

Ensuring a Strong Labour Dimension for Just and Inclusive Energy Transitions

IEA Clean Energy Labour Council
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Ensuring a Strong Labour Dimension for Just and Inclusive Energy Transitions

Workers play a critical role in the global energy system, providing key services across many areas of the energy sector. To give a greater voice to the labour perspective in energy and climate policy discussions, the IEA Executive Director convened the Clean Energy Labour Council in 2022. The Labour Council is made up of representatives of the world's most important national trade unions and trade union confederations, as well as prominent thinkers on the topic, to foster engagement between the IEA, energy policy makers, and the labour movement.

One of the main topics for the IEA Clean Energy Labour Council is ensuring a just energy transition for workers. The International Labour Organization (ILO) defines just transition as *“greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind”*. The ILO also stresses the need to respect fundamental labour principles and rights and to implement effective social dialogue. In 2015, the ILO published [Just Transition Guidelines](#) covering a range of measures: labour market policies to create new decent jobs and limit job losses, skills development, mechanisms for social dialogue, guidance on policy coherence, occupational safety and health policies, and social protection policies to safeguard workers. This was followed up with the [adoption of an ILO Resolution](#) on the ILO Just Transition Guidelines at the 111th International Labour Conference in 2023.

The IEA Clean Energy Labour Council presents this paper in order to highlight the importance of a strong labour dimension in clean energy transitions, and to ensure that the transitions are fair, inclusive, and people-centred. The IEA Clean Energy Labour Council shares these policy considerations with international policy makers as well as the G20 and COP30 Presidencies.

Clean Energy Transitions: the role of energy workers

Workers are at the heart of the energy system, with around [67.5 million people](#) working in the sector in 2023 and an estimated [2 million additional jobs](#) created in 2024. These millions of skilled workers are central to securing a safe, reliable, and sustainable energy supply, and in turn, ensuring energy security worldwide.

While this paper will focus mostly on the energy workforce, clean energy transitions affect workers in a range of sectors from industry to transport, to agriculture. Industrial decarbonisation of energy intensive industries will have a particularly large impact on both direct and indirect workers and requires special attention. These workers should also be supported during clean energy transitions to ensure that they are just transitions for workers and local communities.

Clean energy transitions will shift the energy mix and significantly impact workers. Clean energy employment already exceeds employment in fossil fuels, with [34.8 million jobs](#) in the former compared to [32.6 million jobs](#) in the latter. This shift is set to continue, with growth predicted in clean energy jobs but a decline in jobs in the coal, oil, and gas supply sectors.

This change in energy employment requires detailed analysis and planning with social partners. Job transitions from fossil fuels to clean energy production is one potential job transition route and a way to keep skilled workers in the energy sector. However, clean energy jobs must be decent jobs to attract new workers to the clean energy sector and to ensure acceptance for the transition. Industrial policies that include decent work will be key to transition planning that supports the creation of new quality jobs.

Clean energy jobs: investing in decent jobs through a multi-stakeholder approach

For clean energy transitions to be fair and inclusive, workers must be involved as active partners in the planning, implementation, and monitoring of the transition to ensure that they are supported in adapting to new jobs. These jobs should be decent jobs. The [OECD](#) has found that decent work requirements, such as collective bargaining and social dialogue, can have a positive impact on working conditions and can improve a job's attractiveness. In addition, a well-defined social system should be in place to provide a security net for affected workers.

The importance of decent work in the clean energy sector was specifically highlighted by the Brazilian Presidency of the G20 within the 2024 [Principles for Just and Inclusive Energy Transitions](#). This work continues under the South African presidency of the G20. The IEA Global Commission on People-Centred Clean Energy Transitions is further supporting this work through the development of a Blueprint for Action and accompanying indicators relating to energy planning for just and inclusive energy transitions, social dialogue and stakeholder participation, and quality jobs, all of which are crucial aspects in ensuring just energy transitions.

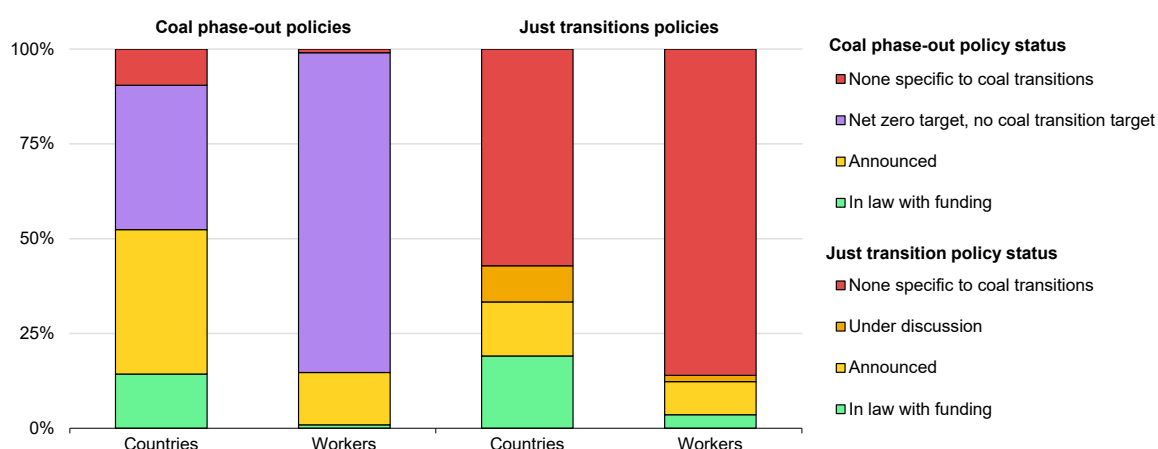
The importance of planning processes

To be truly effective, just transition policies must be developed with workers and should support workers. Robust social dialogue is a central component of just energy transitions, providing a formal process for the planning, implementation, and monitoring.

This strategic long-term planning should include industrial policy measures to support local diversification and job creation. This requires a holistic policy approach with industrial policy, energy policy, regional policy, labour market policy, and social and economic policy measures working in coordination alongside social dialogue and multi-stakeholder involvement. A proactive policy approach can ensure that new job opportunities are created before old ones disappear.

Despite the importance of these planning processes, not all workers and countries are covered by just transition policies. At the [end of 2023](#), while many [coal-dependent countries](#) had coal phase-out policies either planned or in place, only 14% of coal workers in these countries were covered by just transition policies.

Coal phase-out and just transition policy coverage by status in the 21 most coal-dependent countries, 2023



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Source: IEA, [World Energy Employment](#), 2024.

Notes: Includes the 21 highest-ranked countries in the [IEA Coal Transitions Exposure Index](#) (see IEA, 2024, Accelerating Just Transitions for the Coal Sector, Chapter 1, Section 1.3). These countries provide over 95% of global coal production and global coal (supply and power) employment. Just transition policies in this figure include policies designed for coal workers faced with energy transitions, and not broader labour policies such as unemployment benefits. Net zero targets are included as they imply a likely transition away from unabated coal.

These planning processes not only help workers transition to new jobs, but they can help governments, employers, and workers to ensure that these new clean jobs are also decent jobs. In Australia, this approach has been put into practice via the [Collie Industrial Transition Fund](#), a AUD 200 million (Australian dollars)

fund to support large-scale industrial projects linked to sustainable local job creation following the phase-out of the local coal industry. This is part of the wider AUD 547 million Collie Transition Package, which includes free career advice, skills assessments, and training via local job centres to help find individual solutions for impacted workers. The Transition Package has been broadly welcomed due to multi-stakeholder involvement in the preceding Just Transition Plan, which followed years of multilateral discussions between trade unions, employers, the government, and the wider local community.

Specific attention has been given to quality job creation in South Africa with their [Just Energy Transition Plan](#) promoting inclusive economic diversification and growth in regions phasing out fossil fuels, including industrialisation in the clean energy sector such as in electricity, electric mobility, and hydrogen. The quality of jobs created in the clean energy industries will be assessed via indicators as part of the funding mechanism, strengthening the labour dimension in the Transition Plan.

Tackling labour and skills shortages

While much focus is on finding skilled workers for tomorrow's energy mix, employers are already reporting skills shortages that need to be overcome. [The IEA survey of energy employers](#) reported that most employers faced difficulties finding qualified applicants for almost all occupation categories, with the most prevalent labour shortages in installation and repair positions. In Europe, welders, plumbers, mechanics, and electricians continue to top the list of widespread shortage occupations, and qualified tradespeople remain in high demand in advanced economies such as Australia, Canada, the United Kingdom, and the United States. Skills shortages are an even bigger challenge [in emerging and developing economies](#). Many EMDEs have high levels of informal employment - up to 80% in India and Indonesia compared to less than 4% in most advanced economies - complicating reskilling and upskilling processes.

To help overcome the labour and skills shortages, energy jobs should be decent jobs with fair wages and good conditions to attract workers to the sector. Efforts should be made to attract hard-to-reach groups and informal workers, including formalising existing skills and providing flexible training options.

It is also important to note that all social partners have a role to play in addressing skills shortages. Skills policies should be discussed through tripartite social dialogue to ensure that skills needs can be successfully addressed with sufficient financial support to tackle the skills and labour shortages.

The importance of social dialogue in ensuring just clean energy transitions

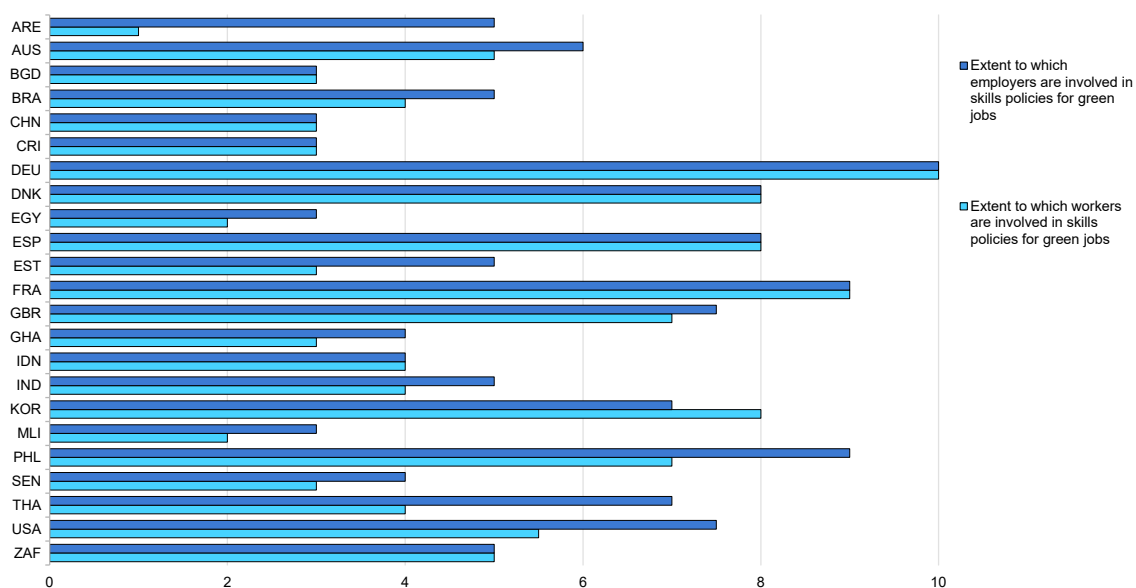
Social dialogue, negotiation, consultation, and exchange of information between or among representatives of governments, employers, and workers, is an essential component of just clean energy transitions. This type of engagement differs from stakeholder engagement, which can include a wider range of parties such as NGOs, citizens' groups, and indigenous representatives, and does not have to be labour specific.

The ILO recently [stated](#) that the use of social dialogue in Nationally Determined Contributions' (NDCs) development and implementation is uneven. Adopting the ILO Just Transition Guidelines could help countries ensure that social dialogue is conducted in the correct manner, including identifying the appropriate representative partners and ensuring regular conduction of dialogue and transparency.

An example of the important role of social dialogue in ensuring a just transition can be found in Spain's [Just Transition Strategy](#). The Strategy includes tripartite dialogue with trade unions, employers, and the government, leading to stronger commitments from businesses to attract new projects in impacted regions, to retrain workers for clean energy occupations, and to support them with job relocation. Chile has also promoted social dialogue in the decision-making process in their phase-out from coal, including with trade unions representing four coal fired power plants, indirect workers at five dockyard companies, and employers' representatives. This tripartite social dialogue resulted in successful job transitions of workers through public support for training and capacity building.

Social dialogue can have a positive impact in reskilling and upskilling workers when included as part of the just transition process. However, ILO research shows that in many countries, workers' organisations are not as involved as employers' organisations in developing national skills policies for "green" jobs. Both employers' and workers' organisations have an important role to play in developing national skills policies. When both social partners are represented in discussions on skills, the results prove productive: in [Denmark](#), thousands of shipyard workers were retrained into new, clean jobs, including in the renewable energy sector.

Involvement of employers and workers in skills policies for green jobs



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Source: IEA analysis based on [ILO](#), 2019 and [ILO](#), 2024.

Note: (1) 1–10 point scale: 10 = full involvement; 0 = no involvement. (2) Country codes: ARE = United Arab Emirates; AUS = Australia; BGD = Bangladesh; BRA = Brazil; CHN = China; CRI = Costa Rica; DEU = Germany; DNK = Denmark; EGY = Egypt; ESP = Spain; E.

Social dialogue also provides the necessary basis for collective bargaining. Collective bargaining enables employer and worker representatives to discuss and agree on key topics, such as fair wages and working conditions. It has also proved to be a useful tool in establishing agreements on how to ensure a just transition for impacted workers, from access and funding to training and education.

Examples of Collective Bargaining Agreements covering training and just transition can be found in Italy between the energy company ENI and the Italian unions Filctem Cgil, Flaei Cisl, and Uiltec Uil. The [agreement](#) provides a mechanism to jointly address the challenge of the energy transition together in an anticipatory and inclusive way, with the aim to preserve jobs. Agreements can also be reached at the international level with Global Framework Agreements, such as one signed between energy company EDF and [IndustriALL Global Union](#), which contains an enhanced just transition framework with a stronger focus on worker protection and retraining. Governments can also be included via tripartite agreements, such as the Education Support for Transition Agreement in Sweden, which provides the right to training and financial support for up to 44 weeks to expand and strengthen skills in line with future labour market needs.

Social protection to ensure that no worker is left behind

Just clean energy transitions require specific solutions for all impacted workers with active labour markets policies being required. While it is hoped that job-to-job transitions can be found for all workers, social protection is also needed to ensure that no worker is left behind.

Active labour market policies such as wage insurance, employment subsidies, and labour market services including lifelong learning, can help impacted workers find new employment. In addition, policies to help mitigate the costs of job displacement can support displaced workers. Measures include wage insurance schemes, wage loss compensation, and adjustment allowances that serve as a bridge to retirement for older employees.

These systems should be discussed by social partners and governments before closures to ensure that immediate support is in place for impacted workers.

Some countries have put social protection policies in place to help workers transition. As an example, in Canada there is the possibility of “work sharing”, allowing workers to reduce working hours but maintain a full salary, most often during temporary slowdowns. Programmes like work-sharing, combined with opportunities to upskill or reskill, allow workers in a fading industry to participate in training for their next job.

Some countries face additional issues linked to high levels of informal workers who must not be forgotten in clean energy transitions. Additional efforts are required to address large-scale informal work and to ensure employment security, decent jobs, and good working conditions. For example, in India, the Self-Employed Women’s Association (SEWA) supports projects that provide women with nationally recognised certifications for clean energy jobs, aligned with industry and region-based needs. Following these projects, many SEWA members report improved income, job quality, and social security.

Working together towards just clean energy transitions

Ensuring fair energy transitions globally requires cohesive policy measures, stakeholder engagement, effective planning and investment with workers and trade unions included in these discussions. Efforts are needed from local to global levels, requiring international ambition, commitments, and action to make clean energy transitions just.

At the international level, the Presidencies of the G20 and COP30 have shown dedication to promote a strong labour dimension in clean energy transitions. Under the South African Presidency of the G20 and the Brazilian Presidency of COP30, it is hoped that international action will be agreed upon to ensure clean energy transitions for workers.

To strengthen the labour dimension in clean energy transitions and to ensure that those transitions are just for workers, the IEA Clean Energy Labour Council highlights the following policy considerations:

- Policy makers, social partners, and other key stakeholders should work together to ensure a just transition for workers with respect for the ILO 2015 Just Transition Guidelines and the ILO Resolution adopted during the 111th International Labour Conference in 2023.
- Worker and trade unions should be included in all stages of clean energy transitions from initial research and analysis, to mapping, decision-making, implementing, and monitoring job-to-job transitions.
- Increased efforts are required to ensure that all energy jobs, including clean energy jobs, are decent jobs that respect ILO fundamental conventions such as freedom of association and the right to collective bargaining.
- Effective and meaningful social dialogue, including through bipartite and tripartite structures, is essential to prepare and implement successful clean energy transitions to ensure that workers are included.
- Collective bargaining agreements are a useful tool to transition workers to the clean energy sector by providing access to training courses and ensuring decent working conditions and should be utilised.
- Holistic industrial strategies focused on decent work should be developed with social partners, backed by social, economic, and regional policies, accompanied by relevant just transition support (e.g. social protection, transition supports, access to training, etc).
- Increased investment is needed in education and training related to clean energy at all educational levels, with engagement from social partners and educators to ensure a skilled workforce for the energy mix of today and tomorrow. While public investments in training are key, companies also have a role to play in ensuring that their workers are skilled for the future.
- Action is needed to ensure that clean energy training leads to quality jobs and is fully accessible to tackle labour and skills shortages.
- Increased efforts are required to address informal employment, which is also a threat to energy security and safety, as well as a barrier to skills development in the energy sector.
- All countries should ensure that social protection systems are in line with international labour standards, enabling social acceptance for the transition and preventing workers from being left behind.

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