



COMPARATIVE REPORT

THE IMPACT OF EUROPEAN GREEN DEAL
POLICIES ON EMPLOYMENT AND WORKING
CONDITIONS IN THE ENERGY, INDUSTRY,
AND TRANSPORT SECTORS



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Acronyms

BG	Bulgaria
CA	collective agreement
CB	collective bargaining
EC	European Commission
EGD	European Green Deal
ES	Spain
ETS	Emissions Trading System
EU	European Union
GHG	greenhouse gases
LT	Lithuania
MK	North Macedonia
MT	Malta
NACE	Nomenclature statistique des Activités économiques dans la Communauté
OSH	occupational safety and health
PL	Poland
PT	Portugal
RE	renewable energy
RES	renewable energy sources
SK	Slovakia
XS	Serbia

Introduction

The report focuses on the impact of European green transition policies on employment and working conditions of three sectors: industry, energy and transport of Bulgaria, Lithuania, Malta, Poland, Portugal, Slovakia and two UE candidate countries: North Macedonia and Serbia. This report summarizes (1) the findings presented in relevant national reports and based on individual in-depth interviews held in each country with representatives of sectoral workers' and employers' organisations (at least 15 IDIs per country) and analyses of collective agreement provisions, and (2) the results of an online survey of workers, putting those in a comparative perspective.

The field work was carried out from Nov. 2023 to May 2024 (survey), Feb. 2024 – July 2024 (IDIs). The survey results should be interpreted with caution as they cannot be considered representative for particular countries or sectors due to the small size of the samples.

Table 1 The worker survey respondents – sample structure (sectors and countries)

Energy	Industry	Transport	BG*	ES	LT*	MK	MT	PL	PT*	SK	XS	ALL
123	92	46	12	42	18	32	30	52	12	31	32	261

* samples potentially most affected by the randomness factor

The aim of the study is to provide social partners with an up-to-date overview to help them adjust their strategies on green transition and enhance their involvement in the European social dialogue. It is part of the project “GREENET Fast forwarding the green transition in a just and socially responsible way – cases of industry, energy, and transport sectors” co-financed by the European Union.

Overview of the European Green Deal policy framework

Key green transition policy targets and measures relevant for the three sectors

The policy framework for green transition in EU is provided by the European Green Deal. The key targets are climate neutrality by 2050 and reducing GHG emissions by 55% by 2030 as compared to 1990. In February 2024, the EC recommended to reduce net GHG emissions in the EU by 90% by 2040 compared to 1990 level. This is to be achieved by increasing the share of energy from renewable sources and energy efficiency, as well as by new clean technologies and the transition to circular economy. Fossil fuels in transport are to be increasingly replaced by green electricity and hydrogen.

The EGD targets include:

- 32% share of **renewable energy** (RE) by 2030, to be raised to 42.5%, as agreed by the EU in March 2023 (with the ambition of reaching 45%). Annual binding increase of 1.1% (in heating and cooling at national level; indicative target of 2.1 % RE and waste heat

and cold in district heating and cooling; indicative target of RE increase of 1.1% **in industry**. As of 2026 no support for forest biomass in electricity -only installations will be provided to protect forests.

- 11.7% increase in energy efficiency by 2030 (763 Mtoe final energy consumption, 992.5 Mtoe primary energy consumption)¹ – target adopted in 2023
- targets on GHG **emissions of transport** and use of innovative fuels: **13% GHG intensity reduction in transport**, 2,6% share of renewable H₂ and synthetic fuels by 2030, 2,2% targeted share of advanced biofuels by 2030
- 55% reduction of **emissions from cars** by 2030 (15% by 2025), 50% reduction of emissions from vans by 2030 (15% by 2025), zero emissions from new cars by 2035. Mandatory targets related to electric **recharging and hydrogen refuelling infrastructure** for cars, vans and heavy-duty vehicles.
- **maritime** targets on **GHG intensity of the energy** used on board (2% decrease by 2025, 6% by 2020, 13% by 2035, 26% by 2040, 59% by 2045, 75% by 2050)

The most powerful tool of the EU climate policy is **the Emissions Trade System (ETS)** and carbon pricing. The ETS target is to cut emissions by 61% by 2030 compared to 2005 levels (through reductions in annual limits on total emissions). ETS covers GHG emissions from installations in the energy sector and energy-intensive industry sectors, including oil refineries, steel works, and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals. It also covers emissions from **aviation** within EEA and departing flights to Switzerland and the UK, and, from 2024, non-domestic flights to and from outermost regions, and **maritime** transport (100% from intra-EU traffic, 50% of extra-UE voyages, from 2024 extended to cover CO₂ emissions from large ships (above 5000 gross tonnage) irrespective of their flag. From 2027 ETS will cover road transport and building fuels (revenues will support vulnerable households and cleaner mobility).

Other legally sanctioned measures, include, among others, CO₂ emission standards for cars and vans, and fuel standards for aviation and maritime transport, monitoring and reducing methane emissions by the energy sector, setting standards for energy and resource efficient construction materials, energy related taxation, sustainable reporting obligation for companies.

To prevent unfair competition from outside the EU where climate standards are less restrictive or lacking the **Carbon Border Adjustment Mechanism**, which is a tool of carbon pricing of certain goods imported to the EU, was introduced in October 2023, to be fully implemented since 2026.

The EGD also promotes **circular economy** to reduce the use of natural resources, energy, emissions (including GHG) and waste as well as to reduce raw material dependence (including critical materials). The relevant measures are: eco-design rules and digital product passports, EU wide rules

¹ Previous target was 1128 Mtoe for primary energy and 846 Mtoe for final energy

on packaging, EU-wide certification of carbon removals, regulating green claims by companies, and guaranteeing a right to repair products to fight planned obsolescence, stricter rules for waste shipment to non-EU countries. In 2023 New Batteries Regulation was adopted with targets for recycling efficiency, material recovery and recycled content to be introduced gradually from 2025 onwards.

Key EU tools to support just transition

The key EU tools to support just transition to a climate neutral economy are the Just Transition Mechanism and the Social Climate Fund. JTM helps to alleviate the socioeconomic costs of the transition in regions which are expected to suffer the greatest job losses and to support the transformation of industrial facilities with the highest GHG intensity. JTM supports actions related to economic diversification, job creation, and re-skilling, among others. The Social Climate Fund will be used to support citizens most vulnerable to fossil fuel price increases through structural measures and investments as well as through direct income support.

Selected data on the energy, industry and transport sectors in the studied countries

Some contextual data on the energy, industry and transport sectors (employment levels) as well as on energy intensity, energy mixes and emissions per capita are presented in Tables 2-6.

Table 2 Energy intensity (units of energy per unit of GDP) in the selected countries (2022)

	EU 27	BG	ES	LT	MT	PL	PT	SK	MK	XS
Kilograms of oil equivalent (KGOE) per thousand euro in purchasing power standards (PPS)	87,70	137,87	88,74	81,30	155,57	98,27	81,03	120,06	99,71	158,57

Data source: Eurostat: nrg_ind_ei

Key features of industrial relations systems in the studied countries

The key features of the industrial relations systems in the studied countries are presented in Table 7. Referring to the Eurofound (2022 p. 4) typology, the collective bargaining systems of LT, PL, MT are characterised by decentralised, predominantly company-based bargaining, while in SK and BG company- and sector-level bargaining co-exist with neither dominating. PT and ES have bargaining predominantly at sector-level. While SK represents company-oriented governance, LT, PL and BG are countries with market-oriented governance, and PT, ES, and MT are characterised by the State-centred governance (cf. Eurofound 2023).

The information and consultation rights in the countries which are EU members are compliant with the relevant EU Directives. In MK and XS employees can exercise their right to information and consultation through trade unions. In particular it covers information on matters relevant for employees, including, among others, economic issues and organisation of work.

Table 3. Energy production and consumption by source, CO2 emissions per capita in the studied countries (2022^a)

CO ₂ emissions per capita (t CO ₂)	CO ₂ emissions per capita trend (2000-2022)	RES share in power generation	Largest sources in total energy supply	Largest sources in domestic production	Net energy imports	Largest sources of electricity generation	Largest sources of energy in final consumption	Share in final consumption	
								Industry	Transport
BG	6,625 ↓1%	18.8%	31% coal , 23% oil	45% coal , 33% nuclear	38,0%	43% coal , 33% nuclear	39% oil products, 26% electricity	27%	34%
ES	4,541 ↓22%	42.7%	43% nuclear, 22% natural gas	41% nuclear, 30% wind, solar etc.	77,1%	23% natural gas, 22% wind, 20% nuclear.	52% oil products, 24% electricity	22%	40%
LT	3,896 ↑8%	68.2%	46% oil, 27% biofuels and waste	80% biofuels and waste	72,1%	42% wind, 17% hydro	38% oil products, 18% natural gas	16%	35%
MT	3,413 ↓16%	12.9%	49% oil, 45% natural gas	94% wind, solar etc.	389,6%	85% natural gas	57% oil products, 40% electricity	13%	43%
PL	7,534 ↓2%	17.1%	36% coal , 33% oil	66% coal	49,9%	60% coal	39% oil products, 16% electricity	20%	31%
PT	3,467 ↓38%	55.5%	46% oil, 20% natural gas	54% biofuels and waste, 30% wind, solar etc.	77,7%	30% hydro, 27% wind	48% oil products, 26% electricity	25%	35%
SK	5,125 ↓24%	22.2%	27% nuclear, 25% oil	62% nuclear, 25% biofuels and waste	57,3%	62% nuclear.	33% oil products, 25% natural gas	29%	24%
MK	3,708 ↓10%	24.5%	45% oil, 32% coal	68% coal	63,7%	47% coal , 23% hydro	55% oil products, 27% electricit	20%	40%
XS	6,658 ↑5%	22.8%	43% coal , 27% oil	62% coal	45,3%	66% coal , 26% hydro	38% oil products, 25% electricity	22%	27%

Data source: IAEA 2022

^a for SK data as of 2023 except data on CO₂ emissions

Table 4. Persons employed in the energy sector (number) in the studied countries (2022)

	EU 27 e	BG	ES	LT	MT	PL	PT	SK	XS
Mining of coal and lignite	105 278	c	260	0	0	84 553	0	c	3 677
Extraction of crude petroleum and natural gas	16 559	c	c	90	0	0	0	c	1 377
Electricity, gas, steam and air conditioning supply	1 380 000	c	44 802	12 557	c	142 184	16 161	17 584	8 143
									39 136

Data source: Eurostat: sbs_oww_act; c – confidential, e - estimated

Table 5. Employment in industry by branch (NACE) in the studied countries (2022): employees in full-time equivalent units – number

Manufacture of:	EU 27	BG	ES	LT	MT	PL	PT	SK	MK
food products	3 504 126	70 386	398 868	36 396	2 615	410 306	88 015	35 616	16 597
beverages	383 634	10 474	56 160	2 904	876	22 899	16 714	4 903	2 295
tobacco products	34 732	:	1 582	:	:	9 995	625	0	1 334
textiles	430 000	10 380	41 303	8 455	331	49 927	44 308	5 054	6 273
wearing apparel	499 000	56 579	26 366	12 063	94	57 141	76 093	10 043	19 393
leather and related products	304 288	7 960	:	439	:	:	45 524	7 979	1 873
wood and of products of wood and cork, except furniture; articles of straw and plaiting materials	728 000	12 066	48 075	18 759	89	121 144	27 515	14 233	2 129
paper and paper products	570 000	8 648	47 798	5 639	240	68 680	14 141	7 362	1 376
Printing and reproduction of recorded media	400 000	7 959	44 413	3 247	1 608	44 371	12 584	4 213	2 250
coke and refined petroleum products	155 439	2 381	:	:	:	:	1 905	:	35
chemicals and chemical products	1 145 932	13 598	99 337	7 127	268	92 603	14 024	7 852	903
basic pharmaceutical products and pharmaceutical preparations	602 502	:	53 317	:	1 285	24 860	9 838	:	2 622
rubber and plastic products	1 500 000	30 188	102 939	9 813	1 593	229 150	31 830	31 132	3 759
other non-metallic mineral products	1 000 000	20 094	100 264	7 489	1 248	142 650	44 170	16 481	2 873
basic metals	818 653	12 832	60 254	582	108	71 440	8 790	23 070	4 229
fabricated metal products, except machinery and equipment	3 082 545	49 137	233 420	16 948	1 347	343 376	90 912	48 344	6 809
computer, electronic and optical products	984 794	10 189	30 065	6 394	2 384	56 528	12 632	11 413	:
electrical equipment	1 390 000	25 626	70 872	5 394	593	134 172	19 611	34 369	:
machinery and equipment n.e.c.	2 820 085	32 773	114 929	6 623	518	128 281	26 192	45 016	2 306
motor vehicles, trailers and semi-trailers	2 249 515	25 127	147 971	6 374	:	206 575	41 193	74 768	:
other transport equipment	680 000	6 385	49 520	6 337	13	51 230	7 865	4 562	484
furniture	750 000	19 396	52 822	31 394	756	181 347	33 731	10 520	4 639
Other manufacturing	700 000	9 443	33 886	6 566	1 933	50 787	14 505	7 023	1 293

Data source: Eurostat: sbs_oww_act; no data available for Serbia.
Branches with highest employment levels are marked with red colour.

Table 6. Employment in transport and storage in the studied countries (2022)

	Employees in full-time equivalent units - number							Employment shares						
	Transportation and storage	Land transport and transport via pipelines	Freight transport by road	Water transport	Air transport	Warehousing and support activities for transportation		Transportation and storage	Land transport and transport via pipelines	Freight transport by road	Water transport	Air transport	Warehousing and support activities for transportation	
EU 27	8 080 109	4 348 214	2 600 000	162 000	247 701	2 170 000		100%	54%	32%	2%	3%	27%	
BG	127 815	85 161	59 060	1 263	2 158	20 348		100%	67%	46%	1%	2%	16%	
ES	735 335	393 266	258 713	8 318	33 052	219 271		100%	53%	35%	1%	4%	30%	
LT	145 052	117 732	102 087	1 236	558	20 782		100%	81%	70%	1%	0%	14%	
MT	12 370	3 571	822	602	2 465	4 351		100%	29%	7%	5%	20%	35%	
PL	725 519	497 425	404 035	2 786	6 162	136 088		100%	69%	56%	0%	1%	19%	
PT	174 422	111 410	76 013	2 228	11 673	33 675		100%	64%	44%	1%	7%	19%	
SK	95 490	57 923	41 890	343	346	22 982		100%	61%	44%	0%	0%	24%	
MK	30 257	21 765	13 858	60	21	5 485		100%	72%	46%	0%	0%	18%	

Data source: Eurostat sbs_oww_act; no data available for Serbia.

Table 7. Key features of industrial relation systems in the studied countries

Country	Workplace representation	Board-level representation	Existence of a tripartite council*	Principal level of collective bargaining	CB coverage ⁽¹⁾	CB coverage	Unionisation level
BG	Union, but law provides for election of other representative ⁽²⁾ . WC are voluntary	No	Yes ⁽²⁾	company	23%	30% [27.8% in 2018]	20% [15.3% in 2016]
ES	Works council, but with unions central role	Yes: state owned companies	Yes	Industry, but precedence to company agreements	94%	70% [80.1% in 2018]	19% [12.5% in 2019]
LT	Union or works council if there is no union	No	Yes	company	14%	15% [7.9% in 2019]	10% [7.4% in 2019]
MK	Union, no works councils ⁽²⁾		Yes	Cross-sectoral, sectoral and company levels ⁽²⁾	n/a	49% ^(2a)	20.2% ^(2b)
MT	Union with other representatives for non-unionised workers	No	Council with various societal representatives including unions and employers	company	30%	61% [50.1% in 2016]	51% [42.9% in 2019]
PL	Union (or works council)	Yes: (formerly) State-owned enterprises	Yes	company	16%	10% [13.4% in 2019]	15% [13.4% in 2017]
PT	Union; works councils are rare. Works councils formally negotiate CAs when no union is present	Yes: state owned companies	Council with various societal representatives including unions and employers	Sector or industry	65%	92% [73.6% in 2018]	19% [15.3% in 2016]
SK	Union and works council (WC are rare and cannot negotiate CA at plant level) ⁽²⁾	Yes	Yes	company	14%	35% [24.4% in 2015]	17% [11.3% in 2018]
XS	Union. No works councils ⁽²⁾		Yes	company	n/a	[30% in 2019]	[26.1% in 2014]

Source: data from ETUI: workers-participation.eu (access 17.10.2022), unless indicated otherwise;

*For the purpose of negotiation, consultation or information exchange over social and economic policies

(1) CB coverage is Eurofound (2022) estimates obtained from ECS 2019;

(2) OECD/AIAS ICTWSS database; a - data as of 2017; b - data as of 2013; c - data as of 2019, d - data as of 2014.

(3) private sector, companies with 10+ employees

Impact of the European Green Deal policies on business operations, employment and working conditions

The comparison of the three sectors: energy, industry, and transport

The IDIs with representatives of sectoral trade unions and employer organisations and employers in energy, industry and transport provided an insight into the challenges and developments related to the EGD policies, which are summarised below.

Impact of EGD policies on business strategies and sectoral reorganisation

The key concern of the **energy sector** is the *security of energy system and energy supply*, but also, in the context of energy crisis, *energy independence*. The strategies of energy companies involve development of RES capacity, including new facilities (some to be sited on former mining sites) as well as conversion of the existing ones (e.g. from fossil fuels to biofuels) as well as the modernisation and development of the infrastructure (power lines and energy storage facilities). The priority is to secure continuous energy supply at acceptable price, and for this reason the continued, even if falling, use of fossil fuels is expected (e.g. BG, PL, SK) to stabilise energy systems. In PL, nuclear energy is to replace coal in this role, the first NPP to be built in 2030s. Because of the energy crises a certain return to conventional energy sources was observed (e.g. MK). Parallely the sector has been changing due to automation and digitalisation (ES). The key challenges are *growing CO₂ costs* and simultaneously the *big investment needs*, so companies monitor their coal footprint and focus on cost-efficiency. The coal mining sector faces ultimate phase-out, and has started the process of downsizing.

The key concern of companies in **the industry sector** is retaining *competitiveness* in the situation of increasing CO₂ costs and the *need of costly investments* to decarbonize (but also in the face of challenges posed by Industry 4.0 revolution). The manufacturing sector is affected by *CO₂ cost* both with regard to the emissions from *technological processes* and as a contributor to high *energy prices*, where energy is predominantly produced from coal (like in PL). Companies tend to develop and manage their own RES (BG, PL, MT, XS) or use alternative fuels (MT, ES), or form partnerships with green energy producers (PL) to reduce their carbon footprint related to energy consumption. They also apply *energy efficiency* measures (BG, ES, LT). In order to decarbonize production companies need to modify processes and apply cleaner technologies and less polluting materials – which involves high costs. More and more companies reorient their business models to *circular economy*, which results in increased co-operation between manufacturers and recyclers within a value chain (PL). As a result of the European Green Deal policies some manufacturing branches, such as the construction industry, re-orient their businesses towards more climate and environmentally products (PL). The automotive industry has started to convert production to electric vehicles, which brought about the most visible change in the value chain, linking car and electric battery producers (PL), and also suppliers of energy management software for such vehicles. The global aspect of this change should be recognised, as the battery represents 1/3 of the electric car value, and 72% of the

electric car battery global market share belongs to China. Another phenomenon is the decentralisation of production observed in global networks procuring specialised components to increase sustainability (MT). Overall the EGD impact is diversified with large businesses better prepared and more advanced in adapting their strategies than, especially local SMEs. Given the challenges and costs of green transition financial incentives and the State support are perceived as necessary.

So far the impact of EGD on **the transport sector** seems limited. The key concerns are the *high costs of electric and hydrogen vehicles*, and non-existent or underdeveloped charging infrastructure which requires *huge investments*. In the **long distance freight transport** such vehicles are not considered by **road** carriers a feasible or comparable alternative to internal combustion engine tractors (PL, SK), and the costs involved in zero polluting options raise concern about losing *competitiveness* towards non-EU carriers (e.g. from Ukraine) (PL) or reduction of jobs (ES). While the **rail** is generally recognised as a greener alternative to road transport, no observable impact of the EGD on this transport branch (such as shift of freight from road to rail) has been reported. The barriers include inadequate transport policy and regulatory environment (PL), or big outlays needed for engine replacement or infrastructure upgrade (SK). In **maritime** transport there is concern that emission related compensations imposed on ships calling European ports is going to affect EU *connectivity with the rest of the world* (MT). Measures taken by companies in the transport sector include optimizing delivery routes (ES), energy efficiency measures in warehouses (ES), investing in greening the suppliers where bigger green impact can be achieved (MT), investing in greener fuels (e.g. by cruise liner industry in maritime transport) as well as replacing fleets so they are cleaner and more environmentally efficient. That does not necessarily mean a shift to electric vehicles, but to new, less polluting ones. In the countries where coal dominates in energy mix (MK, PL) a shift to electric vehicles is often questioned as premature and counterproductive in GHG emission reduction. The process of fleet electrification in **public transport** is observed in big cities, especially if supported by relevant policies and regulations (PL, PT, XS). However regional and urban transport services are *not sufficient to replace private cars* (e.g. in MK, XS). The funding is lacking for expanding public transport services (e.g. in MK, XS; SK: in regions), and at the same time zero-emission buses are much more expensive (PL, SK, XS) and require infrastructure investments (SK), as well as bigger fleets for equivalent service provision (PL: e.g. in the case of electric buses in cities). There are also new challenges brought about by the green transition related to transport electrification: transporting batteries which are hazardous goods, management of used batteries, increased demand for electricity, and space for charging infrastructure.

Impact of EGD policies on employment and working conditions (work organisation, health and safety)

In **the energy sector** job losses have been reported or are expected in the fossil fuel related branches, particularly in the mining sector in the countries heavily relying on coal (BG, MK, PL, XS), with the major changes still to come. In PT 5000 direct and indirect jobs were lost in mass lay-offs in oil refining sector, and an increase in outsourcing is observed. To some extent the necessary

employment reduction in the energy sector will be achieved through planned or early retirements which should mitigate the negative impact (PL, XS). Employment in the RES sector is growing, but is not going to offset the lost jobs in numbers or required skills (e.g. in PL). New job prospects are also linked to and dependent on large investments, such as the construction and modernisation of power lines (PL), hydropower projects (XS) or nuclear energy (PL). The demand of new skills is related to the shift to cleaner fuels (e.g. coal or oil to gas, fossil fuels to RES), but also connected with environmental management and reporting, and last but not least, automation and digitalisation, all of which creates demand for higher skill levels, and makes low skilled workers most vulnerable to the change. With cleaner technologies OSH can be expected to improve, but on the other hand digitalisation is going to change work organisation and may require new OSH measures.

In **industry**, the prerequisite of securing jobs, is profitability which puts the survival of companies in energy-intensive branches such as metal at stake (e.g. in PL). The shift from combustion to electric engines makes 1/3 less staff needed and the first lay-offs in the automotive sector have already started (PL). While as a result of green transition some jobs are gone and others are created, the mobility of workers becomes a challenge, especially if production is geographically concentrated, and transport infrastructure is insufficient (ES). In MT an outflow of workers to “green regions” is recognised as a challenge. Green and digital transitions create demand for highly qualified staff (ES, XS, PL), including materials engineers, environmental technology experts, or staff certified to deal with electric voltage (in automotive companies) (PL). Reskilling and upskilling of staff to adapt to the changing needs is often provided by companies themselves (PL, MK). The contributing factors are labour shortage and unavailability of required skills on the market (as the vocational education system is not sufficiently responsive to the needs of industry). Among new features of work organisation are interdisciplinary teams (MT). The new OSH challenges are related with AI and remote monitoring technology (MT), and new products (whose health impacts have not been well studied, as yet, e.g. new construction materials) . The impact of green transition varies across the studied group of countries, e.g. no changes in working conditions or skill demands in PT have been reported.

No staff reductions related to green transition have been reported in **the transport sector**, and in MT employment is on increase. However, the concern is that extra costs involved (e.g. in zero-emission fleet) will need to be compensated by consumers (higher prices) and/or by workers (frozen wages), as clients are not sensitive to green aspects. No major impact on skill needs has been reported, changes have had evolutionary character (PL), but some increased demand of retraining and upskilling is projected in ES. No impact on organisation of work has been reported, however charging time (in case of electric vehicles) may need to be explicitly recognised as working time. While newer and safer vehicles should improve OSH, batteries for electric vehicles pose a risk of spontaneous combustion.

Cross-sectoral findings of the workers' survey

Activities supporting green transition at company level

The most frequently indicated activities taken by companies, as indicated by the survey participants, are *efficiency measures* regarding materials and energy use, followed by the use of *RES* and *circular economy measures*, as well as those which involve *business model*, *work organization* or *technological processes* change towards low emission (41%, 35%, and 35% indications respectively). However, none of those activities is found among the top three results from the candidate States: MK and XS, where most indications referred to *environmental plans*, *green procurement* or (in XS) *staff training on green behaviours* at the workplace. PL stands out with the low-carbon oriented *change or extension of business profile* as the most frequently indicated activity (58% indications), which can be explained by the domination of respondents from the energy sector, which has traditionally been relying on coal and now reorients itself towards RES.

In MK a strikingly high proportion of respondents (59%) admitted that they have *no sufficient knowledge* on the green transition related activities of their companies and the same proportion had *not heard about* any of such activities (compared to still high averages of 28% and 20% respectively for all the survey participants). On the opposite end only 12% and 5% of the ES respondents made such claims, followed by SK: 13% indications in each case.

Impact of green transition on employment and working conditions

Q5 The *transformation of jobs* and *opening new positions*, as a result of the green transition was observed by 20% and 19% of survey respondents respectively. In total 18% of respondents declared that *retired staff was not replaced*. Opening of *new positions* (e.g. due to profile change or expansion of the business) in their companies was most frequently observed by workers from ES (40% indications). The *elimination of jobs* was reported by the total of 26 respondents representing 10% of the survey participants.²

The respondents who were aware of their companies' activities related to green transition (n=209), most frequently reported that the latter have *not changed the organisation of work* (55% of indications in that group) or *the working conditions* (71%) in their workplaces. As much as 24% indicated that the conditions have *improved*. In all the surveyed countries, the *deterioration* of the working conditions was reported only in isolated cases (9 indications, out of 209 in total; 0-2 per country).

² The percentages have been calculated with reference to the total number of survey respondents (261). Please note, however, that 20% of the survey respondents who selected the statement „I have not heard about any activities carried out by the company in which I work for the purpose of green transition” did not answer the questions about the impacts of green transition on their company.

Opinions, expectations and needs of workers in the studied countries (survey findings)

Perceptions of the green transition and the prospects of their own workplaces

The majority of respondents (76%) believe that the green transition is going to result in the *improvement of environment and people's health*. As much as 63% of respondents agreed that green technologies would improve the *competitiveness of their national economy*. There was less optimism observed regarding an increase in *national energy independence and security* as a result of the transition from fossil fuels to RES: while 57% respondents in total believed so, the belief prevailed (78%-71% indications) only among respondents from four countries (MT, XS, SK, and ES). The respondents were least optimistic about the *positive job balance* as a possible future impact of green transition, the majority (55%) did not believe in it. The disbelievers clearly prevailed among respondents from BG*, SK, PL, MK, and PT* (92% to 67%). Among those from ES, LT* and XS, on the other hand, optimists dominated in this respect (77%-56%).

Green transition was considered by 72% of survey participants as relevant for the future of their companies. It scored lower than *energy prices* (80% indications) and *digital transition* (74%), and higher than *limitations in access to raw materials*. A great majority of survey respondents (70% in total) considered the company for which they worked as playing a key role in the economy of the region where they lived, and 72% regarded their sector as such.

The most widely shared concern was that the regions dependent on energy-intensive industries will not be able to cope *without the government assistance* (74% in total). Two third of respondents were afraid that green transition will bring an *increase in the costs of living*, and a similar proportion (65%) that measures to *support* workers in the transition process would be *delayed or poorly designed*. Over half (56%) of respondents feared that green EU standards would lead to *the loss of the competitiveness of the European economy*. Besides BG* (83%-100%), the relatively high concern rates in **all the four** dimensions could be found in SK (77%-84%), PL (52%-79%) and MK (53%-78%). In contrast, majority of the respondents from LT*, MT and XS did not share the concern about EU losing competitiveness, and those from LT* and ES - about the delay or poor design of support measures.

Expectations regarding just transition

The survey respondents were asked to what extent specific measures would enable a just transition, which they evaluated on the scale of 1 to 5. Each of the measures was scored with 4 or 5 by at least 50% of respondents (see Table 8). The average scores in the survey ranged from the highest 3.59 (*social protection measures*) to the lowest 3.35 (*co-financed employment with new employers*). In most cases the scores remained within the 3 to 4 range, which indicates moderate to big contribution to just transition.

Table 8. Relevance of selected measures for enabling just transition – survey average scores

The green transition will have a particular impact on certain sectors and social groups. To what extent do you believe that the following measures will enable a just transition? 5 to a very large extent / 4 to a large extent / 3 to a moderate extent / 2 to a small extent / 1 to an insignificant extent										
Measures	BG	ES	LT*	MK	MT	PL	PT*	SK	XS	All
Supporting workers in energy-intensive industries in improving or changing their qualifications in order to keep their jobs.	3,83	3,64	2,67	3,81	3,13	3,62	3,75	4,06	3,41	3,57
Co-financing the employment of workers made redundant as a result of the green transition with new employers.]	3,17	3,43	2,89	3,31	2,93	3,71	3,25	3,77	3,03	3,35
Supporting companies in energy-intensive industries to convert their activities to low emissions	3,50	3,76	2,61	3,66	3,17	3,62	3,25	3,94	3,19	3,49
Involving workers and their organizations in the process of planning and implementing the green transition	3,75	3,67	2,94	3,78	3,53	3,58	3,67	3,35	3,41	3,53
Creating new green (environmentally and climate-friendly) jobs which will replace jobs in energy-intensive industries	2,83	3,62	2,89	3,84	3,40	3,63	3,75	3,35	3,25	3,47
Supporting industrial diversification of the economy in regions previously dominated by fossil fuel-based industries.]	3,08	3,74	2,83	3,75	3,23	3,67	3,75	3,65	3,28	3,51
Social protection of workers employed in the companies exposed to the adverse effects of the transition (early retirement/paid leave prior to retirement, severance pay)	3,42	3,40	2,89	4,19	3,37	3,87	3,75	3,61	3,41	3,59
Financial protection from energy costs for the economically disadvantaged	3,50	3,38	2,56	3,97	3,47	3,96	3,67	3,10	3,50	3,52

Transition-related forms of support available to employees

Those respondents whose companies experienced job losses due to green transition (n= 26; 0-8 per country) were asked which forms of support were available to workers who lost their jobs. The listed forms of support (*transfer to another job within the company, assistance in finding a job outside the company provided by the employer; eligibility for early retirement/pre-retirement for paid leave, for one-off severance pay, for other protection; special programmes provided by local, regional or national authorities*) were indicated by 3 to 10 respondents each.

Reviewing and improving staff skills

Among respondents aware of their companies' activities related to green transition (n=209) only 30% reported that their employer *reviewed workers' qualifications and skills* with regard to green transition (about 1/5 had no knowledge whether such activity took place). More frequently workers were provided by their employers with *upskilling and retraining* (39% and 41% indications

respectively). In majority of cases such *upskilling* and *retraining* activities included digital skills development (74% and 83%, respectively).

Perception of own situation: being informed and career prospects

The majority of survey respondents considered themselves not sufficiently informed about: (1) their *company plans which may affect workers* (62%), (2) the *impact of climate policies on the labour market in their sector* (57%), and (3) the *ways to reduce the impact of their company* on climate and environment. Only among the ES respondents (for the three types of information) and among the SK respondents (for the last two types) those who were sufficiently informed (in their own perception) prevailed over those who were not. The biggest proportions of insufficiently informed respondents (ranging from 84% to 69%) were found among the respondents from MK and PL.

The survey participants who perceived their jobs as potentially endangered by green transition represented 41%. The proportion was much higher in the case of BG (75%), MK (63%) and PL (62%). As much as 72% of survey respondents considered their skills as useful outside their current sector, and even a similar proportion (74%) were ready to upskill or retrain, if needed to remain in employment. However fewer of them were ready to move to another sector (61%), and no more than half would consider a job outside their current place of residence, if were not able to find the job in the vicinity. The mobility barrier seemed highest in BG* and MK (only 25% and 28% respondents respectively potentially willing to move), and the lowest in MT (60%) and SK (55%).

Social partners and the green transition

Social partners' perceptions of green transition

While green transition is generally seen by social partners from the studied countries as inevitable and necessary, they are often critical about **the approaches applied** to achieve its targets, and sometimes sceptical (or even distrustful) regarding **the motivation and interests** behind the measures taken and about the declared results of adopted policies, and, most importantly, about **the distribution of benefits and costs**, both within the societies, but also among countries. The condition of TU approval of green transition is that it is fair (BG, LT) and not implemented at the expense of workers (PL), and does not cause economic shocks to countries or regions (BG).

In particular social partners:

- perceive EGD measures in some respects as incoherent with its targets, as the policy package does not seem to contain (well communicated and anticipatory) remedies to new problems the applied measures create (e.g. the use of critical raw materials, management of used batteries for electric cars, etc.) (PL – TUs, EMP)
- are critical about actions taken by business and government as not addressing the problems of the planet (PT, MT - TUs)

- are concerned about the pace of transition which should be adjusted to minimize the negative effects of transition on labour. This applies particularly to countries where green transition is the biggest challenge, i.e. those highly dependent on coal for energy, with high employment levels in fossil-fuel based sectors or having a high share of most transition affected industries (energy-intensive, automotive) (PL, BG, MK, SK). EMP in transport sector (SK) call for slower changes with more feasible targets and measures for implementation in short-term (SK - EMP)
- are concerned about the increased financial burden involved in green transition (related to the necessary investment effort), which affects company competitiveness (PL, SK, ES), and poses a risk of industry being pushed outside EU (PL- TUs, EMP), as well as creates pressure on cutting labour costs (PL, SK). EMP in industry consider State support (e.g. in the form of tax reliefs) as necessary (SK, XS).
- are concerned about negative impact of transition on TU activity, but also on employment, working conditions (BG)
- are concerned about ineffective public spending and they demand transparency in this respect (PT- TUs)
- point to the need of clear national strategies on green transition (BG, PL, SK)
- believe the EGD measures should recognize and be adjusted to the specific needs of the southernmost and easternmost parts of EU (PL – EMP, TUs)

Social partners beliefs related to just transition, as revealed by IDIs can be summarised as follows. In order **to make transition fair** the priority should be on the creation of new jobs, and temporal and geographical gaps between job lost and created should be addressed by national authorities. Workers should be provided with upskilling or reskilling opportunities to adapt to green and digital transitions, and, in case of redundancies, with support in retraining and finding a new job, or social protection. Education systems should be adjusted to respond to the changing skill demands. Green transition should be based on an inclusive dialogue. Workers should be involved in planning and implementation and informed well ahead about changes planned at company level.

Social partner activities in the studied countries

At sectoral level the reported social partner activities related to green transition included: policy advocacy, proposals and recommendations to the government (LT), joint advocacy of measures to mitigate financial burden to companies in energy-intensive branches (PL), and involvement in policy and regulatory framework development and strategic planning (ES, LT), with a focus by TUs on measures to protect employment and secure social protection for workers who will lose job (ES, PL, LT, PT). TUs were also active in organising debates on policy implementation involving other stakeholders (PT), awareness raising campaigns (PT, LT) and education activities (PT, MK). TUs as well as employer organisations were also involved in networking activities in their respective environments (among TUs, e.g. in MK and among enterprises, e.g. in SK), and promoting innovation

and technology development to reduce costs and increase efficiency, as well as environmental responsibility (ES, LT).

As revealed by the workers' survey, the most frequently reported activity of workers' organisations **at company level** (in companies where trade unions or work councils existed, n=220) was *requesting information from management on the company's plans and future* in relation to the green transition (34% indications). Worker organisations also presented *proposals to protect the interests of workers* during the green transition (26% indications). The third relatively popular activity was *dissemination of information on green transition* among workers (24% indications in the total sample). Less frequently observed were worker organisations' *own initiatives to reduce company impact* on the environment and climate (20% in total) and *initiatives to protect the interests of local communities* (16%).

At the same time, it needs to be noted that more than 1/3 of the survey respondents who worked in companies where trade unions or work councils existed admitted *not to have sufficient knowledge* about the activities of organisations representing workers in their companies, while 22% that worker organisations did not carry out any activities related to green transition (compared to 45% among the respondents from ES).

Social dialogue and collective bargaining in the context of a just transition

Social dialogue in the studied countries

The social dialogue concentrates on such issues as wages, working conditions and social protection of workers and those topics remain the key focus, even if addressed as a result of the impact of the climate policies. In MT, where sectoral social dialogue is held only in the public sector also the income and cost of utilities are discussed. With a possible exception of ES, green transition as such does not seem to be a topic which organises social dialogue, even if it is discussed at sectoral level in such countries like SK and LT. In SK the interviewees assessed discussions on strategic (policy and regulatory framework) as open. In LT SD is regular, in contrast in PT it is reported as irregular and ineffective at sectoral level and limited at company level, and in MK in energy sector - as selective (held with some TUs).

Issues which are typically raised and negotiated in the context of green transition (especially but not only at company level) are securing jobs and social protection for workers who are to lose their jobs, and also upskilling and re-training, as well as participation in decisions regarding technological and organisational measures, including OSH. At sectoral and inter-sectoral level social partners also raise green transition related concerns such as competitiveness or increased involvement of the government and the efficiency of funding from different sources (e.g. in SK).

Only 29 (11%) of the surveyed workers reported that there is *a joint body /steering committee* dealing with green transition, in which workers are represented in their company. Less than 1/4th of respondents in total indicated that their *employers discussed with workers* such issues as: (1) the

impact of green transition on workers (20%), (2) ways to minimize its negative effects (23%), (3) current and future skill needs related to green transition (20%), or (4) scope and forms of training programmes preparing workers to changes involved in green transition (only 15%).

The majority of respondents (59% of n=209) declared that their *employer involved worker representatives in monitoring/supervising and adapting occupational health and safety measures to new tasks* (e.g. with regard to the implementation of new technologies, waste management, the use of materials in regeneration and recycling). Over 1/5th chose the answer “I do not know”.

Information and consultation procedures in collective agreements the studied countries

Provisions on information and consultation are not found in collective agreements in PT because those issues are already covered by legislation (Labour Code). In other countries they may be found in CAs, e.g. in company level agreements (at company level: in MK, in XS, in energy sector: in PL in some company level CAs, and in BG in sectoral CA), but, as a rule, they are not particularly related to green transition. Exceptions are: LT, where CAs provide for specific procedures on information and consultation regarding transition, its progress and related plans and changes, transparent information on the impact of green transition, and the right of workers’ representatives in decision-making on working conditions during the transition; and ES where a clause related to environmental information and consultation to mitigate climate change was included in a green transition related CA of the cement sector. In that country obligations regarding environmental information and the environmental delegates of workers are regulated by a royal decree.

As much as 85% of survey respondents indicated that workers in their companies were covered by a collective agreement. The existence of provisions related to *information and consultation procedures* were reported by 36% respondents of this group (n=222).

Collective agreement provisions supporting a just transition

According to the reports by the national researchers, in the studied sectors **CAs have no references to green transition or just transition**, except in ES and LT. Some may contain provisions, applicable to the situation of company restructuring or reorganisation which, depending on the specific measures provided, may to greater or lesser extent support just transition, even if they were negotiated long before the adoption of European Green Deal or without connection to green transition. Such provisions can be found in CAs in PT, in BG (the energy sector CA), PL (energy sector company level CAs) and XS (in different sectors in CAs of public companies). The types of measures identified include those to secure employment: redeployment to another job, upskilling, re-training, flexible or reduced working hours, as well as severance pays in case of redundancies. In MK CA provisions are limited to basic rights and obligations, although also mention continuous training.

Other than that, in PL two social contracts were signed as a result of tripartite negotiations to secure protective measures for workers³ in (1) hard coal mining sector (actually applicable to the State controlled companies only), and (2) lignite mining and coal-fired energy generation, whose jobs were to be affected by the transition. The first contract is linked to the hard coal mining phase out, and the schedule of mine closure is part of it, the second one was connected to the government plan to transfer coal-related assets (lignite mines, coal-fired power plants) from the State controlled energy groups (so they can more easily obtain external financing for green investment) into a separate entity. The plan has been put on hold due to the change of the government (in December 2023) and now is being revised.

Green transition related clauses can be found in CAs in LT, and include commitments to reduce emissions by implementing new technologies and processes, and on training employees covering environmental issues and practices. Provisions related to job security and retention, may include measures to promote the creation of green jobs in sustainable production and RES, as well as on training and upskilling to adapt to change in technology and working methods. Green transition related CAs can be found in ES, like the one in the cement sector, mentioned before. In that country there are also company agreements promoting environmentally responsible practices, with social partners acting as intermediaries in identifying and rewarding employees committed to sustainability.

In the other countries no such provisions have been identified in CAs, especially that, for instance in SK, trade unions do not voice demands on the environmental performance of companies, but focus on employment related issues. Green commitments may be found in codes of conduct (as in an energy company in XS), and, for instance, in ES green clauses are increasingly used in contracts and subcontracts. In the latter country there are also various initiatives to promote sustainable practices of employees. Companies, especially in the industry sector, provide information and guidelines related to emission and energy efficiency in the workplace (e.g. in PL). There are some practices applied by companies which combine the reduction of their impact on climate and environment with benefits for the employees, even though they are not backed up with CA provisions. Examples are: fuel efficient driving motivation systems in road transport, which have been applied for economic reasons for many years (PL), or employer provided collective transport for workers in some companies (PL).

In the workers survey, provisions related to green transition, regarding (1) *working conditions*, (2) *training, upskilling and retraining*, and (3) *employment guarantees* were reported by 43%, 27% and 22% respondents in total (n=222) respectively. The majority of respondents (55%) believe that CA provisions should be complemented with regard to green transition.

³ Such as redeployment, pre-retirement paid leaves, severance pays, and re-training.

Conclusions - reflections on the future model of green social dialogue

The key findings

The EGD policies affect all the three sectors, in particular the energy sector, and the energy intensive and automotive branches of the industry, with a comparably limited impact on the transport sector, as yet. Whether companies take up actions to green their operations is largely determined by their economic situation and capacities. The relevant changes in company strategies can especially be observed in bigger enterprises compared to SMEs. Companies in the candidate countries (MK and XS) seem less advanced in applying measures to green their activities compared to those in the studied Member States.

Although green transition related staff reductions have already taken place, especially in fossil fuel related branches, the major impact on employment in the countries heavily relying on coal for energy supply (PL, BG, MK, XS) is yet to be seen. In all the studied countries new jobs are created, but they are not likely to compensate the lost ones, in terms of number, or skill level needed, and regarding geographical location and timing. A demand for upskilling and re-skilling is expected to grow, due to the twin green and digital transition, particularly in the energy and industry sectors, creating a challenge both for companies and also vocational education systems. Green transition seems to have a positive or no impact on working conditions, but at the same time, new occupational hazards have arisen (e.g. related to digitalisation or the use of new materials).

The topics organising social dialogue, collective bargaining, and activities of trade unions are employment, wages, working conditions and social protection measures, and not green transition as such. In the studied countries CAs as a rule do not contain provisions specifically related to a just green transition or climate change mitigation measures, with an exception of LT and ES. In PL two tripartite social contracts were signed at sectoral level specifically to secure protection measures for coal mining and coal-fired energy workers whose jobs were to be affected by the transition. In most of the studied countries social dialogue was assessed as weak or insufficient.

The future model of green social dialogue

- For the social dialogue to be effective in ensuring that green transition is just, the **tripartite** co-operation is crucial. In a number of countries (PL, SK, BG, MK) the need of the leadership of the national authorities has been voiced in developing a **comprehensive vision and strategy** of green transition, **in dialogue** with the social partners and other stakeholders, and also in coordinating the transition process (like for instance in ES). It is needed for long-term planning, as a stable reference for detailed policy measures and business decisions as well as for the anticipation, assessment and mitigation of negative social effects, and last but not least for the efficient allocation and transparent management of limited public resources.

- With respect to challenges and opportunities posed by green transition, social dialogue and collective bargaining should **focus** on such issues as training and career development, social protection and improvement of working conditions, as well as creation of new green jobs.
- The scope of social dialogue and collective bargaining at company level should be extended to cover possible measures linking better environmental and/or climate performance of companies with benefits for workers (such as eco-driving motivation systems in transport)
- To ensure transparency, workers should be **informed** about the expected impacts of green transition related measures, opportunities involved, as well as keep updated about the progress and the actual effects.
- The green social dialogue should provide an opportunity for a **non-dogmatic fact-based discussion** in which the different aspects of proposed or implemented approaches to decarbonization are discussed and any doubts or potential problems are openly addressed, and revision of the adopted measures is not excluded.
- At European level different **national contexts** need to be recognised and the implementation of EGD measures adjusted to ensure that costs and benefits of the EGD guided transition are fairly distributed among countries.

References:

Eurofound (2022), Moving with the times: Emerging practices and provisions in collective bargaining, Publications Office of the European Union, Luxembourg

Eurofound (2023), Measuring key dimensions of industrial relations and industrial democracy (2023 update), Publications Office of the European Union, Luxembourg
<https://www.eurofound.europa.eu/sites/default/files/2023-12/ef23008en.pdf>

The European Green Deal COM/2019/640 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN>

Websites

European Commission https://commission.europa.eu/index_en

IEA <https://www.iea.org/countries>

OECD collective bargaining website <https://www.oecd.org/employment/collective-bargaining.htm>



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