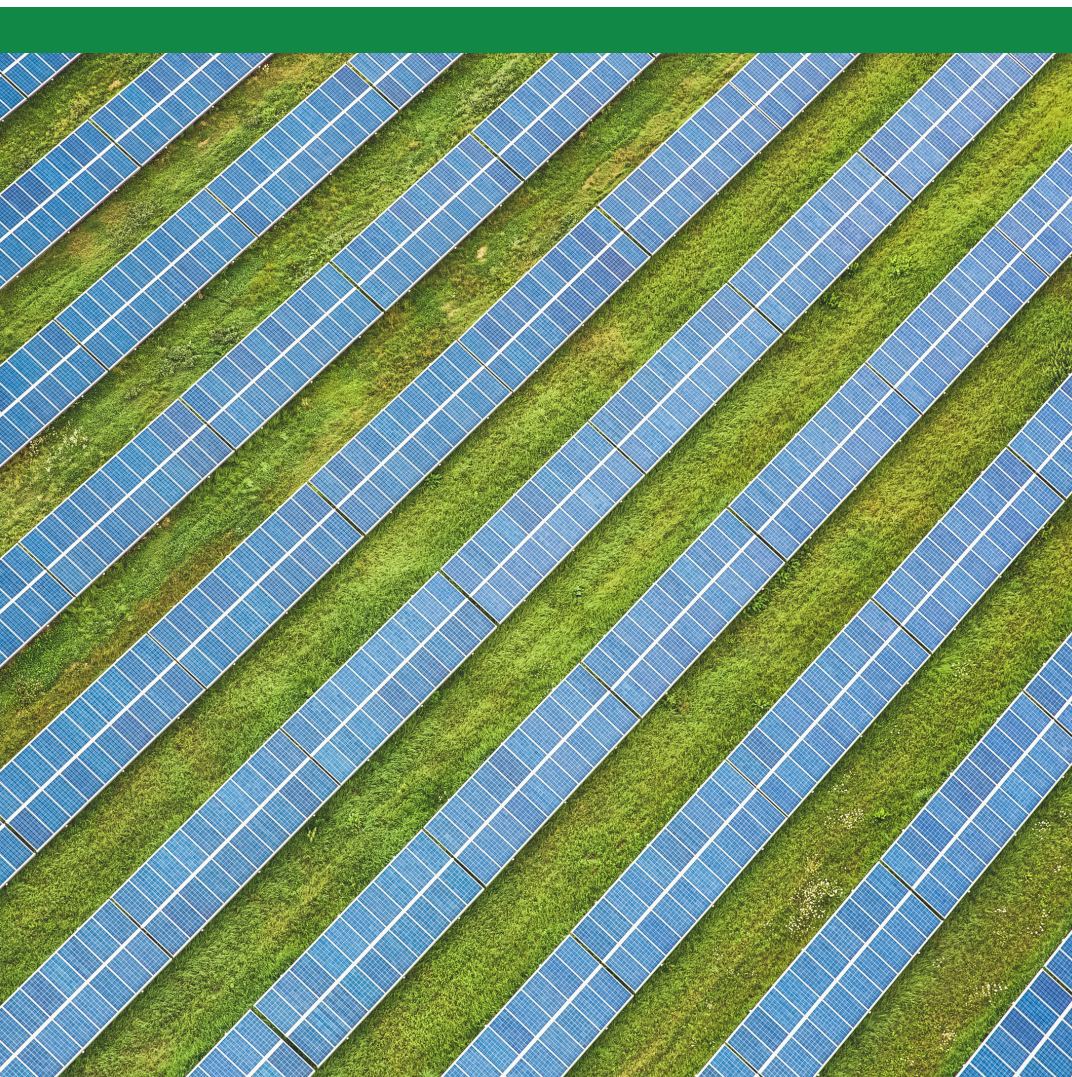


REJEnerAXion

Energy for a just and green recovery deal: the role of the industrial relations in the energy sector for a resilient Europe



FINDINGS OF THE COMPARATIVE ANALYSIS



Samuele Alessandrini
Simonetta Bormioli
Serena Rugiero



(Project no. 101052341/SOCPL-2021-IND-REL)

© Rejeneraxion project

Date of publication: October 2024

Graphic design by AISFOR

The electronic version of this publication is available on the website www.rejeneraxion.com

The content of this document does not reflect the official opinion of the European Commission. Responsibility for the information and views expressed therein lies entirely with the authors.

TABLE OF CONTENTS

PREFACE	4
INTRODUCTION	5
METHODOLOGICAL NOTE	8
REPORTS OVERVIEW	9
PART 1	13
1. ENERGY TRANSITION FRAMEWORK AND SCENARIOS	13
2. POLICIES AND GOVERNANCE OF THE ENERGY TRANSITION	14
3. EFFECTS OF THE ENERGY TRANSITION	16
PART 2	20
4. MEASURES TO MANAGE THE EFFECTS OF ENERGY TRANSITION AT TERRITORIAL LEVEL	21
5. MEASURES TO MANAGE JOB TRANSITIONS	23
PART 3	28
6. CHARACTERISTICS OF THE INDUSTRIAL RELATIONS AND SOCIAL DIALOGUE'S SYSTEM	28
7. POSITIONS OF THE SOCIAL PARTNERS ON THE JUST ENERGY TRANSITION	30
8. JUST ENERGY TRANSITION MEASURES AND THE ROLE OF TRADE UNIONS	32
9. INTERESTING PRACTICES/BEST PRACTICES	34
FINAL REMARKS	35
ANNEX	38

PREFACE

This report presents the **main findings of the comparative analysis of all the research outputs** (national reports based on desk analysis, qualitative interviews to stakeholders, case studies based on concrete experiences of industrial relations tackling the energy transition) carried out in eight European countries (**Italy, Belgium, Hungary, Slovakia, France, Germany, Spain, Poland**) for the project REJenerAXION (Energy for a just and green recovery deal: the role of the IR in the energy sector for a resilient Europe).

REJenerAXION, a European Union co-funded research project (Project no. 101052341/SOCPL-2021-IND-REL), aims to analyse and strengthen the role of innovative industrial relations structures, including social dialogue, to respond in a socially fair and balanced way to the main challenges and opportunities offered by a clean-energy transition at national and European level.

After a brief introduction to the topic of a Just Energy Transition, the paragraphs that follow will illustrate: the framework and scenarios of the energy transition, the policies and governance of the Just Energy Transition and its effects on local development, employment, workers, the organisation and quality of work, in the first part. A description of the measures introduced by the project countries to tackle the impact of the energy transition with a specific focus on the job transition, in the second part. An analysis of the social partners' position on a Just Energy Transition, the role of trade unions, and the actions taken to foster a Just Energy Transition, in part 3. Finally, in the conclusions we will try to summarise the main evidences gathered and offer some key observations to better address the energy transition.

INTRODUCTION

The **Just Transition** is a complex concept that requires a **systemic approach, reflective of the intersectionality between the social implications of the energy transition and the need for social and economic cohesion**. At the same time, this concept must become operational at the local level, according to the specific features of the territory.

Our comparative analysis highlights the **lack, in the countries examined, of a clear and shared national definition of what a Just Transition means**. However, the formulation of such a definition is an essential prerequisite for the construction of effective energy transition policies and to control, monitor and evaluate the results of a process that is intended to be socially just and balanced.

In the absence of a shared framework on a Just Transition¹, the different actors involved in the transition itself (companies, local institutions, trade unions, workers, environmentalist groups, experts, civil society) tend to interpret and implement its principles according to their own point of view. In this sense, **the concept of a Just Transition seems to be “dispositional”**: not only it derives from other concepts (safeguarding employment, quality of work, professional reconversion, training, local development, protection of labour and contractual protections, workers’ participation in decision-making processes), but it also changes according to the interpretation and interests of the various stakeholders, depending on the supply chain processes and value chains of innovations involved, evolving business models and market reorganisations and the reputation of companies.

The analysis demonstrates this variety of interpretations and **the need to promote a shared and structured reflection on what a Just Transition means**, within a clear definition of the objectives to be achieved. **This implies a new role for the state to take action with precise guidelines and a framework of integrated policies** encompassing the different dimensions of a Just Transition: climate, employment, training, social and industrial policies. Only a structural and integrated approach can ensure a clear assumption of responsibility by the actors involved and a reconstruction of the different instances called into play by the energy transition, in order to anchor them to the achievement of shared goals which embody a common interest, when the transition is dealt with in socially acceptable terms.

In this framework, it was of fundamental importance to map the main actors involved in the processes of decommissioning, closure and transition of fossil assets, evaluating first and foremost whether the initiative is corporate, and thus in line with the principles of a market-based transition, or stems more directly from government choices, and thus has a policy-based imprint. The governance mechanisms adopted in the various countries – that determine the level of effective involvement of the social partners – were also considered.

In **Germany** the Just Transition notion is not much in use in the public discourse but there are two key terms – ‘Energiewende’ (energy turnround) and ‘Kohleausstieg’ (the phasing out of coal) – that are clearly connected to its meaning and are mainly used in favour of **modelling the regional structural change while focusing on social consensus building**. There are various support measures for companies and workers involved in transition pathways that, in the absence of a national policy dedicated to the Just Transition, stem from the bargaining power of trade unions and work

1 According to the ILO, a *Just Transition* means “greening the economy in a way that is fair and inclusive to all.” It focuses on creating decent work opportunities while ensuring that no one is left behind. This requires maximising the social and economic opportunities arising from climate action and carefully managing any challenges through social dialogue and respect for fundamental labour rights (Eurofound). The European Parliament emphasises that a just transition is essential for achieving EU climate neutrality by 2050. It highlights the need for an inclusive and fair transition, ensuring that no region or group is left behind in the process. This concept is integrated into EU climate and energy policies, with particular attention to fostering sustainable job creation and supporting vulnerable areas (EUR-lex).

councils at company level. These measures, however, mainly concern direct workers (and exclude indirect and supply chain workers).

A more comprehensive policy framework in which Just Transition plans (JTPs) have full public support at the national level would therefore avoid, in this as in other countries, an unequal distribution of the effects of the transition between workers of large companies – covered by collective bargaining agreements that guarantee social security and high wages – and workers of small companies or from structurally weaker regions, who are stuck in a local labour market that offers fewer opportunities for remuneration and job quality.

In countries like **Hungary** and **Slovakia**, the **Just Transition is not conceived as a public goal** and there are no public policies associated with it. The green transition in such contexts appears to be oriented by the intersection between the interests of big companies and the priorities of the central state. In these cases, the revitalisation of social dialogue at national, regional, sectoral and local level becomes a fundamental precondition for a JT, as a lever to affirm the focus on its social dimension, its socio-economic benefits, the priority of the public interest and the importance of participation. Similarly, it appears crucial to strengthen sectoral collective bargaining, also by facilitating its expansion in favour of the new issues related to the green and just transition, in contexts where there is an increasing relevance of bargaining at company level.

In **Poland**, too, **the need for a national energy transition strategy is emphasised** as a guide for regional-level policies and business decisions, in order to ensure the assessment of the social effects of the transition, the definition of measures to mitigate its negative impacts and the identification of the necessary resources. The formulation of a national strategy should make it possible to involve the social partners in designing and monitoring relevant measures through information and coordination mechanisms. In this country, although not explicitly defined in terms of a Just Transition, there are emerging measures for the protection of workers affected by the energy transition through “social contracts” proposed by trade unions.

Especially in those situations where fragmentation and poor coordination between actors (at federal, regional, community, and local level) can be observed, as in the case of Belgium, developing a shared Just Transition definition is essential, to achieve a unified transition policy, which is a key prerequisite for the fair treatment of workers and of employment and social issues.

In **Italy**, which lacks a definition and a plan dedicated to the Just Energy Transition as much as an industrial and development plan, **the social partners share the objective of a Just Energy Transition and are working to this end to create increasingly broad spaces for discussion and dialogue**, also in response to the lack of public intervention.

In **France**, on the other hand, the **Just Transition is embodied in the set of instruments aimed at managing local development policies and restructuring activities** with an important role of territorial pacts - in which, however, a full involvement of trade unions does not always emerge - and a considerable effort in mapping labour markets and new occupations and in forecasting and analysing the transferability of jobs/skill sets.

Spain is the only country in the REJenerAXION partnership that **has developed a Just Transition strategy**, with framework agreements on mine and power plant closures, tripartite framework agreements for a Just Transition, participation in Just Transition conventions, **with trade unions playing a proactive role in all these phases**.

Nevertheless, even in such a favourable context for the development of a Just Energy Transition, the main obstacles to its concrete realisation re-emerge, stemming mainly from the plurality of interests revolving around the transition and

the different orientations on the redevelopment of the territories impacted by the processes of dismissal and closure of fossil assets. It is precisely here that the experience that the social partners traditionally have in managing restructuring processes appears crucial. At the same time, however, this experience needs to be adapted to the particular complexity of the green transition, which also necessarily calls for the strengthening of social dialogue and collective bargaining.

Finally, our analysis confirms that the multidimensional and complex character of the **Just Transition requires a multi-level system of governance** (involving the European, national, sectoral, regional and company level), **where social dialogue plays a fundamental role** in ensuring the quality of the Energy Transition, as an instrument as much as a form of governance.

However, in the countries examined, **a process of gradual weakening of social dialogue practices, collective bargaining coverage and workers participation** – traditionally strong in the fossil fuel sectors – **can be observed**.

The transition represents a multifaceted challenge. On the one hand, it makes it necessary to **reorganise industrial relations systems** so as to be able to respond effectively to the changes and effects of the transition on the economic and social system. On the other hand, it **allows social partners to assume a key role in managing the transition**, also by filling the knowledge gaps (on new risks, job quality, new professional profiles) and action gaps caused by the speed and radicality of the decarbonisation processes, which require the reconstruction of an equitable regulatory system. Finally, the pursuit of a JT constitutes, precisely because of its ambition to overcome the work/environment dilemma, an opportunity to make the environmental ground a new space of representation for trade unions outside and inside the workplace.

METHODOLOGICAL NOTE

The report presents the main findings of the comparative analysis of the national reports (8) and case study reports (24) conducted in the partner countries between September 2022 and March 2024.

The research methodology of the project included: i. A desk analysis, at European and national level, based on literature review, studies and documents from academia and institutions and official databases focusing on the relationships between the energy transition (ET), employment and social dialogue (SD); ii. A qualitative survey, with in-depth interviews with 'privileged observers' – key actors in the ET field (policy makers, experts, workers and companies' representatives) – carried out in each country involved in the project, in order to describe the positions of the social partners and the structures and processes of industrial relations (IR) in relation to the ET and a JT; iii. Country case studies selected to cover the main ET paths of each country and their effects considering the geopolitical and strategic context, the different stages of the value chain and the different fossil energy sectors involved (coal, oil, gas and nuclear), also – where appropriate – in a cross-sectoral approach due to the strong link between energy and industry.

National reports and European report

The baseline reports at European (1) and national level (one for each country involved in the project, 8 in total) present a description of the policy framework for the decarbonisation of the energy sector and the main trends concerning the economic, environmental and employment dimensions of the ET. A chapter is devoted to an overview of IR and SD initiatives on the topic of the Just Energy Transition (JET).

National qualitative survey

Annexed to the national reports are the Qualitative Survey Reports that were produced in 2023. The main objective of the qualitative survey was to analyse the role of IR and SD in supporting a JET, considering the consequences on working conditions and quality, work organisation, new risks and opportunities for workers, companies, local communities and the environment. The survey was also aimed at validating the National Reports, integrating them with the stakeholders' point of view and identifying case studies for fieldwork.

The stakeholders interviewed included representatives of employer organisations, trade union representatives, regional institutions and authorities, experts (universities, public and private research institutes), environmental, professional and social associations, civil society (local communities, informal networks). The sectors involved are those of energy generation from fossil fuels (production, extraction and distribution). Other energy sectors were also considered when, with reference to the specific economic, social and institutional context, they represented, together with fossil fuels, the main target of the ET at national level.

The interviews (with a national focus) refer to six relevant fields of analysis: employment, work organisation and working conditions, sectoral level, territorial/regional level, socio-environmental level, ET drivers and obstacles.

Case studies

The research case studies were conducted on concrete experiences of IR in the field of a JET, either in progress or already completed. The analysis focuses on all stages of the energy system value chain, also considering the relationship with the territory and the implications for regional restructuring processes in coal-intensive regions. From this perspective, the challenges and opportunities for IR and SD arising from the impacts of the ET on the organisation of work, on working conditions and on the labour market were also considered.

Three different case studies were conducted between September 2023 and February 2024 in each project partner country (24 in total for the eight countries).

The methodology was based on a combination and cross-fertilisation of data sources: direct observation, desk analysis and qualitative survey tools based on in-depth interviews with 'privileged observers' considering the different actors involved in these processes: workers' trade union representatives, employers and representatives of employers' organisations, local institutions and authorities, experts (universities, public and private research institutes, etc.), environmental, professional and civic associations. Research questions of the interviews concern the concrete actions of IR and the results of the selected case studies, referring to six relevant fields of analysis: organisation of work, working conditions, labour market, sectoral level along the value chain, territorial level, public policies and the JT, actors involved. Considering the specific characteristics of each country's energy system, the following selection criteria were applied in choosing the case studies:

- » Representativeness of the fossil fuel-based energy technology value chain (vertical level);
- » Effectiveness of IR in managing the ET (highly/not at all/poorly effective) (horizontal level);
- » Special interest (e.g. nuclear power generation) (horizontal level).

REPORTS OVERVIEW

European Report (1). Energy for a just and green Recovery deal: the role of the IR in the Energy sector for a resilient Europe.

National Reports (8). Energy for a just and green Recovery deal: the role of the IR in the Energy sector for a resilient Europe: see the Annex (tab. 2).

Case studies reports (24): see tab. 1.

All research outcomes are available on the project website: <https://www.rejeneraxion.com/>

LIST OF ACRONYMS

ET	energy transition
IR	industrial relations
JET	just energy transition
JT	just transition
JTF	just transition fund
JTP	just transition plan
MS	Member States
NECP	national energy and climate plan
REJ	REJenerAXion project
SD	social dialogue

Table 1. Case study reports overview

COUNTRY	Title of the case study	FEATURES OF THE ECONOMIC ACTIVITY IN TRANSITION		INDUSTRIAL RELATIONS AND SOCIAL DIALOGUE		
		Fossil fuel sector	Typology of Energy Transition process	Level of Social Partners involvement	Level of Industrial relation/Social Dialogue	Topics of Industrial relation/Social Dialogue
Germany	1) The "Coal Consensus" of the Commission on Growth, Structural Change, and Employment	Coal (lignite mines, coal fired plants)	Decommissioning/dismantling and Reconversion	Ex ante - trade unions at national, regional and from different sectors have been involved from the beginning	Sectoral	Transition and investment Policies, Social protection systems, reskilling
	2) "Revierwende" - A trade union project for the just transition of coal-mining areas	Coal (lignite mines, coal fired plants)	Reconversion	Multi-trade union-initiated project	Territorial	Transition and investment Policies, Social protection systems, Other (reskilling, regional conversion)
	3) Reconversion and managing energy transition at the Uniper company and in the Wilhelmshaven region	Oil, coal and gas	Reconversion	Ex ante - trade unions at national, regional and from different sectors have been involved from the beginning	Company	Transition and investment Policies, Social protection systems, Working conditions, green skills promotion
Spain	1) Meirama. From mine and coal-fired power plant to Hydrogen and bio-methane plants	Coal	Decommissioning/dismantling and Reconversion	In Itinere, Ex post/evaluation phase	Company, Territorial, Sectoral, Inter-sectoral, National	Transition and investment Policies, Social protection systems, Working conditions, Other
	2) Andorra. From coal-fired power plant to PV and Eolic knot	Coal	Decommissioning/dismantling and Reconversion	In Itinere, Ex post/evaluation phase	Company, Territorial, Sectoral, Inter-sectoral, National	Transition and investment Policies, Social protection systems, Working conditions, Other
	3) Aboño. From mine and coal-fired power plant to hydrogen plant	Coal	Decommissioning/dismantling and Reconversion	In Itinere, Ex post/evaluation phase	Company, Territorial, Sectoral, Inter-sectoral, National	Transition and investment Policies, Social protection systems, Working conditions, Other
Poland	1) Social contract for hard coal mining sector	Coal (hard coal)	Decommissioning/dismantling	Ex ante/DM process, In itinere	Sectoral	Transition and investment Policies, Social protection systems, Working conditions, Other
	2) Social contract in lignite mining and electricity sectors	Coal (lignite and hard coal)	Other	Ex ante/DM process, In itinere	Sectoral and National	Transition and investment Policies, Social protection systems, Working conditions
	3) Energy transition in ZE PAK	Coal (lignite)	Decommissioning/dismantling and Reconversion and other	In itinere	Company and territorial	Transition and investment Policies, Social protection systems
Slovakia	1) Slovakia - from coal to geothermal energy in the Košice region	Coal	Reconversion	In itinere	Company	Social protection systems, Working conditions
	2) The mining region of Upper Nitra	Coal	Decommissioning/dismantling	In itinere	Company	Social protection systems, Working conditions
	3) Slovak gas industry transformation	Gas	Reconversion	In itinere	Company	Social protection systems, Working conditions

Hungary	1) Transformation of the Mátra Erőmű Energia Zrt (MERT)	Coal and gas	Decommissioning/ dismantling and Reconversion	Ex ante/DM process and not involved	Company and sectoral	Transition and investment Policies, Social protection systems, Working conditions
	2) Transformation of the coal-based regions of Eastern Hungary	Coal	Decommissioning/ dismantling	Not involved	Territorial and sectoral	Transition and investment Policies, Social protection systems
	3) MOL company's portfolio greening	Oil and other	Reconversion	Ex ante/DM process, In itinere	Company	Social protection systems, Working conditions and other (introduction of new technologies)
Belgium	1) The energy transition of an electricity production plant	Coal	Reconversion and other ("closure-reopening")	In itinere	Company, Territorial, Sectoral	Social protection systems, working conditions
	2) The energy transition of an electricity production plant	Other: Nuclear	Decommissioning/ dismantling and Reconversion	Ex ante/DM process, In itinere, Ex post/ evaluation phase	Company, Territorial, Sectoral, National	Transition and investment Policies, Social protection systems, Working conditions
	3) Major electricity and gas distribution network operator: One Hundred years of energetical transition	Gas	Other	In itinere	Company and territorial	Transition and investment Policies
France	1) Is a European Company Agreement relevant to support the green transition of a major "Fossil Group"?	Oil	Other	In itinere	Company	Transition, Social protection systems, working conditions
	2) Managing the impacts of a Coal power plant future closure in the Pays de la Loire Region	Coal	Reconversion	Ex ante/DM process, In itinere	Company and territorial	Transition and investment Policies
	3) Managing the impacts of a Coal power plant closure in the Normandy Region	Coal	Decommissioning/ dismantling and Reconversion	Ex ante/DM process, In itinere, Ex post/ evaluation phase	Company and territorial	Transition and investment Policies, Social protection systems, Working conditions
Italy	1) The transition to the Gela biorefinery and the role of industrial relations	Oil	Reconversion	Ex ante/DM process, In itinere	Company, Territorial, Sectoral, National	Transition and investment Policies, Social protection systems, Working conditions
	2) The energy transition of Sulcis Iglesiente	Coal	Decommissioning/ dismantling and Reconversion and other	In itinere	Territorial, Sectoral, National	Transition and investment Policies, Social protection systems
	3) The energy transition in the Ravenna hub	Oil and gas	Decommissioning/ dismantling and Reconversion and other	Ex ante/DM process, In itinere	Company, Territorial, Sectoral, Inter-sectoral, National	Transition and investment Policies, Social protection systems, Working conditions, Other

PART 1

1. ENERGY TRANSITION FRAMEWORK AND SCENARIOS

With the only exception of **France** (2021), whose energy mix is based on nuclear energy (75%) and renewables (25%) and electricity represents the largest part of the energy mix, the other Rejeneraxion (REJ) project countries are heavily dependent on foreign energy imports (**Poland**, for example, has no significant energy sources other than coal).

Phasing out of coal and **diversification of energy supply** are gradual and long-term processes that some countries (**France, Germany, Spain, Poland and Belgium**) have already started (and have been implementing for decades), yet they are still in progress and, given the EU ambitious climate targets, may need of acceleration. Meanwhile, following the energy crisis exacerbated by the war in Ukraine and with a view to pursuing energy security, phasing out of fossil fuels has slowed down, sometimes leading to stalemates and uncertainty (**Hungary, Italy**), to postponing the decommissioning of power stations or their reconversion (**Slovakia and France**, among others), or to revising national strategic policies, as in the case of Poland, which allowed the increased use of the existing coal units and periodical increase of coal production when the state energy security is threatened.

To diversify sources and decarbonise energy generation, storage and consumption, **renewables play a growing role in the energy mix** across Europe (in the period 2010-2020 energy production from renewables increased by 39.2%) but with different characteristics. On the one hand, **Hungary** and **Slovakia** have the lowest rates of renewables among European Member States (MS) while **France** stands out at the opposite end of the spectrum, since its electricity mix is today mainly split between nuclear and renewables. In between are **Belgium, Spain, Italy, Germany and Poland**, which to a greater or lesser extent (depending on geomorphologic and industrial specificities) aim to boost the installation and capacity of renewable energy plants.

Nuclear energy is available in six of the eight MS represented by the REJENERAXION project, with the exception of **Italy** and **Poland**. However, trends are polarised: on the one hand, **Belgium, Spain and Germany** are planning to phase out nuclear power, albeit agreeing to a slowdown in shutdowns (in **Germany** and **Belgium**, for example), whereas **France, Slovakia, Hungary and Poland** are on the opposite side with the first three countries interested in revitalising the sector and **Poland** looking forward to building its first NPP.

Decarbonisation levers follow different paths to reach the expected goals: the rationalisation of plants operation and production processes in the energy industry (**Poland, Slovakia, France**), the progressive electrification of production processes and consumption (**Italy**), the decarbonisation of the gas industry (**Slovakia**), the development and use of renewable energy with the creation of a hydrogen pilot market and clean technologies (**Belgium**), the conversion of large energy companies into multi-energy groups (**France, Poland and Germany**) or the adoption of a variety of technological solutions (**Italy, Belgium**). In all countries, the shift to clean energy involves **the use of natural gas as a vector of transition** - with different approaches depending on climate, industrial and energy policies (**Belgium's** geographical location, for example, is strategic in terms of gas supply, as a gateway and hub for northern Europe).

2. POLICIES AND GOVERNANCE OF THE ENERGY TRANSITION

2.1 Leadership of the ET

The MS represented by the REJ project can be broken down into three different groups as regards the **leadership and guidance of the ET by the central government and national institutions**.

A first group includes **Germany, France and Spain**, where climate and energy policies are managed at the national level under the responsibility of ministries, commissions and authorities in coordination with regional governments as well as civil society involvement (or consultation) (which often includes trade unions). In these countries, **the underlying and integrated policies of the ET are negotiated, developed and implemented through strategic and comprehensive policy documents**. Spain stands out as having clearly defined strategic and operational frameworks to accompany, govern and monitor the JET (by drafting Just Transition Agreements and Just Transition Conventions locally and establishing two public bodies: the Just Transition Institute and the Institute for Energy Diversification and Savings-IDAE). **Germany** focused on building consensus around coal phasing out measures, settling tensions and conflicts and consolidating a cohesive approach of key actors thanks to the efforts of the Commission on Growth, structural change and employment. In **France**, the National Energy and Climate Plan (NECP) is drawn up on the basis of the National Low Carbon Strategy (formulated in 2015 and adopted by decree in 2020), which envisages multi-annual framework energy plans for integrated policies.

Italy and **Belgium**, on the other hand, despite having a division of responsibilities on ET between ministries and other institutions (very articulated in **Belgium**, given the distribution of competences in this matter between the federal, regional, and local levels of government) **lack an overall vision and a clear strategy**. This weakness of public stakeholders, coupled with their inability to formalise a targeted strategy, results, in turn, in a lack of cohesion and alignment, or even actual uncertainty in policies and regulatory frameworks at the different levels.

The third group includes the Eastern European countries (**Poland, Hungary, Slovakia**), which have in common a strong role of the central government in guiding environmental and energy policies and transitions to a long-term coal phasing out. Policy-making is often contradictory and lacking in transparency, because of a more **formal, instrumental and inconsequential alignment with European guidelines and directives** on the green and ET (Hungary is scarcely inclined to increase the share of renewables, while the NECP or **Poland's** Energy Policy 2040 prepared by the Polish government in office until December 2023 did not specify the date of climate neutrality, and the documents were not updated to support the revised European climate policy targets).

2.2 ET Governance

These characteristics regarding the orientation of national environmental and energy policies outlined above have direct effects on the **governance of ET processes, stakeholders and resources**. In this respect, considering the ET as a whole, the REJ project countries can be categorised according to two opposite approaches: on the one hand, those with **weak and fragmented governance** and, on the other hand, those with a more or less **cohesive governance**. More

specifically: **Belgium, Italy, Slovakia and Hungary** fall into the weak governance group, while **France, Spain, Germany and Poland** belong to the stronger governance group.

The **weakness of governance** in **Italy** is determined, among other things, by the shared competence between the central and regional governments when it comes to legislation on the generation, transport and distribution of energy; in **Belgium** it is determined by the fragmentation and poor coordination between the decision-making authorities at the different levels of administration (which also leads to tensions between national demands and territorial needs); in **Hungary** by the adoption of a top-down, untransparent approach that marginalises social partners; in the case of **Slovakia**, trade unions only participate in public policy discussions around the ET and its effects through projects financed by the European Commission.

ET governance appears to be more cohesive in **France** where, despite the difficulties of coordination between public policy stakeholders in economic, labour and environmental policies, the role of the government is underpinned by a strong collaboration with local authorities (with a more limited participation of trade unions). In **Spain**, governance takes place through the 15 Just Transition Agreements covering 2021-2027 and the Just Transition Conventions (instruments supporting the government in planning actions according to situation analysis carried out with a participatory approach, agreement of action protocols and tripartite monitoring activities). Cohesion in **Germany** has been achieved by the Commission for Growth, Structural Change and Employment (so-called Coal Commission, 2018-2019) in accordance with the governance of processes, especially at regional level, as a prerequisite for agreeing on a concrete roadmap and timetable for the phasing out of coal-fired power generation and outlining economic, social and regional support measures for the affected areas. In **Poland**, policies at regional and local level are aligned with national ones and implemented by the relevant authorities, also with regard to the JET.

2.3 Just Transition Fund Territorial Plans

Some of the **Just Transition Fund (JTF) territorial plans** launched in all the project countries show weaknesses: the insufficient funding to meet local needs; the short timeframe for the implementation of the actions caused by delays in preparing calls for proposals; the poor involvement of local stakeholders (including trade unions), which results in inefficient funding of actions for local development needs; the scarce capacity of local governments to run policies and create synergies between funds available within the same areas (as in the case of **Italy**); mistrust in public stakeholders and low participation of citizens; the uncertainty of political and administrative decision-making.

In some cases (**Spain, France and Germany**), the development and implementation of JTF territorial plans was possible thanks to coordination with development plans and other measures available to transition areas, maximising contributions and resources to promote results in a JT perspective.

In **Poland** regional authorities enjoyed autonomy in developing JTF territorial plans, but the national government did not adopt a national strategy which could provide a relevant framework for their planning efforts. In **Hungary** JTF territorial plans are only nominally in the hands of regional bodies but are actually run by the central state and the regional design is only used as a means to obtain European funds.

3. EFFECTS OF THE ENERGY TRANSITION

3.1 Effects on local development and the supply chain

The effects of the ET are experienced with **greater intensity in areas whose economies are dependent on fossil fuels** (as in the case of industrial monocultures in **Poland** and Lusatia in **Germany**), or in **less developed areas** even before the phasing out (**Hungary**), or which have committed to building energy infrastructure precisely to support financially depressed territories (**Italy**). In some cases, the start of this process dates back to the 1970s at the time of the first oil shock, or affected only a few limited areas. Over time, this has led to an important cumulative effect of job losses appearing to be less disruptive due to its gradual nature.

ITALY – Case study 2 - The green transition process in the petrochemical industry: the case of the Gela biorefinery

The evolution of industry in Gela began in the post-war period, with centrally guided industrialisation and the formation of a specialised workforce.

Gela's industrial history can be seen through the themes of IR, the area's dependence on industry, the role of the trade unions, company strategies and multiple industrial reconversions.

To date, in spite of an attempt at a local industrial policy and in spite of the willingness expressed by trade unions and companies to maintain and strengthen the industrial use of the Gela site, the social partners highlight the lack of development alternatives that are really viable in the short term and the difficulty in defining a clear policy strategy, except through adaptive and incremental policies, which maintain the economic-employment priority of the industrial pole.

The most frequently reported spill-over effects on the territory and the supply chain concern:

- » **Changes in generation geography** (spatial misalignment, due to centralised fossil fuel plants and decentralised renewables) reported by **Germany, Spain, Italy** (which also emphasises the risks of de-industrialisation and industrial desertification);
- » **A new interdependence** between the energy industry and other economic and production sectors (energy-intensive industries, housing, transport, logistics, automotive) observed in **Germany** (which emphasises the need to be mindful of it), **Italy** (concerned about its energy-intensive centres of excellence), **Belgium** and **Spain** (which shows the reduced spill-over effects);
- » The interest of countries undergoing phasing out to **maintain a low-carbon energy profile** has consequences on direct employment (i.e. less labour intensive) as well as on subcontracted employment due to changing value chains (**Poland, Slovakia, Italy, France, Germany, Belgium**);
- » **Reduced revenue for local governments**, compelled to scale back social welfare services, possibly leading to the **depopulation** of the areas concerned (**Italy, Spain, Poland, Germany**);
- » **Increasing poverty and economic and social inequalities between regions** drive the most skilled workers and young people to leave, causing the depopulation of the areas affected (**Hungary, Slovakia, Poland and Italy**), which thereby become less attractive to investors (**Italy, Spain**).

3.2 Effects on employment

The employment and labour market effects of the ET can be traced back to the **decreasing labour force in the energy industry** across Europe over the last two decades, further exacerbated by the challenges posed by digitalisation and the introduction of new technologies, as the average age of workers tends to be higher and higher and the demographic transition currently underway is becoming more pronounced (**Poland, Slovakia, Italy** and **Germany**).

In the transition between traditional and new jobs, the **balance between jobs created and lost tends to be negative**. This is partly due to **lower labour intensity** in renewables. So far, in this sector, job openings are concentrated in the construction and start-up phases of plants, with a gradual reduction for subsequent generation and maintenance steps. Employment growth estimates concerning the RES are convergent among some countries (**Belgium, Italy, Poland**). Few countries have an entirely optimistic view: among these is **Hungary**.

Employment effects of **geographic misalignment** are implying higher mobility and commuting of workers in the industry (**Italy, Spain** and **Hungary**). **Timeline mismatch** is noticeable throughout the transition process: new jobs are created at a later stage with respect to job losses, also due to delays in investments and administrative and authorisation procedures for renewables (**France, Italy, Spain** and **Hungary**). On the other hand, Eastern European countries (**Hungary, Poland** and **Slovakia**) observe a limited impact of the ET on the labour market, determined by a slow shut-down and reconversion of coal fired power plants launched many years ago and only limited to coal mining areas. **Belgium** also reports on a limited perceived impact of the ET on the labour market, albeit for different reasons due to delayed implementation of the necessary transition measures across the country.

Alongside expectations about new jobs and concerns over market reactions to the ET, **Belgium, Germany, Italy, Slovakia** and **Poland** raise the **problem of finding skilled workers** (both technical and strategic positions), which is all the more serious considering the **long-standing tendency for skilled workers in the industry to move abroad** (**Slovakia, Poland, Italy**) or attract cohorts of skilled workers from the younger generations to the sector (**Hungary**).

On top of everything, **labour market analyses** (both diagnostic and predictive) regarding changes triggered by transitions towards clean energy **seem to be by far too limited** (data on the impact of the ET on jobs in **Slovakia** are completely lacking), except in **France** (where national legislation on the governance of the ET clearly mandates this) or wherever they are part of the Just Transition Agreements (e.g. in **Spain**) or are promoted by trade unions or social partners (**Italy**).

SPAIN – National baseline report

In Spain, the impacts on employment and on the territory of the closure of coal-fired power plants have been quite well quantified. This quantification is framed within the framework of the Just Transition Agreements (JTAs). Due to the high territorial impact on the areas affected by these closures in regions characterised by high depopulation, a set of agreements called just transition agreements have been reached to promote, through co-governance tools, mechanisms to monitor the effects on employment of the planned closures, to promote the retraining and relocation of the people affected and to promote territorial actions to create activity and employment, taking for this purpose a perspective of diversification of economic activity. However, the employment expected to be created in these affected areas does not match the employment lost due to the closures. In addition, in these areas there is a time gap between closures that have already taken place and future projects that have not yet been started.

The objective of these agreements is to support the workers and the territories of the areas affected by the closure of thermal power plants. Its priority action is focused on maintaining employment in the territories and their economic and industrial revitalization, linked to the deployment of renewable energies and other projects.

3.3 Effects on workers: employment security and job profile

The ET poses a challenge to workers in this industry on two levels: in terms of **job retention**, on the one hand, and with respect to **individual employment prospects**, on the other hand, in an environment subject to profound changes in business models and production processes and with a tendency to downsize the workforce.

As far as job retention is concerned, the reduction in the workforce is mainly due to **retirement (including early retirement)** and concomitant **hiring freeze (Germany, Spain, France, Italy, Belgium, Poland)**. For those who are not close to retirement, employment protection measures have been introduced or planned (as requested by the unions) especially in the most affected and vulnerable areas (thanks to the territorial plans of the Just Transition Fund, among others). Moreover, considering that the **workforce in this industry is on average more qualified (45%)**, and in view of the development of new technology and the need for certain new professional profiles, energy companies (i.e. the big players) have an interest in retaining their workers wherever possible by investing in their training and upskilling and by harnessing SD (**Belgium, France, Slovakia, Germany and Italy**). It is no coincidence that concerns about the effects of the ET and the phasing out of fossil fuels affect **subcontracted workers** in particular, namely those working for subcontractors and suppliers who are less protected and therefore more at risk (**Italy, France, Belgium, Spain, Poland**).

More qualified workers in the industry are more likely to be protected, enabling them (provided they are retrained, upskilled or re-skilled) to be more easily employed in energy-related sectors (**Germany, Poland, Slovakia**). In terms of the profiles of workers, one of the effects of the ET observed in the project countries (**France, Belgium, Hungary**) is the expectation for a **redefinition of professional identity**, featuring the ability to carry out multiple functions and have several skills, including digital and automation skills (**Poland, Slovakia, France, Italy**).

Also, with respect to changes in the profiles and skills requirements of energy workers, **there is no specific data on the effects of the ET**, except for a series of studies and detailed analyses conducted in **France** (especially at sectoral level) as well as a few **initiatives promoted by trade unions** in certain sectors in **Italy**.

3.4. Effects on work organisation and quality

The transition to a different energy paradigm needs to consider the **impacts on organisational systems** because the value chains of fossil fuels and renewables are based on different business models, leading to a change in strategic and organisational management.

In the oil and gas sector, the value chain is created by a large mining project and large industrial sites cascading into supply chain activities; whereas in the case of renewables, there is a multiplication of projects with specific operating models and value creation also through the use of advanced digital solutions.

Furthermore, the effects of the **close link between digital transformation processes and the ET** are part of the broader debate on the transition from a segmented economy in steps to a networked economy oriented towards the implementation of lean production models in which the various actors are linked along the entire value chain by digital innovations.

The comparative analysis reveals the intertwining of these changes and the **need for an integrated analysis**. Indeed, we are not witnessing the establishment of a new energy model that completely supplants the other, but rather a dynamics in which the two paradigms - and the different business models they represent - coexist and even intersect at a cross-

sectoral level (just think of the case of the so-called Hard to Abate sectors in which fossil fuels prevail).

The transformation of organisational models has **repercussions on professional profiles and the quality of work** and requires an **“adaptive” response from the union**. In particular, changes in the ET business models and production processes induce effects on work organisation that have direct repercussions on workers in terms of their increased versatility and capabilities required for coordination and interaction with workers having different profiles. However, this could result in work overload and burn-out amongst the workers left to handle production in understaffed firms - all the more so given their fairly high average age (**Poland, Slovakia, France**).

As regards job quality, there is evidence of **weaker worker protection** (in terms of stability, wage levels, coverage by collective agreements, occupational health and safety risk management). The most frequently reported concerns are:

- » The **uncertain status** of new borderline professionals, who work across different sectors (often with subcontractors) under more precarious conditions and with poorer job security (**France, Italy, Spain, Hungary**);
- » The **fragmentation of workers’ contracts** in firms that operate in transition industries that are being reconverted and reorganised, including the diversity of social statuses resulting from the application of different collective agreements in multi-energies companies (**France, Italy**);

FRANCE – French national baseline report

In the framework of the decarbonization efforts in the energy sector in France, one of the main challenges is to maintain the advantageous status of the employees of the electricity and gas industries (IEG) and of the oil industry for those workers that are to redeploy from traditional industries to greener ones, moving towards other jobs, companies or even sectors. As a matter of fact, the risk of losing the previous status and the fragmentation of the collective agreements applicable to the different activities in the major energy groups reduces the possibilities for inter-branch or inter-sector transitions and bridges. In this regard, several French trade unions in the energy sector, including CGT in 2020, plead for a single and sufficiently protective social status for all employees in the energy sector.

- » The **greater exposure of workers to new, unfamiliar or lesser-known risks** in the transition from the fossil fuel industry to new technology and production systems (**Belgium, Spain**);
- » Worsening **wage conditions** for fossil fuel industry workers relocated to other sectors (**Poland, Slovakia, Germany, France** and **Belgium**) as well as for those who keep working in the energy industry (a 10% reduction by 2050 is expected in **Slovakia** and in **Belgium**);
- » An **increased exposure to occupational health and safety risks** in the coal sector due to lower investment levels, ageing and work overload caused by downsizing (**Hungary, Poland**) and, conversely, an improvement in occupational safety conditions for job transitions to other sectors (**Poland**).

PART 2

This section takes stock of the **measures REJ partner Countries have introduced to tackle the impact of energy conversion on employment and local communities**, with a specific focus on **job transitions** as a key element of a JT.

Against this backdrop, an emphasis is placed on the **potential role of trade unions in ensuring a balanced job-to-job transition** on the basis of the fairness principle, contractual safeguards and professional consistency. Taking action to support job transitions can also allow trade unions to reinforce and expand their representation power in the new processes of green reconversion of the economic system.

A fair ET not only aims at ensuring that those who lose their jobs can find a new one, but also at **implementing a decent job transition**. As highlighted by the comparative report (specifically in relation to Germany, Spain and Italy), the green conversion must be underpinned by job creation **based on the “good work” principles**, both for new entrants into the job markets and for those facing re-allocation. At the same time, job transitions should ensure that the right employment conditions are maintained together with appropriate qualifications and decent salaries, the latter being traditionally higher in the fossil energy sectors - with better contractual safeguards in all assessed Countries.

GERMANY - Case Study 1 The “Coal Consensus” of the Commission on Growth, Structural Change, and Employment

The work of the German trade unions mostly focuses on the social aspects of JT. Above all, the focus is on ensuring that new jobs with good working conditions are created where jobs are lost due to the coal phase-out.

One main demand of the trade unions is therefore that “good” new jobs need to be created in regions where jobs in the fossil energy sector are being lost.

“Good work” is defined by trade unions in terms of decent permanent jobs that are subject to social security contributions, coverage by collective bargaining agreements that are common in the sector, co-determination in companies, availability of apprenticeships, company health care, strategic personnel planning, and work-life balance and family-friendly jobs.

The measures below are taken into consideration as - on the one hand - **they put the worker as an individual at the centre**, based on his/her professional experience as well as his/her know-how, qualifications and skills, and - on the other hand - **they do not overlook the needs of local communities**, the latter being inextricably linked to energy technologies. This requires a **place-based ET** to be implemented in parallel with regional development policies through solutions that make the most out of local specificities. The goal is to **avoid the risks of industrial desertification and the loss of skilled labour**. Such goal can be attained by creating synergies between technological investments and skills needs: this, in turn, will ensure the recruitment of an adequate workforce in areas hit by divestiture and reconversion processes.

The array of measures that have been implemented in REJ Countries ranges from national and local measures to company-level ones (mostly by large companies) and mainly concerns direct employees and - less frequently - subcontracted workers, as well as the local dimension and the key actors of local development.

4. MEASURES TO MANAGE THE EFFECTS OF ENERGY TRANSITION AT TERRITORIAL LEVEL

4.1 Measures to tackle changes in production geography

As regards the effects stemming from changes in production geography, **the emphasis is placed on regional policy measures**, especially to promote diversification of local economies. They include:

- » The **Territorial JTP** in all partner countries, to promote job transitions and the re-allocation through re-skilling and support for those wishing to set up a business;
- » **Support to individual enterprises** (also as part of the Territorial JTP), through actions aimed at boosting diversification of local economies with incentives for job creation, setting up of businesses that are decoupled from fossil sources, promoting the transformation of existing companies for them to become greener or more innovative, as well as introducing programmes to enhance training, up-skilling and re-skilling and vocational counselling (such as in **Poland**);
- » **Management tools for local development policies**. This is particularly the case in **France**, where such tools include various schemes such as regional plans, green transition contracts, etc. The same can be said for the French Territorial Pacts (i.e. Agreements between the State, local authorities and government agencies, with trade unions' inputs) containing 5-year economic diversification strategies, related to specific territories among the areas most affected by ET impacts. These pacts overlap with, or complement, the JTF territorial plans (for example, the planned closure of the coal-fired power plant in *Cordemois* benefits from the Territorial Pact and the JTF Plan). It is to mention that, in France, the closure of coal-fired power plants is the subject of a specifically dedicated legal framework in the 2019 Climate and Energy Law. Article 12 provides specific support measures for employees impacted by the power plant closure, such as: employee protection plan, a one-stop shop overseeing territorial redeployment, plan for workers of other sectors/companies/professional backgrounds, a special leave to maintain the employment relationship, *ad hoc* supplementary allowance). At the company-level, it is worth mentioning the support given to reconversion: in **France** with a pledge to look for industrial alternatives for the sites concerned and the promotion of local economic development by some large companies, in **Germany** with the reconversion plan in the region of Wilhelmshaven (Masterplan Wilhelmshaven);
- » **Reinforcement of territorial employment centres and the database containing training opportunities and job offers** (established by the Just Transition Institute in **Spain**); vocational training by the Spanish employment system liaising with the territorial employment offices. Each Just Transition Agreement (i.e. sector-specific and company-level Just Transition agreements between social partners and the Government) provides for workers to have access to vocational training opportunities in line with the National Employment System. Such opportunities are directly managed by employment centres together with local authorities of Autonomous Communities;

- » **Measures provided for by the German Commission of Growth, Structural Change and Employment to tackle structural changes and the economic and social consequences of transition.** The goal is to ensure a transition based on modernization and growth prospects for coal-dependent regions and a JT for the workers affected, by guaranteeing: security in employment and the creation of decent job opportunities through proactive structural and industrial policies, the development of research networks, in-house and external recruiting of labour, vocational training and development of a skilled workforce. The German trade union confederation DGB too has put in place a number of measures that are closely linked to the issue of structural changes at the regional level. It did so through the “Revierwende Project” (co-founded with public money), which is aimed at implementing transition in coal-dependent regions through the creation of seven territorial districts with initiatives for a socially JT.

4.2 Measures to protect workers

In order to counterbalance the impact of a potential weakening of workers’ protection when shifting away from the fossil fuels sector towards the emerging sectors, a number of **measures have been introduced to protect working and contractual safeguards**. They include, in particular:

- » The **transferability of site-level bargaining (Belgium)**. This is based on a sector-specific social agreement providing for a right of the former site workers to be re-hired as a priority, internal training-based mobility as well as external mobility to other production sites, personal support measures and a participation incentive for workers who stay for the dismantling of the old plant;

BELGIUM – Case study 1

The creation of a new [production] site with a new name means that the company is not bound by the local benefits negotiated at the old sites, obeying only the sectoral and company agreements negotiated at the organisation’s central level.

The 2019 Collective Labour Agreement focused on the modalities for reclassifying workers, adopting a case-by-case approach. A list of 30 workers to be reclassified on Tihange had been drawn up, stipulating that these workers would have “hiring priority” in the event of a power plant being rebuilt on the legal Les Awirs site. At the time of the closure of the Les Awirs site, union and management representatives negotiated the terms and conditions for redeploying workers. The CLA defines the social measures that were to accompany workers impacted by the closure of Les Awirs: it contains a number of measures, including outplacement, support measures, legal (early) retirement, termination of contracts and profit-sharing bonuses.

- » The **Italian Smart Work Contract**. This is included in the renewal of the National collective agreement for the electricity sector for the year 2022. **This contract foresees an extension of coverage**, by applying contractual safeguards to workers of neighbouring sectors that are regulated by other contracts. The goal is to ensure a level playing field, not only through a correct classification of professional roles but also through measures aimed at aligning different contracts and ensuring their convergence.

This kind of protection measures have to do with the transformation of ET at the territorial level. However, they also touch upon issues of creation, reallocation and transformation of jobs as detailed below.

5. MEASURES TO MANAGE JOB TRANSITIONS

Job transition paths can unfold along two main axes: **the creation and destruction of employment**. Therefore, the **main challenges** will be:

i) **the reduction of the out-of-job time period** between the loss of jobs and the creation of new ones (delay). This is due to the lengthy implementation of investments and the complex changes in the value chain layout;

ii) the **development of "good jobs"**, by protecting employment and contractual safeguards and tackling the effects of a less centralised organisation of work based on different business models and organisational strategies, as they require trade unions to adjust their *modus operandi*.

Furthermore, some professional profiles cannot be compartmentalised as they are rather cross-sectoral. This implies the **need to do away with a rigid classification of job areas**, to take the ensuing changes into account (as highlighted by France in particular) and to **focus on skill sets** (as exemplified by the World Bank approach applied to ET affected workforce in Polish coal regions).

POLAND – Polish national baseline report

The success or at least the feasibility of job transition pathways of the workers of fossil fuel sectors undergoing renovation, reconversion or closure highly depend on the skill-sets of these workers. In the framework of the ET, to facilitate their move to other jobs, company or sector measures are put in place delivering reskilling and upskilling trainings, aimed at fulfilling the gap that results from the overlap of needed skill-sets between declining jobs and available new ones. In this direction some interesting analyses were carried out as for Poland, not only focusing on possible job to job transitions, skills needs and training of coal-related workers, but also on their attitudes, behaviours and stances.

In this respect, it is important to remember that the transformations of the energy industry and the related chains have a significant impact on the **correct identification of professional roles** needed for the transition, as sometimes such roles do not fit traditional job profiles and require some mapping and reclassification efforts (as demanded in particular in **Italy, Hungary and Slovakia**).

5.1 Measures related to the destruction of jobs and the loss of skilled labour

Measures to combat the **destruction of employment** - which affects both employees and contracted workers, including those employed in ancillary sectors - are basically aimed at protecting the social group of those working in mines or power plants facing closure or dismantling as a result of ET. This is particularly the case of Poland and Germany, where workers in high-energy sectors or SMEs relying on mining and lignite and coal-fired power plants are not covered by the legislation on early retirement which applies to mine workers. In this connection, it should indeed be noted that other sectors such as the automotive and the chemical industry tend to be overlooked in policies aimed at tackling the impact of ET - which would require a cross-sector perspective.

Therefore, it is particularly direct workers of the to-be-phased-out fossil sectors who benefit from **measures aimed at boosting and promoting the exit from the job market**, as these actions are meant to tackle the destruction of jobs caused by ET in a socially acceptable fashion.

The most widespread measures include: **voluntary retirement, incentive-based retirement, redundancy allowance, generational relay and early retirement schemes**. These measures, together with the hiring freeze, are the most important tool to reduce labour in assets up for divestment.

More specifically, the **German** Structural Strengthening Act for Coal Regions provides for workers who have turned 58 and are employed in coal and lignite-fired power plants and lignite mines to be eligible for financial compensation for a maximum of 5 years until retirement. The reduction in retirement allowances due to early retirement are compensated by direct payments to the compulsory pension insurance. Former employees of the coal mining sector aged 50 or above have been benefiting from an adaptation allowance.

In **Spain**, the Framework Agreements for mines and coal-fired power stations envisage a social plan for early retirement and incentive-based retirement ("fast-track" retirement schemes). As regards the territorial level, measures are provided for by the territorial agreements.

In **Poland**, measures envisaged in State-led Social contracts (2021-2022) for the social protection of miners and coal-fired power plants production workers who lose their jobs include, in particular: a pre-retirement paid leave entitling to 80 % of the salary for up to 4 years preceding the acquisition of retirement rights, or a severance payment.

In **France**, a major energy group has taken steps to support mobility and has put in place a number of retirement support schemes. These are defined in the document entitled "Terms and conditions of support for employees as part of the transformation of the Coal sites" negotiated with three trade unions, including the majority union in the Group (2019): end-of-career leave for workers of coal-powered power plants up for divestment. Eligible employees will have a chance to retire earlier, while also receiving a substitution income as an end-of-career allowance until the date of administrative retirement. Access to this retirement scheme is voluntary.

In **Italy**, the Agreement on early retirement and intergenerational solidarity - which aims at combating the productive overcapacity of ENEL company in a socially sustainable way - provides for a sort of "generational relay", as it offers incentives to retire and retirement support measures to make room for new entrants. The latter are offered a paid apprenticeship contract which allows them to acquire practical on-the-job skills.

In **Slovakia**, the recent enactment of the Retirement Age Act - allowing to retire after 40 worked years - has led to an increase of early retirees. However, it has also shed light on the problem of generational turnover, i.e. the lack of new skilled workers.

As a matter of fact, it has been already noted that the destruction of jobs as a consequence of more skilled workers retiring also implied the **loss of skilled labour**. This is also due to **demographic transition** and a **differentiated impact of digitalization skills** - where older, less skilled workers have paid the price. In this respect, the divide between blue collar and white-collar jobs is particularly felt in Hungary.

To come to terms with these impacts, a number of **measures for staff retention and re-skilling** have been introduced in the REJ countries. These measures are mentioned in:

- » The strategic, company-level training plans to retain highly skilled workers, i.e. employees aged 45 and above (**Belgium**);
- » The development of Jobs and Skills and the project of a unified approach for all employees of a major oil company (**France**);
- » The “Dual Work Position” strategy promoted by the **Slovakian** company SPP to tackle demographic transition in the energy sector based on coaching of a younger employee by and older, more experienced one;

SLOVAKIA – Case study 3 Slovakia – from coal to geothermal energy in the Košice region

Slovakia is the second most gasified country in Europe in which the state-owned company Slovenský plynárenský priemysel (SPP) - Distribúcia is the sole owner and operator of the gas distribution network. The company is undergoing huge restructuring and decarbonization efforts alongside a long-term trend of reducing the number of its employees. Currently the gas sector, dominated by middle skilled workers, is facing workforce ageing, demographic transition, poor attractiveness for young people and the lack of qualified resources in the labour-market. The whole of these elements could hamper the effectiveness of the ongoing transformation processes. In this framework, to address the challenge of filling roles that require specific knowledge and expertise, SPP-Distribúcia activated a Dual job position program aimed at getting in the company new young people without experience trained in job by experienced older colleagues.

- » The Skilled Work Strategy adopted by the German Federal Government (2022) to recruit skilled workers on the job market. Such strategy is founded on the intensification of vocational training, the promotion of employee training, an increased employee participation, a higher job quality and support to targeted migration - *inter alia*, by streamlining the recognition of foreign professional qualifications; another interesting initiative targeting skills shortage is the establishment of the vocational training centre on the power plant site of Uniper in Wilhelmshaven. The training centre will offer regional companies the opportunity to train their apprentices and use the centre for further training measures. The project has been initiated by the workers' representation in close collaboration with the regional trade union structures;
- » The Contract for interprofessional expansion (Italy) provides incentives to early retirement. The measure aims at supporting technological innovation and development within enterprises undertaking an overall structural change in business processes and staff skills, also via new hirings. Italy's social partners have also worked jointly to enhance the training and apprenticeship contract to make the electricity sector more attractive.

5.2 Measure to relocate workers and transform the workplace

In order to tackle the social impact of divestment processes stemming from ET, the support/incentive-based early retirement of older workers has been coupled with the following: **relocation** (i.e. via internal and external mobility) and **transformation of the workplace** (dismantling, decommissioning, in-house reconstruction, re-gearing of core business towards renewables).

When managing the transition towards new jobs, we must not overlook the weakening of workers' protection in terms of employment stability, remuneration levels, as well as management of risks for health and safety. **Measures put in place to shield workers and contracts'** safeguards include the already mentioned transferability of the site-level contract in Belgium and the Smart Work Contract in **Italy**. Other important measures include the already mentioned **social contracts (Poland)** to ensure **social protection of workers**. Besides the pre-paid retirement leave and severance pay for miners and coal electricity workers, provisions were introduced for miners' **relocation in active mines, the entitlement to enrol in re-skilling activities**.

In **Spain**, the relevant legislation envisages an **"Employment exchange"** with a training programme and a pledge to rehire (in case of company dismantling or restructuring) in the same area or within the same company; internal mobility is ensured by a committee overseeing classification and vocational training initiatives. Some territorial agreements provide employees with the option to **maintain social and employment conditions and ensure the preservation of employment**, even in case they are transferred to contracting companies. Outsourced workers are still guaranteed a supplementary allowance to social protection plans (pension plans). Relocation plans are also on the pipeline, and auxiliary undertakings have to give priority to such workers were hiring new workforce.

To manage the relocation of workers, a major **French** energy group has come up with the **Career contracts**. The latter are signed at the end of the process, and are aimed at building, monitoring and implementing (mainly intra-Group) transition paths. As regards sector-specific measures, in 2020, in France, the CGT has asked to extend the solid social safeguards to all workers of the energy sector - including those employed in ancillary sectors - thereby harmonising the specific status of those working in the electricity and gas sector ("IEG status"). Fragmentation challenges are also being tackled by a major oil company, which promotes jobs and skills development and a unified approach to all employees of the group.

In **Germany**, a **Coal Commission** was set up to build consensus on coal phase-out. On top of a ban on dismissals on economic grounds, this multi-stakeholder body ensures security of employment for employees and apprentices as well as quality alternatives, internal and external mobility, wage guarantees, skills development for workers moving to other sectors, and the setting up of a high-quality education and training. The German **"Revierwende Project"** also envisages the establishment of local, one-stop shops to start up activities supporting a socially JT for workers. Such centres provide a platform for exchange among target groups, counselling and training, with a focus on the reconversion of regional economic systems.

In **Italy**, the transformations stemming from the closure of ENEL's thermal power stations have been tackled through the establishment of a plan shared with trade unions and the signing of an **agreement on functional, geographical and intra-group staff mobility (redeployment)** (2013, 2015) to ensure stability of employment within the Group, while regulating re-skilling and redeployment of redundancies of traditional generation sectors in other company business lines.

Finally, **France** has been particularly successful in **mapping markets and jobs and drafting provisional analyses aimed at jobs/skills-sets transferability**. ADEME - a French public industrial and commercial establishment that publishes an annual inventory of markets and jobs associated with the main sectors involved in ET - has reinforced the cooperation among stakeholders dealing with environment and employment, and has come up with a Roadmap for Employment 2021-2023. Moreover, ADEME - in cooperation with the Climate Action Network - has created the TETE (*Transition Énergétique Territoires Emplois*), an innovative tool for local authorities to measure the employment-related impact of local climate and energy plans.

In the next section, we will ascertain if and how trade unions have participated in the definition of the above measures. The goal is to assess how genuine and grounded SD and collective bargaining are. More broadly, we will analyse which course of action trade unions have undertaken to face the challenge of ET. In other words, we will see if they have adopted an oppositional or rather a reactive and proactive stance when faced with the opportunity to have a say and to steer the process with a more or less anticipatory and steady approach.

PART 3

The challenge of the green transition in the energy sector – that constitutes the base of numerous value chains and the subject of European and national transitional policies – impacts **the role of trade unions and IR practices** at multiple dimensions. The role of IR and SD for a JET was examined according to the following analytical dimensions: a. the involvement of trade unions in the ET debate, b. the orientation of unions vis-à-vis the ET and c. the actions and measures taken by trade unions to guarantee a JET.

6. CHARACTERISTICS OF THE INDUSTRIAL RELATIONS AND SOCIAL DIALOGUE'S SYSTEM

Considering that fossil fuel sectors are traditionally well organised in terms of union representativeness and contractual coverage, in contrast to the emerging renewables sectors, in this analysis the countries involved in the REJ project are categorised by **type of IR** as follows: **well-structured** forms with a balanced participation of social partners; **fragmented and poorly coordinated** forms; **weak** forms sometimes due to not transparent and/or lacking dialogue between the parties.

6.1 Robust systems of industrial relations

National and/or sectoral systems of industrial relations characterised by a strong and long tradition of collective bargaining at various levels (as in the case of **Germany, Spain and Italy**) give high priority to both the energy transition and a JT.

These countries are characterised by a well-structured dialogue system between the parties and have seen IR being strengthened and interlocution practices being expanded (multi-level dialogue). This has made it possible for social partners to participate in territorial development plans and measures to reconvert production activities, as well as to expand the range of matters covered by company-level bargaining. In general, robust IR systems are characterised by a **high diversity of employers and trade unions' representation and high levels of coverage by national and/or sectoral collective agreements**.

6.2 Fragmented systems of industrial relations

Where the systems of IR are fragmented, the actors poorly coordinate with each other (at both sectoral and territorial level), even though the dialogue between institutions and social partners involves multiple levels of power. Poor coordination (due to the plurality of the actors involved in **France** or the multi-level dimension of federal governance in **Belgium**) has a **negative impact on the effectiveness of bargaining**, which is also affected by the emergence of new players with a weak bargaining tradition (as a consequence of the liberalisation of the energy market in the Belgian case), whose appearance on the scene somehow contributes to reducing the role of trade unions. In **France**, the health of IR is affected by the **reorganisation of the value chains** resulting from the restructuring processes brought about by the green transition: the fragmentation of collective agreements is due to the existence of multiple CBAs for different

professional fields and to the differentiation of the social status of workers within a same company. Finally, in **Belgium**, tensions were noted between the **different levels that govern the transition and coordinate policies**, with a negative effect on the possibility for trade unions to intervene by way of negotiation in a situation where dialogue is poorly coordinated.

6.3 Weak systems of industrial relations

In Central and Eastern European countries (**Poland, Slovakia and Hungary**) there is a general **weakening of the SD and collective bargaining system**. In Slovakia and Hungary, IR occurs in a context where unions are poorly recognised and the political and decision-making system is highly centralised and, in some cases, lacks transparency. In Hungary, compared to general deterioration in coverage rates and activity of sectoral SD bodies, the energy sector is exceptionally well organised and regulated. The weakening of SD is reported by both employers and trade unions, while institutions maintain an ambiguous position on the green transition, swinging between political opposition (in Poland's case) and the opportunity to access substantial European funds. In Slovakia and Hungary, social partners' action is also resisted by institutions that tend to diminish its visibility and reputation. This results in **union intervention being reduced to company-level bargaining**, while negotiation with institutions, both centrally and locally, is virtually non-existent (with the relevant exception of two important Polish cases of TUs coordinated action and sectoral level bargaining which resulted in two social contracts with the involvement of the government). The intervention of unions thus remains uncoordinated and decentralised, with dominant businesses taking a lead.

HUNGARY – National baseline report

More concretely, Hungary has had a major experience in closing down mines as well as restructuring and privatisation in the last decades. The completion of these processes was successful because of the significant role played by both regional and local authorities, but also sector-level social partners were involved in major structural decisions and their implementation. Such knowledge and experience were barely or sporadically asked within new projects and initiatives. In such an institutional context, it is not surprising that trade unions reported no meaningful dialogue between social partners and external actors either at regional or national levels related to energy transformation and green transition. Trade unions were especially vocal in their assessment that policies are made at the government level, with very little possibility to participate in prior consultation, and if so, such a consultation have a more informal character. Appearance of new regulatory bodies adds to the institutional strains trade unions and social partners are coping with.

When it comes to change in the industry, both major trade unions had clearly formulated priorities and recommendations, starting from supporting increased nuclear energy capacities and employment, to supporting European-level solar development and production.

7. POSITIONS OF THE SOCIAL PARTNERS ON THE JUST ENERGY TRANSITION

Union positions on the TE are ideal-types of a broader spectrum of behaviours and approaches that largely depend on the local institutional, social and economic context and can be summarised as the following three ones: unions playing a proactive role, a reactive role or an oppositional one.

The **proactive role** is based on the presence of trade unions and of a strong system of IR (bilateral committees, regional industrial committees, co-determination systems) and is associated with the formulation of specific contracts, agreements and procedures on the effects of the ET to facilitate workers' participation and an assessment of the impacts on the organisation of work. On the other hand, when unions adopt a **reactive role** vis-à-vis transition processes, they seek to minimise their social costs by supporting slow and gradual phase-outs through instruments such as JT plans for workers and local communities. When unions **oppose the ET**, their bargaining efforts are mainly focused on traditional claims such as preserving jobs, guaranteeing employment levels and protecting the workers who are most affected by fossil industry closures (with, in many cases, the energy unions counting the largest membership among those affected by the transition).

In terms of changes in the union approach to the energy transition, in many cases (France, Italy, Spain and Germany) we note a **shift from an oppositional stance to a reactive or proactive one**. Social partners initially opposed the ET processes with the aim of defending jobs and the very good conditions achieved in this sector. However, in recent years, trade unions and employers' organisations in the fossil fuel and energy industries have supported socio-ecological transformation. In the countries where this shift was observed (**Germany, France, Italy, Spain**), trade unions tend to adopt strategies in support of the green transition, focusing mainly on the social side of the JT and on guarantees for a 'decent job transition' based on: a. facilitating the job-to-job transition, b. creating good new jobs and c. maintaining the labour and contractual safeguards achieved in the course of time in the fossil energy sector.

The comparative analysis considered the different level of "articulation" of trade union interventions in favour of a JT: from national to territorial, sectoral and company level bargaining. The level of interaction and the possible interconnections between the different articulations depend, to a large extent, on the characteristics of the IR system, the orientation towards ET and the strategies adopted by trade unions. The effectiveness of support to workers involved in ET processes can benefit from strong linkages between the shopfloor/workplace, company and sector/national level of trade union policy and collective bargaining.

7.1 The orientation of trade unions for the energy transition

In Central and Eastern European countries (**Poland, Slovakia, Hungary**), trade unions maintain a **non-prioritising position on the ET**, with some of them openly opposing the coal phase out and expressing concerns for the transition to renewables (**Hungary**) considering the matter of energy security (due to intermittency of renewable energies linked to natural resources) and the ET related loss of jobs and threat of price increases (**Poland**). Moreover, the marginalisation of sectoral, regional or national SD relegates any exchange between social partners to the company-level only. Despite this, in Poland, for example, relatively strong IR in the sector made it possible for workers to obtain important safeguards

through the negotiation of a social pact on the closure of mining sites (state-led social contracts for the hard coal miners (but only of State-owned mines) in 2021, and for lignite miners and coal-fired power plant workers (irrespective of the ownership type) in 2022).

Another element to consider is the **polarisation of positions on the ET**. In **Poland**, for example, social partners show heterogeneous and often conflicting positions on the ET: on the one hand, those who see the transition as a 'top-down' imposition of European policies at the expense of regional economies and, on the other hand, those who see the transition and the funds dedicated to it as an important opportunity for economic and social renewal.

In **France** and **Belgium**, where the IR system suffers fragmentation, however, social partners have a different approach to the matter. **France** stresses the importance of the JET as a topic for discussion between the social partners: trade unions tackled the issue of transition by abandoning their oppositional positions and adopting a **reactive approach** that seeks to take environmental issues into account. In addition, managing the transition is a core interest for social partners, as proven by the definition of territorial plans for the JT and of instruments to manage the transition throughout the entire country. In **Belgium**, on the other hand, the JET does not seem to be at the heart of the union agenda, as its direct effects on labour are yet to be perceived. This said, in both countries **trade unions are poorly involved in decision-making processes**: in **Belgium**, unions are less attentive to the real effects of the transition, while in **France** social partners denounce not being sufficiently involved in the implementation of JT strategies.

In the countries having a **proactive approach** – generally aimed at anticipating changes and ensuring the participation of workers and their representatives not only when it comes to assess and monitor the impacts of the ET but also at the strategic decision-planning stage, with efforts aimed at signing agreements and formalising the role of unions –, different intervention strategies emerge according to the different institutional contexts that determine *de facto* the level of actual trade union involvement.

In the **Italian** case, for example, the willingness to **adopt a forward-looking approach** to manage the effects of the transition and ensure its social acceptability is at odds with the weakness of governance processes and institutional support for the transition, with the result of a limited active participation of trade unions to the definition of the transformative processes. In this context, IR also often fill the gap created by the absence of national and local industrial policies, while the ET is driven mainly by private initiative.

In countries such as **Germany** and **Spain**, on the other hand, the trade union movement – on top of its classic bargaining and workers' protection function – appears to be a **leading and proactive player** in the implementation of certain transitional measures that pertain to both social and environmental justice (e.g. the *Revierwende* project in Germany). In these cases, unions adopt strategies pursuing the model of an environmental modernisation of the economy ('economy greening'), within which workers affected by closures will be trained and redeployed in emerging sectors by means of JT planning. Moreover, the SD on transition topics appears to be very well-structured, being based on institutional governance instruments (e.g. the JT Agreements in Spain) which require the participation of social partners to all the phases of the transition. The institutional instruments adopted (such as the Conventions in Spain or the Coal Consensus mechanism in Germany) also show close proximity to the territorial level at which they produce their effects. In this sense, **the ET is conceived and designed as a process of territorial conversion**, with institutions and social partners jointly governing the ongoing changes. The SD on ET matters seems to be also very open to the contribution of the scientific world – experts, scientists and scholars –, with the aim of acquiring scientific evidence to validate the parties' positions.

8. JUST ENERGY TRANSITION MEASURES AND THE ROLE OF TRADE UNIONS

The measures undertaken by social partners in the JET sphere concern both the **preparation of instruments to govern the transition** (participation objective) and the creation of **instruments to anticipate its effects on employment and the territory** (forecasting objective). Intervention levels vary depending on the capacity of the social partners involved, on how well-rooted they are territorially and how open and prone to their involvement are the institutions. The REJ project identified measures at national, territorial and company level.

8.1 Measures for a Just Energy Transition and union intervention

At the **national level**, in **Spain** and **Germany** **agreements between the national government and social partners** are in force with the aim of managing phasing-out and the restructuring of the territories concerned: the Coal Consensus mechanism in Germany and the Just Transition Agreements in Spain (the latter also provide for the involvement of union representatives at company level).

In **France**, too, national authorities discussed the matter with social partners so as to draft measures benefiting the workers and territories affected by means of territorial pacts and their related five-year strategies for economic diversification (since 2019, with the adoption of the law on energy and the climate). In **Poland**, following tripartite negotiations at the sectoral (national) level, the social contracts for coal miners and coal fired power plant workers were signed **providing measures to manage ET related redundancies** (introducing workers' protections). At the national level, unions also **participate in a number of European JT projects**. In the case of **Hungary**, for example, the involvement of trade unions is mandated by the legal compliance requirements of European projects, which – in some cases – explicitly require the participation of social partners.

At the territorial level, union participation in the definition of JT measures is polarised: on the one hand, the countries where unions are scarcely involved and the measures are limited, also as regards to the formulation and implementation of the JET territorial plans (**Hungary, Slovakia, Belgium and Italy**); on the other, the cases where the trade unions have been actively involved in the development and monitoring of the implementation of the JET territorial plans (**Poland**) and in local governance instruments, as is the case in **Spain, Germany and France** (where, however, participation in territorial governance instruments stops at the planning stage in the examples analysed in the REJ project).

For what concerns **relations between companies and trade unions**, bargaining instruments lend themselves to tackling various JT issues: coordination between territorial investment plans and corporate SD (**Poland**, albeit to varying degrees), adoption by the major energy players of shared measures and approaches on the treatment of direct employees (via supplementary company agreements in Italy and France and co-determination in **Germany**), negotiations at company level on the management of workers in transition and phase-out operations and, in some cases, shared monitoring of company agreements (**Italy, France, Spain and Belgium**). In **Italy** and **France**, trade unions managed to effectively negotiate with the major energy players the effects of the closures of coal-fired power stations and manage, for example, the employment transition in the shift from a traditional refinery to a biorefinery (**Italy**). Moreover, the renewed national CBA for the Italian electric sector also sets forth for the industrial plans of this sector's companies to be discussed in

advance with social partners. Even in these cases, however, it is essentially a reactive mode of intervention: where companies take the initiative of the transition, trade unions try to negotiate stronger better rights and conditions for workers.

Collective bargaining, and company-level negotiations in particular, has begun to also tackle the issue of the **workers' quality of life**, rather than focusing solely on working conditions, in an attempt to strengthen the representative power of unions. The supplementary agreement entitled '*Statuto della Persona*' [Status of the Person] signed with Enel and the protocol '*Noi*' [We] signed with ENI in **Italy** are two examples of this. Furthermore, as representation at company level evolves, cases were identified of **union representatives for the environment at workplace level** (in **Spain** and **Italy**, for example): direct representatives of workers with a mandate on environmental safeguards for the protection of both employment security and the territory.

8.2 Trade unions and Job Transition

A crucial union intervention consists in **facilitating an employment transition** (i.e. the transition from employment in a given sector, company or territory to employment in a different context or with different tasks and qualifications) that is just in terms of collective bargaining coverage, job stability, maintenance of good conditions, wages and contractual safeguards on health and safety and workers' participation. Moreover, from a trade union perspective, a just employment transition represents a viable and adequate response to the challenge of creating new, good jobs in the regions and territories where fossil fuels plants are being decommissioned and closed.

In this respect, one of the main obstacles trade unions have to face, vis-à-vis the shift from the traditional energy sector to renewables, is the **instability and precariousness of the new jobs**. In the renewables sector, in countries where the supply chain is not fully developed, most of the employment is concentrated at the early stages of the value chain (installation and commissioning), while in subsequent operations and maintenance phases the levels of employment are significantly lower. Moreover, the territorial spread of renewable energy production means trade unions must intervene in a more pervading manner over a wider territory.

In such a context, **union intervention also helps supporting the expansion of its representation function**, where there is a shift toward sectors or working spheres that have not yet been reached by union action. At the same time, the instability of emerging jobs, the fragmentation of industrial work, the spatial dispersion of workers, threaten to disrupt labour solidarity in favour of an ever-increasing individualisation of work.

Where the IR system is stable and takes an interest in the JT, some elements of common interest with regard to **the future scenarios of trade union intervention and representation** are detected, notably concerning:

- » An increased risk of subcontracting (companies tend to outsource redundant workers) where working conditions are less protected because union presence is more limited (Spain, Belgium, Italy), even leading to informal labour (Hungary);
- » The protection of the job and employment security of workers, that trade unions pursue by negotiating workers lifelong learning and upskilling measures (Italy, Germany, France, Spain);
- » The protection of the professional competence of workers by way of an intervention on the certification of skills and of their transferability (France, Italy);
- » A more integrated vision of bargaining, overcoming the traditional boundaries of union intervention, as well as segmentations between sectors, jobs, territories.

9. INTERESTING PRACTICES/BEST PRACTICES

- » **Agreements and Conventions for a Just Transition in Spain** (the former at sectoral level and the latter at territorial level): institutional instruments for planning the transition, providing a general framework for assessment, collaboration and information exchange between social partners at national, regional and local level throughout all the transition stages, from planning and implementation to monitoring;
- » The **Revierwende project** launched by the **German** trade union (DGB) to support union activities in accompanying the structural transformation of coal regions (in seven districts) through a dense network of territorial offices tasked with initiating a socially JT for workers; the project is co-financed by public funds;
- » Tools for the management of direct employees and subcontracted workers, jointly defined by major energy players and trade unions in **France on relocation, mobility and protection of the contractual safeguards** in case of business transformation and restructuring;
- » **'A Road to Employment after Coal'** programme (launched in 2023 and also covering workers of the ancillary industries) – involving co-financed new employment; reintegration support in new jobs; support for starting a business or a social co-operative – developed thanks to the coordination between the company level SD dimension and the regional authority-led JT planning process (in **Poland**, involving a major lignite mining and energy conglomerate) within the framework of the *'Eastern Wielkopolska'* territorial plan of the JTF;
- » The SMART contract (in **Italy**), included in the renewal of the national CBA for the electricity sector in 2022 so as to **expand and extend contractual protections to other areas of work** (currently either covered by other sectoral agreements or not covered at all);
- » In **Spain**, vocational training is provided through the National Employment System in conjunction with territorial employment offices. All these JT Agreements provide for workers to benefit from **vocational training measures** in accordance with the National Employment System, managed by the employment offices in cooperation with local regional authorities.

FINAL REMARKS

1. The characteristics of the European context and of each Member State, the decarbonisation strategies and policies, the interests of the actors involved, the dynamics (including geo-political ones) and their resulting effects, outline the **global and complex nature** of the ET process.
2. The ET has a **systemic nature** but is also strongly **context-related** because of the close correlation between energy technologies and the local context, making it imperative to consider the **place-based dimension** of the transition, i.e. the adaptation of green conversion processes to each economic, social, political and territorial context.
3. Given the benefits that it brings along, with the creation of new economic opportunities and the development of green jobs that contribute to combating climate change (linked to the development of energy efficiency and renewables, to increasing electrification, waste management and circular economy and to digitalisation processes), **the ET can aggravate some existing social risks and generate new ones if not properly governed.**
4. The **main concerns regarding the energy and employment transition** are: the risk of impoverishment of the economic and social fabric linked to the reduction and divestment of fossil and related industrial activities; the safeguarding of employment levels; the impoverishment of highly qualified skills; how to preserve the protections that are currently in place for workers and which they have enjoyed thanks to the presence and activities of trade unions in the traditional energy industry; job polarisation; the inadequacy of social welfare; increasing territorial and regional inequalities; the weakening of SD processes; the social acceptability of the ET.
5. ET processes are generating **unequal redistributive effects that accentuate the economic, social and environmental disparities** of the territories which most depend on fossil economies, with the risk of exacerbating misalignment within the EU, due to the change in the geography of production, the interdependence of economic sectors, the loss of jobs and the risk of industrial desertification.
6. The systemic nature of the transition and its consequences on territories, production processes, the labour market and workers have highlighted a **far-reaching social dimension**. Intervention on it according to the **principle of a JT** requires transversal policies based on an integrated approach sensitive to intersectionality, long-term energy strategies, coordination between the actors involved and the involvement of civil society, and the use of tools such as joint planning and participatory monitoring.
7. Given the place-based and long-term nature of the ET and its effects, its guidance at the national level requires a **multi-level governance** supported by clearly defined policy and regulatory frameworks, an overall vision and a shared reference strategy aligned with European guidelines and directives resulting out of a consultation and negotiation between national institutions, local authorities, social partners and civil society.
8. Achieving the goals of the ET and shaping it in terms of a fair and equitable change are strongly linked to the **key role of industrial policies** at European and national level, which are needed to manage the processes of: the labour market transition, skills development, innovation, industrial restructuring and infrastructure.
9. Given the change in production processes (mode, geography, organisation, business), the transition causes important effects on employment in the energy sector. In the context of an increasingly less stable and more

fragmented labour market, the spatial and temporal misalignment caused by decarbonisation, the reduction and ageing of the sector's workforce and the processes of automation and digitalisation lead to a **final negative balance between jobs gained and jobs lost**. **Indirect (and supply chain) workers**, in particular, are similarly affected but less protected in terms of stability, wage levels, occupational health and safety due to lower contractual coverage, and they are often overlooked in just transition measures.

10. In the transition from fossil fuels to renewables, **job profiles (especially for new occupations) are also less coherent and more fragmented**, leading to the risk of inadequate contractual frameworks and weaker social protections. At the same time, workers still employed in the sector are being asked for **more versatility and an increase in skills**, with worrying effects of work overload and exposure to new occupational health and safety hazards. In general (with a few exceptions) there is a lack of studies and analyses concerning changes in employment, profiles, anticipation of market needs and qualification of resources.
11. In order to counter the negative effects on employment and workers, **measures for a JET prioritise the creation and protection of good jobs**, identifying the profiles needed to meet the challenges of change and ensuring a **decent job transition**, aimed at safeguarding employment and contractual protections. Measures to contrast the loss of jobs in traditional energy sectors focus on workers in the mines and power plants that are being closed down (voluntary early retirement, incentive retirement, redundancy payments, generation replacement agreements, etc.). However, these measures do not apply to indirect workers and, moreover, exacerbated by the demographic and digital transition, they may cause a generational mismatch and the loss of skills (as workers reach retirement age or skilled workers flee to other markets). Therefore, **measures are also being implemented to retain and retrain staff** in the energy sector, supporting outplacements and mobility (internal and external) especially through training interventions on upskilling and reskilling.
12. Managing the ET so as to achieve the climate neutrality targets requires a programmatic vision with specific guidelines based on a **strong role for the State**; likewise, the implementation of just transition policies demands the definition of a clear strategy at national level.
13. **IR and SD can play a central role in ensuring the social acceptability of the transition** through the prevention and management of expected and unforeseen challenges and related risks (in the areas of employment, workers' health and safety, inequalities and social exclusion with respect to territorial impact). Where IR are well structured (Germany, Spain and Italy), extensive SD allows social partners to participate in the formulation of territorial development plans, paying attention to the equity/justice component; where the SD and the bargaining system are weaker (**Poland, Hungary and Slovakia**), the union's interventions are limited to company bargaining, with almost no participation in negotiations with central and local institutions - with notable exceptions in Poland, where, however, national (sectoral) level negotiations were not held as part of a structured transition planning process, but were forced on the government, representing the State employer, by trade unions through protest actions; finally, the effectiveness of bargaining is also reduced in situations where the IR system has a high degree of fragmentation and sub-optimal coordination between the actors involved (**Belgium, France**).
14. **Trade unions** can contribute to shaping just employment transition paths. In fact, where trade unions take a proactive role, they contribute to the formulation of specific contracts, agreements and procedures on the effects of the ET aimed at promoting workers' participation and an assessment of the impacts on the

organisation of work (**Germany, Spain, Italy**). In reactive contexts, trade unions mainly seek to reduce the social costs of transition through workers' protection measures and by supporting slow and gradual phase-outs, e.g. through instruments such as the JTPs (**Belgium, France**). Finally, in oppositional contexts (Hungary, Slovakia and Poland), trade unions focus on defending fossil sector jobs (achieving interesting results too, as in the case of the negotiation of the social pact for the closure of coal mines in **Poland**).

15. The measures implemented by social partners for a JET focus on two main goals: preparing **tools to manage the transition and creating mechanisms to anticipate the effects** on employment and the territory. The effectiveness of these measures depends on the capacity of the social partners themselves, on their territorial roots and on the willingness of institutions to involve them. At the **national level**, agreements between governments and social partners aim to manage the decommissioning and restructuring of affected regions. At the **territorial level**, the degree of union involvement varies, with active participation in some areas in the development and monitoring of JET plans, while in others this is limited. At the **company level**, collective bargaining focuses on economic and work organisation's planning and on workers' protection, often in response to the transition initiatives taken by companies. One can also note **a broadening of the topics of collective bargaining**, which in some cases leads to agreements that, in addition to dealing with working conditions, pay attention to the centrality of the individual, quality of life and environmental representation functions at company level.
16. To ensure that transition pathways are just and equitable, the role of SD should be increased and collective bargaining and information and consultation practices should be strengthened to foster **negotiated participation** in the design phase of transition and in the definition of strategic choices.

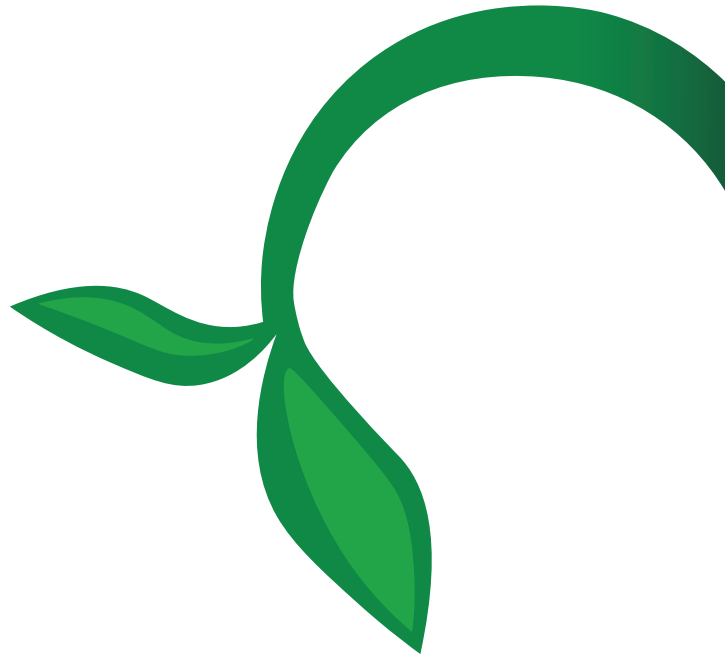
ANNEX

Table 2. National reports and case study reports

Country	National Reports Energy for a just and green Recovery deal: the role of the Industrial relations in the Energy sector for a resilient Europe	Case study Reports
Europe	Bormioli S., Rugiero S., Europe baseline report , FDV Working Paper n.10/2024, 2023, ISSN: 2724 1882	
Belgium	Kuburas I., Naedenoen F., Belgian baseline report , FDV Working Paper n.8/2024, 2023, ISSN: 2724 1882	Kuburas I., Naedenon F., The energy transition of an electricity production plant, Belgian case study report, 1, Rejeneraxion project, 2024
		Kuburas I., Naedenon F., The energy transition of an electricity production plant, Belgian case study report, 2, Rejeneraxion project, 2024
		Colmont C., Naedenoen F., Major electricity and gas distribution network operator: One Hundred years of energetical transition, Belgian case study report, 3, Rejeneraxion project, 2024
France	Teissier C., French national baseline report , FDV Working Paper n.9/2024, 2023, ISSN: 2724 1882	Teissier C., Is a European Company Agreement relevant to support the green transition of a major "Fossil Group"?, French case study report, 1, Rejeneraxion project, 2024
		Teissier C., Managing the impacts of a Coal power plant future closure in the Pays de la Loire Region, French case study report, 2, Rejeneraxion project, 2024
		Teissier C., Managing the impacts of a Coal power plant closure in the Normandy Region, French case study report, 3, Rejeneraxion project, 2024

Germany	Vitols K., German national baseline report , FDV Working Paper n.3/2023, 2023, ISSN: 2724 1882	Vitols, K., Voss E., The “Coal Consensus” of the Commission on Growth, Structural Change, and Employment, German case study report, 1, Rejeneraxion project, 2024
		Vitols, K., Voss E., “Revierwende” – A trade union project for the just transition of coal-mining areas, German case study report, 2, Rejeneraxion project, 2024
		Vitols, K., Voss E., Reconversion and managing energy transition at the Uniper company and in the Wilhelmshaven region, German case study report, 3, Rejeneraxion project, 2024
Hungary	Bors P., Meszmann T., Hungarian national baseline report , FDV Working Paper n.3/2024, 2023, ISSN: 2724 1882	Transformation of the Mátra Erőmű Energia Zrt (MERT), Hungarian case study report, 1, Rejeneraxion project, 2024
		Transformation of the coal-based regions of Eastern Hungary, Hungarian case study report, 2, Rejeneraxion project, 2024
		MOL company’s portfolio greening, Hungarian case study report, 3, Rejeneraxion project, 2024
Italy	Alessandrini S., Bormioli S., Rugiero S., Italian national baseline report , FDV Working Paper n.7/2024, 2023, ISSN: 2724 1882	Alessandrini S., Bormioli S., Rugiero S., The transition to the Gela biorefinery and the role of industrial relations, Italian case study report, 1, Rejeneraxion project, 2024
		Alessandrini S., Bormioli S., Rugiero S., The energy transition of Sulcis Iglesiente, Italian case study report, 2, Rejeneraxion project, 2024
		Alessandrini S., Bormioli S., Rugiero S., The energy transition in the Ravenna hub, Italian case study report, 3, Rejeneraxion project, 2024

Poland	Koziarek M., Polish national baseline report , FDV Working Paper n.6/2024, 2023, ISSN: 2724 1882	Koziarek M., Social contract for hard coal mining sector, Polish case study report, 1, Rejeneraxion project, 2024
		Koziarek M., Social contract in lignite mining and electricity sectors, Polish case study report, 2, Rejeneraxion project, 2024
		Koziarek M., Energy transition in ZE PAK, Polish case study report, 3, Rejeneraxion project, 2024
Slovakia	Gažo P., Martišková M., Slovak national baseline report , FDV Working Paper n.1/2024, 2023, ISSN: 2724 1882	Martišková M., Gažo P., Slovakia – from coal to geothermal energy in the Košice region, Slovak case study report, 1, Rejeneraxion project, 2024
		Gažo P., Martišková M., The mining region of Upper Nitra, Slovak case study report, 2, Rejeneraxion project, 2024
		Shokha S., Gažo P., Martišková M., Slovak gas industry transformation, Slovak case study report, 3, Rejeneraxion project, 2024
Spain	Cruces Aguilera J., De la Fuente Sanz L., Spanish national baseline report , FDV Working Paper n.4/2023, 2023, ISSN: 2724 1882	Cruces Aguilera J., De la Fuente Sanz L., Meirama. From mine and coal-fired power plant to Hydrogen and biomethane plants, Spanish case study report, 1, Rejeneraxion project, 2024
		Cruces Aguilera J., De la Fuente Sanz L., Andorra. From coal-fired power plant to PV and Eolic knot, Spanish case study report, 2, Rejeneraxion project, 2024
		Cruces Aguilera J., De la Fuente Sanz L., Aboño. From mine and coal-fired power plant to hydrogen plant, Spanish case study report, 3, Rejeneraxion project, 2024



ast:rées
GroupesOS

CELSI Central European
Labour Studies
Institute



INSTITUTE OF
PUBLIC AFFAIRS

LENTIC
Technology - Innovation - Change



Co-funded by the European Union (Employment, Social Affairs and Inclusion). Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them. Project no. 101052341/SOCPL-2021-IND-REL