Challenges and opportunities for employment in the gas sector in the context of the European energy transition

Executive summary

The climate emergency has come to the fore of media debates and the political agenda in recent years. This stems from the rise in social and governmental concern around the wide-ranging impacts of climate change in ecosystems, economic sectors, and social conditions. One of the latest, and most ambitious, measures from the Paris agreement framework is the European Green Deal. This was launched by the European Commission in December 2019 with a view to making the EU the first climate-neutral region in the world by 2050.

The decarbonisation of energy systems and industrial sectors is one of the most important challenges of this century. The nature of the transition, and the economic and social impacts, will differ profoundly depending on sectors and activities in each region. Nevertheless, despite the differences, the transformation will impact job numbers and job types across the EU. This is particularly true in the energy sector and could lead to workers going through rapid changes or experiencing insecurity in their jobs, if the situation is not managed properly.

The International and European trade union movements, along with employers' representatives, have stressed the need for a "just transition" on several occasions. The socio-economic risk must be tackled to protect workers through the energy transition. To support that, the trade union organisations initiated the development of the framework of action at the International Labour Organization and in the United Nations Framework Convention on Climate Change. In 2015, the Paris Agreement recognised that policy implementation should take into account "the imperatives of a just transition of the workforce and the creation of decent work and quality jobs". The International Trade Union Confederation has defined the just transition as a transition that "*secures the future and livelihoods of workers and their communities in the transition to a low-carbon economy. It is based on social dialogue between workers and their unions, employers, and governments, and consultation with communities and civil society*"[1]. Building on this, the ILO adopted Guidelines for a just transition[2] in order to offer a framework that countries can make use of, adopted through tripartite consensus, to guide the transition to low carbon economies.

Against this background, the gas industry will be deeply affected by the transition and have a ubiquitous role to play in it. The gas sector is seen today as offering an efficient transition pathway to phase out more emission intensive sources of energy like oil and coal. At the same time, it is a sector that must also tackle the emissions resulting from the extraction, production, transport and use of natural gas.

Gas plays a very important role in the European energy mix. Prior to the war in Ukraine, natural gas represented more than a quarter of Europe's total primary energy mix, second only to oil. However, most of the gas supply is concentrated in a small number of countries (Germany, United Kingdom, and Italy) accounting for half the gas supply. Those countries along with France, the Netherlands,

[1] *International Trade Union Confederation*. (2022, 3 October). Building Workers' Power. https://www.ituc-csi.org/just-transition-centre?lang=en

[2] International Labour Organization. (2015). *Guidelines for a just transition towards environmentally sustainable economies and societies for all*.

and Spain, account for around three quarters of the European gas supply showing the significant disparities between European countries.

The technologies intended to decarbonise the gas sector have been clearly identified. Two main routes rely on switching from natural gas to other commodities: biogas (mainly biomethane) and hydrogen.

Biomethane has the advantage of being able to be transported and distributed in existing gas grids without any retrofitting. However, the decentralised nature of biogas and biomethane production will require increasing injection points in the transport and distribution network. The supply of renewable gas remains small today. The total injection of biomethane into the gas grid is less than 1% of the current demand for natural gas in Europe. However, this is expected to grow rapidly. The REPowerEU communication called for 35 billion cubic meters (bcm) of biomethane by 2030. Achieving this would entail a 35% average annual growth rate from 2022-30 - compared to 20% in the years 2015 to 2021. The targeted growth would be rapid despite remaining a small volume compared to the actual supply of natural gas. However, the most optimistic forecast predicts supply of 151 bcm of biomethane by 2050, provided the right conditions are fulfilled.

Hydrogen is another commodity expected to grow rapidly in Europe. Compared to biomethane hydrogen is more challenging to transport and distribute. Most of the hydrogen produced today generates emissions during its production, but two less emitting alternatives exist: blue hydrogen produced from natural gas sing CCUS, and green hydrogen produced from renewable electricity using electrolysis. The European Union is putting a special focus on green hydrogen as the European Hydrogen Strategy considers it essential to the EU's 2050 carbon neutrality. This strategy set a target of installing at least 40GW of renewable hydrogen electrolysers by 2030 and producing up to 10 million tonnes of green hydrogen. The REPowerEU plan set an additional target of 10 million tons of imports by 2030.

CCUS technologies, used to produce hydrogen and capture industrial emissions, have also taken on new momentum in Europe. CCUS is of specific relevance to the gas sector because of the sector's expertise in the gas value chain, especially in transport and storage. Public support of this technology has varied through the years in Europe. This has been linked to the lack of high price signals per tonne of carbon dioxide (CO_2) and the termination of some projects initiated in the 2000s. But things are changing. In November 2021, the Innovation Fund allocated 1.1 Bn euro to 7 emissions reduction projects, 4 of which included CCUS. The 5th list of EU Projects of Common Interest (PCIs), also published in November 2021, included 6 pan-European CO_2 infrastructure projects. CCUS technologies are not without drawbacks and uncertainties, but also suffer from a lack of targets and support in the European legal framework. While the PCI list has supported opensource CCUS (designed to store emissions from any number of applications or industries), the EU taxonomy only supports investments in CCUS for hydrogen production, and not for its others uses.

The gas industry is therefore at a crossroads. Its future depends on scaling up different technologies, and to some extent on public support. The war in Ukraine and the subsequent energy crisis could act as an accelerator of change in the sector, but these crises have also brought uncertainty. The REPowerEU targets demonstrate the willingness of the European Commission to significantly develop green hydrogen and biomethane technologies, nevertheless it is still unclear what is expected for natural gas by 2030. Similarly, the Ready4H2 project, a joint coalition of European gas distribution companies, claims that over 1 million kilometres of distribution grids are ready to carry hydrogen and contribute to its rapid scale up. The extent to which DSO networks are used in this way will depend on several factors but changes in this part of the value chain must be anticipated for workers.

Anticipating changes in employment, jobs and skills is a difficult task as the future of the sector will be as varied as current energy mixes and needs of end-users across Member States. The literature

on the socio-economic consequences of the decarbonisation of the gas sector is unfortunately extremely scarce. Exact figures on projected and actual job profiles constitutes material information that cannot be shared easily and that loses a level of clarity when overly aggregated. An added level of uncertainty comes from the fast changing geopolitical and commercial landscape. Building scenarios on skills and employment at too high a level in this context would be a dubious enterprise.

The mapping performed by the French EDEC, one of the few other efforts to understand the employment landscape, is a useful framework in identifying the current jobs in the gas value chain. It can be used to link current jobs to technological, economic, and environmental changes. It also helps determine the impact that these changes might have on job numbers and types of work. Trends have been identified for employment, future jobs, and skills. The mapping provides evidence about the future for workers in the sector, although notably, those findings cannot be completely extrapolated or applied to other countries or the companies active in them.

The angle taken in this report (Challenges and opportunities for employment in the gas sector in the context of the European energy transition) was to build on identified existing practices and tools in the field of green transition related to employment and skills in order to develop a methodology useful for the social partners considering the challenges ahead. Some of the good practises identified in this report emphasise the role of social dialogue and social partners in ensuring a just transition. Chapter 3 provides examples of some interesting practises in the frame of a just transition, and is also intended to be used by the social partners as references.

The methodology in chapter 5 is built on the examples identified above and inspired by the work of the French EDEC as it delivers what we think is an essential approach for the social partners of the gas sector. This goes beyond a “broad strokes” European level approach, to consider the national level as well. Given the vast challenges at stake, it is crucial to work to anticipate outcomes to deliver a just transition at as granular a level as possible. This methodology puts social dialogue at the heart of the tools available to ensure a just transition. It is comprised of five steps, each of them relying on the fruitful cooperation of social partners:

1) Adopting a methodology built with the social partners to guarantee its effectiveness and adherence.
2) Carrying out an inventory of jobs and skills in each European country.
3) Building scenarios for the evolution of the gas sector according to national and also local specificities.
4) Identifying future changes on jobs and skills needs.
5) Building career paths and identifying business bridges within the sector and with the outside world.

The steps outlined above are similar to the methodology we have adopted and could be repeated at national and company level for ever more granular recommendations. This report has additionality benefited from the feedback obtained during a workshop held in spring 2022.

Delivering a just transition for workers will be no mean feat given the challenges ahead. Adaptable tools for anticipation, monitoring, solid social dialogue and collective bargaining will be crucial to achieving it.

RECOMMENDATIONS

These recommendations could be further implemented at the European, national, regional or company level. They all follow the same logic of identifying what already exists, mapping possible future scenarios, and devising the best methods for achieving it. The list is not exhaustive and covers:

- The methodology to be implemented to understand future challenges;
- Training as a major factor in the transformation of jobs and profiles; understanding the correlation between the future needs and the resources available will invariably require concrete actions. Among these, professional training, identification of career paths and making links between jobs (such as cross-sector recognition of qualifications) will be essential;
- Social dialogue as a key element in ensuring a just transition;
- The attractiveness of, and diversity in, the sector; the sector suffers from a lack of attractiveness due to a negative perception of fossil fuels and a lack of understanding about the professions within the sector. Fostering the competencies needed for the shift towards net zero, the attractiveness of the sector must be improved;
- Connections to other sectors.

THE METHODOLOGY

Mapping the different situations

The preliminary diagnoses are an essential element in any reflection. These must be as exhaustive and factual as possible. Choices may need to be made, such as limiting the fields of investigation for coherence and efficiency.

The diagnoses should include an in-depth reflection on jobs through the most comprehensive mapping possible of existing jobs and skills.

Building comprehensive and realistic scenarios

Once a diagnosis has been made and shared, it is advisable to map the various medium-term scenarios of how the sector could evolve.

Here again, social dialogue will be a decisive step, as the feedback from local actors (institutions, companies, and staff representatives) is one of the keys to successfully constructing these forecasts.

These forecasts must also be realistic, i.e., with a significant probability of being achieved, and linked to greater challenges such as employment and the energy transition.

Developing HR tools to define the means to achieve the objectives

The scenarios developed will make it possible to identify needs in terms of skills and the workforce. Based on these needs, it will then be possible to define the HR tools needed.

The development of certain tools is essential. This is the case for: competence frameworks for each job or job family; prospects for the evolution of jobs, in terms of volume or required skills; and the identification of bridges between jobs whether they are in the same family, in different families, or in different sectors entirely.

Providing sufficient budgets for every step of the process

All the steps outlined require dedicated financial resources: reflecting on the future of the sector, constructing the scenarios, mapping jobs and skills, the implementation of the transition.

Accounting for local issues and specificities

Success is not going to be possible with a totally top-down approach such as one entirely driven by the EU for Member States' implementation. This process must account for local issues and specificities. The numerous employment areas in question have geographical, economic, and social specificities that will each require different actions and specific support. Making the approach as effective and efficient as possible, means local actions being supported, or even favoured, depending on cultural and political contexts.

TRAINING

Responding to the challenges around hydrogen, biomethane and CCUS

In Europe, hydrogen is set to be a strategic energy vector in the medium term, but it is still in the scale up phase. For that reason, anticipating future needs will involve, among other things:

- Structuring relevant and clear training programmes for related jobs. These should cover a sufficient geographical area to anticipate, and best respond, to companies' needs.
- Training and/or retraining employees in both the gas sector and other sectors to capitalise on their expertise.

Developing and capitalising on good practices in companies

Some companies allocate specific training budgets, or set up internal training centres, to ensure that their employees are trained.

Further identifying and sharing best practices in terms of budgets, organisation, and the content of training activities, would boost the development of similar initiatives across Europe.

Strengthening the links between private and public actors

Increased interaction between the industry (professional federations, associations, and companies) and national education systems and training institutions would:

- Support the creation of training courses.
- Develop the existing training programmes in terms of content and delivery and ensure that they stay up to date with changes in jobs, skills and companies' needs.

Setting up specific actions for VSEs and SMEs

Given the significant proportion of Very Small Enterprises (VSEs) and Small & Medium Enterprises (SMEs) in the gas sector, specific actions must be carried out with them to prevent them from being left behind in the energy transition. It is therefore necessary:

- To support VSEs and SMEs in formalising forward-looking employment and skills management approaches. Career paths should also be formalised and structured by drawing, where appropriate, on the best practices of large companies and Member States.
- To facilitate access to training for VSEs and SMEs.

Structuring the different levels of training

The process of structuring training programmes at the various levels requires a specific approach.

At company level:

- Finding a new balance between the time spent on technical training and the time spent on improving cross-cutting skills and soft skills. Ideally more time would be spent on improving cross cutting and soft skills, which include: digitalisation, digital tools, cybersecurity, project management, customer relations.
- Building training paths adapted to each profession allows employees to capitalise on, improve and develop their skills with a long-term perspective.

At government level:

- Deploying new "varnish" training courses in the field of new energies for technical job profiles.

At the cross-sectoral level:

- Accelerating the integration of training initiatives across sectors;
- Creating dedicated training courses for employees moving from other sectors (oil, coal, etc.).

SOCIAL DIALOGUE

Establishing quality social dialogue at all levels of representation

Stronger collective bargaining and social dialogue are a prerequisite for a just transition. Collective bargaining enables social partners to discuss and negotiate solutions that mitigate negative employment consequences and guarantee high quality jobs. European social dialogue could make a significant contribution to identifying the appropriate level of analysis and mobilising more local players.

It is imperative that the diagnoses are carried out jointly by all players. The processes must be inclusive to generate broad support and limit obstacles and resistance to change. Without quality social dialogue the process will likely fail. Workers' involvement, from the shop floor to strategic decision-making, is a key condition for a successful journey towards a sustainable, knowledge-based, resource-efficient, and high-performance industries.

The main actors should be identified so that they can be driving forces in the development of diagnoses and the actions that will result from them. This means that there must be strong rights to effective collective bargaining and to join and form trade unions to strengthen workers' voice in the implementation of the just transition.

Available social dialogue tools at EU level should be assessed and used where appropriate to ensure a just transition of the sector.

Steering the project and allowing for redirections

The war in Ukraine has demonstrated that there are unpredictable aspects that can strongly impact strategies. Strategies are devised at certain moments in time and, like a ship in a storm, it is necessary to be able to change course to avoid the reefs. It would be appropriate to use the existing social dialogue bodies at the company level (or create new ones if needed and agreed with the full involvement of workers representatives) to establish companies' just transition plans, monitor projects, and validate budgets.

ATTRACTIVENESS AND DIVERSITY

Strengthening the attractiveness of the sector

Strengthening the attractiveness of the sector requires several levels of communication with public authorities and people living in the EU, particularly workers and job seekers.

Attractiveness and purpose driven work are becoming increasingly important as climate issues become more and more prevalent. It is not a question of greenwashing but rather of highlighting values related to the professions, the meaning of the work, and the professional and social elements of recognition that accompany it. Remuneration and working conditions are important elements that should be considered.

Regular communications aimed at both the general public and target populations (young people and women in particular) could focus on:

- the role of the sector in the transition and increasing domestic energy production;
- the potential for job creation in response to skills shortages (technical or otherwise);
- inter- and intra-sectoral bridges for jobs that are in decline or under pressure, to attract profiles from related, declining sectors;
- highlighting the technical and technological dimensions of the jobs in the gas sector.

Taking an intersectional approach to inclusive workplaces

Making the gas sector a more diverse and inclusive workplace will improve the level of diversity of thought which, in turn, will help achieve climate and social goals. On this point, it is now recognised that many people suffer from more than one type of discrimination. This means, for example, that gender inclusion cannot be properly managed without putting equal focus on anti-racism. This logic extends to ableism, homophobia, transphobia, and classism, etc. More precisely, intersectionality relates to any person who suffers from two or more types of prejudice, and who therefore stands at an intersection. An intersectional approach to inclusion in the gas sector would include steps such as:

- Giving all people an equal share of voice so everyone can steer the process of achieving a just transition.
- Addressing pay gaps with a focus on other kinds of discrimination alongside sexism.
- Communicating at all levels, including in the recruitment process and cross-sectoral efforts, with language tailored to promote inclusivity.

- Joint action with universities and training institutes to drive improvements in STEM preparedness and careers information.
- Incorporating diversity and inclusion objectives into performance reviews.
- Educational programmes and coaching for all stakeholders to support them through cultural change.

COMMUNICATION WITH OTHER SECTORS

Given the challenges of the energy transition, it seems appropriate to adopt a global approach to energy-related jobs, in the broadest sense. It is important to facilitate reskilling and upskilling of employees from other sectors who could fill the recruitment gaps. Employees working in the fields of electricity, petroleum, chemicals or construction, and public works could put their skills to good use in many jobs in the gas sector.