

A Checklist for Green Workforce Assessments

**EuropeOn Guidelines for the
Implementation of the Energy
Efficiency Directive's workforce
provisions**



EuropeOn Members

- Austria - Bundesinnung der Elektro-, Gebäude-, Alarm- und Kommunikationstechniker
- Belgium - Techlink
- Denmark - Tekniq Arbejdsgiverne
- England, Wales & Northern Ireland - Electrical Contractors' Association (ECA)
- Estonia - Eesti elektritööde ettevõtjate liit (EETEL)
- France - Fédération française des intégrateurs électriciens (FFIE)
- France - SERCE
- Finland - Sähkö- ja teleurakoitsijaliitto (STUL)
- Greece - Πανελλήνια Ομοσπονδία Σωματείων Εργοληπτών Ηλεκτρολόγων (POSEH)
- Germany - Zentralverband der Deutschen Elektro- und Informationstechnischen Handwerke (ZVEH)
- Iceland - Samtök rafverktaka (SART)
- Luxembourg - Fédération du Génie Technique (FGT)
- Netherlands - Techniek Nederland
- Norway - Nelfo
- Scotland - Electrical Contractors' Association of Scotland (SELECT)
- Sweden - Föreningen Installatörsföretagen (IN.SE)
- Switzerland - EIT.swiss

About EuropeOn

EuropeOn has been the European voice of the electrical contracting industry since 1954. With over 1.8 million professionals in over 300.000 businesses and with a turnover of over EUR 200 billion, electrical contractors are responsible for the electrical installations in buildings and infrastructure, enabling cities and citizens to take part in the Energy Transition. EuropeOn leads the #Skills4Climate campaign and is part of the Electrification Alliance, the Platform for E-mobility, the Forum for European Electrical Domestic Safety, and the Construction2050 Alliance, among others.

Please cite as: EuropeOn (2024): A Checklist for Assessing the Green Workforce - EuropeOn Guidelines for the Implementation of the Energy Efficiency Directive's workforce provisions

Published: May 2024

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List of Acronyms

AFR	Alternative Fuels Infrastructure Regulation
EDD	Energy Efficiency Directive
EPBD	Energy Performance of Buildings Directive
FTE	Full-time equivalent
LTRS	Long-Term Renovation Strategy
NBRP	National Building and Renovation Plan
NECP	National Energy and Climate Plan
NZIA	Net-Zero Industry Act
RED	Renewable Energy Directive
VET	Vocational Education and Training

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Executive Summary

- There are growing concerns over potential workforce constraints for the implementation of the EU's energy and climate goals, notably about electrical contractors represented by EuropeOn. The recast **Energy Efficiency Directive** has sought to respond to this challenge with new provisions under Article 28 for Member States to “**assess the gap between available and in-demand professionals**” by 31/12/2024 and every 4 years thereafter.
- This EU requirement is actually an **opportunity to invest in a more thorough assessment**, enabling Member States to identify policies effective to align their workforce with the energy transition's needs and opportunities.
- This publication puts forward **guidelines articulated around 5 key steps** aiming to provide relevant administrations with insight gathered from EuropeOn members on how this assessment can become a valuable tool for Member States to address the workforce needs of the energy transition but also to **reap its socio-economic benefits**.

1. Clearly identify the aim to achieve, the scope and the wider policy context

2. Assess and understand the state of the current workforce with the expertise of national stakeholder representatives

3. Forecast and extrapolate future workforce needs on the basis of the assessment

4. Add a qualitative component to the quantitative assessment

5. Follow up on the findings with corrective measures

- This report also highlights **3 potential pitfalls** to avoid:

1. Real vacancies: the data from national agencies on vacancy rates may be flawed as they often base their calculations on the job ads that are actually published in a given sector. However, many employers don't bother publishing vacancy notices anymore in sectors where worker shortages are severe.

Determining the real vacancy rate and the current shortage of workers can only be achieved by **understanding how many workers companies in a specific sector would hire if there were enough qualified individuals on the labour market**, which is best done with an extensive survey.

2. Working with stakeholders: sectoral and industry representatives are the best placed to provide relevant authorities with the most **up-to-date data and on labour market trends** and insight into its quantitative as well as qualitative needs. They may already have quantitative data on hand as well as an analysis of training and upskilling needs in light of upcoming market trends.

3. Fostering quality jobs: the diversity of tasks and the versatility of skillsets are integral to the quality and resilience of jobs. **Methodological choices for carrying out workforce projections can steer the development of jobs towards more or less quality** in this sense. Using employment factors (e.g. jobs/MW) for each technology and adding them up paints a picture of low-quality jobs confined to a narrow remit.

Conversely, examining existing job profiles and extrapolating job growth on the basis of broader targets (e.g. renovation rates, electrification rate, investment plans) leads to an understanding of the jobs ahead that promotes full skillsets and fosters quality through variety of expertise, tasks and skills.

- This publication also puts forward **policy recommendations** aimed at European policymakers, at national policymakers as well as at both levels of government simultaneously. Our recommendations go beyond the specific scope of the aforementioned obligations under the Energy Efficiency Directive to address labour and skills shortages at large, and to reap the full socio-economic benefits of the energy transition.

1. Introduction

Over the past years, workforce shortages have become an increasingly central question in Europe's path to climate neutrality. As the energy transition accelerates, a growing number of policymakers and stakeholders have come to realise that the growth of clean energy industries and the deployment of their solutions could be impeded by a shortage of qualified staff.

EuropeOn has been aware of this potential bottleneck since before the Green Deal and started the #Skills4Climate campaign in 2019 to emphasise the need to better consider workforce as an enabler of the energy transition[1]. Calls to act preemptively on workforce and skills have been heard by EU policymakers who have sought to integrate this component to Fit for 55 legislation, albeit to a limited extent.

The Energy Efficiency Directive is particularly explicit in its workforce provisions. Article 28 requires Member States to “assess the gap between available and in demand professionals” relevant for energy efficiency professions every four years[2]. As the first assessment is already due by the end of 2024, this report seeks to inform and assist policymakers and administrations with a methodological checklist that can serve as a basis to carry out this assessment.

A separate EuropeOn publication deals exclusively with another Article 28 provision prompting the Commission to work on an attractiveness campaign for energy efficiency professions.

While some may set out to only fill an EU reporting requirement, we encourage national administrations to carry out this assessment thoroughly and think about how this can actually serve their national policies relevant to the whole energy transition but also to education and employment.

As mentioned previously, addressing the green workforce's needs and availability will be key in reaching each country's energy and climate goals but is also a requirement for their clean

[1] <https://europe-on.org/skills-4-climate/>

[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_231_R_0001&qid=1695186598766

energy industries to flourish, for their education policies to be a success and lead to high employability and for their citizens to have access to jobs that are future-proof, meaningful and of high quality.

A quantification of the current and future needs is the first step in this direction and should be taken thoroughly. Together with an accompanying qualitative assessment, this exercise should give national governments the best basis to devise the education and employment policies that will enable their constituents to thrive and benefit from the energy transition.

While the Energy Efficiency Directive is the only instrument that has such a specific requirement on workforce, it should be noted that several other Green Deal legislations require reporting that hint at addressing the relevant workforce. The National Building Renovation Plans (under the Energy Performance of Buildings Directive) and the National Energy & Climate Plans[3] both require Member States to map their future trajectories with varying emphasis on workforce. However, the latter have a scope that is broader yet overlaps that of the EED. Keeping this in mind it could be more valuable for national administrations to carry out one wider and thorough assessment that could fit the reporting need under the various EU obligations.

In this perspective, it is relevant to look at the electrical contracting sector. Electrical contractors employ for the most part electricians, as well as labourers and engineers. While they can be considered as energy efficiency professions under the EED, they are also responsible for the deployment of solar PV, efficient and clean heat pumps, charging points for EVs, energy management solutions, battery storage, and more[4]. In this case, an assessment that is wider in scope than just energy efficiency would be more sensible and effective. This report is primarily aimed at supporting the implementation of the EED but one of its key recommendations will be to also consider wider energy transition areas.

This report also strongly recommends that assessments should investigate workforce needs on the basis of existing occupational profiles rather than on the basis of the tasks that have to be achieved, in light of the horizontal nature of many relevant professions. In practice, workforce projections using employment factors (such as jobs/MW) for specific technologies should be avoided.

[3] https://commission.europa.eu/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-energy-and-climate-plans_en

[4] <https://europe-on.org/about-europe-on/#who-electrical>

The guidelines presented in this report are aimed at informing workforce assessments for energy transition sectors, which have come under the spotlight recently. This report does not address the guidelines needed for traditional workforce projections such as retirements and expected replacements of workers, as these types of variables are well-known and not exclusively linked to the energy transition.

The guidelines in point 2 are articulated around five key Steps, presented in chronological order, aiming to guide assessors through this project. Each Step comes with a checklist of considerations that can apply to most national situations and which will contribute to an adequate and thorough assessment. Some specific variables are further explained under this chapter as well.

Policy recommendations are put forward for national authorities as well as for EU policymakers.

Finally, national examples of workforce assessments are provided. These are not necessarily best practices that abide by all the guidelines and recommendations presented in this report, but rather serve as learning examples to draw from. When a recommendation presented in point 2 appears in one of the national examples, a referral to the relevant example is added to the checklist.

2. A Checklist for Green Workforce Assessments



STEP 1

Clearly identify the aim to achieve, the scope and the wider policy context



Make sure this assessment is fit to deliver on workforce needs

The ultimate goal of assessing workforce availability is to ensure we can reach our targets by preparing ahead with relevant policies, for instance on adequate training capacity and awareness raising. Before defining the methodology for this assessment, the end-goal should be clear to assessors. In practice, this means ensuring the assessment will be replicable every 4 years, based on existing professions, linked to tried and tested educational paths and based on expert input from social partners.


See the French example



See how this exercise can fit into other reporting obligations by widening the scope beyond energy efficiency

There are several obligations for Member States to report on their progress towards EU energy and climate targets that also include a workforce component. These obligations often overlap as is the case with the EED, NBRPs or NECPs. Assessors should seek to broaden the scope of workforce evaluations to address the various reporting obligations and have a clear picture of the “green” labour market. This is especially important as the same professions may be relevant for different sub-targets (e.g. electricians for efficiency, renewables, mobility, circularity, ...).

See the French and German examples



Identify relevant job profiles by mapping current occupations

Assessors should start by having a clear idea of the professions that will be needed to reach their targets. This also depends on the scope of the assessment as mentioned above (only EED or also NECPs, NBRPs, etc). If there are uncertainties about this item, trade associations and stakeholder networks should be consulted (see step 2).

See the French and Swedish examples



Map the skills and experience needed in each job profile

Once relevant job profiles have been identified, more granularity can be useful. The level of experience of professionals can have a meaningful impact on their effectiveness for certain tasks and targets. For instance, a starting electrician will still need some supervision or advice from more senior colleagues while an experienced professional will be able to undertake more complex projects unsupervised. Likewise, apprentices can be taken into account, but it should be clear that they won't be able to achieve as much as confirmed professionals.

See the German example



Tailor the scope of the assessment to the national context

Every Member State is different, with various labour and safety rules that impact the profiles and number of workers needed. For instance, in Germany, only workers with the higher *Meister* qualification have the right to sign off and connect a new electrical installation to the grid. In some Nordic countries, collective agreements can stipulate only electricians are allowed to work on rooftop PV installations. Such national rules have a significant impact on the profiles needed to achieve targets and should be duly taken into account when devising the assessment's methodology.

See the German example

STEP 2

Assess and understand the state of the current workforce with the expertise of national stakeholder representatives



Set up a network of stakeholder representatives to collectively work on the workforce needs

Bottlenecks arising from worker shortages affect entire value chains and stakeholders are keen to mobilise to work on this issue. The relevant national administrations can have a key role in organizing the collaboration within value chains to extract valuable information on the state of the labour market and on the relevant job profiles for the various objectives ahead. Stakeholder representatives such as trade associations are also the most likely to have up to date figures on their human resources, may have already done a similar workforce assessment and are in the best position to provide quality data through wide-ranging surveys.

See the French example



Assess the number of workers in each identified job profile

There are multiple ways to assess the current state of the workforce. As mentioned above, social partners are often the best placed to provide this information. National administrations and agencies are also relevant contact points, but their data may not always match the job profiles needed or have the granularity required. If no adequate data is readily available, a thorough survey disseminated through social partners may be the best option for quality data collection.

See the German, French and Swedish example



Assess the number of real vacancies in each sector

Understanding the current state of the workforce means having a closer look at the real vacancy rates. National authorities often rely on published job ads to calculate vacancies. However, in sectors where worker shortages are significant many employers don't even bother to publish ads as the time spent on the latter does not pay off and does not lead to recruitment. Rather, employer often recruit by taking on apprentices or by word of mouth. Thorough surveys are the best way to understand what the real vacancy rate is, especially by asking about how many workers *would have been hired* if there were qualified workers on the labour market.

See the German example



Understand the type of work each occupational profile can achieve

With the fast-paced evolution and innovation rate of the clean energy sector, it is important to have an updated understanding of the work and tasks each identified job profile can and should undertake. This is also linked to the level of experience of workers (apprentices can be useful but cannot undertake all levels of installations) as well as the level of responsibility (who needs supervision and who can work alone). Stakeholder representatives are once more in the best place to provide this type of information.

See the French and Swedish examples

STEP 3

Forecast and extrapolate workforce needs on the basis of the assessment



Harness cross-sectoral forums to collectively forecast future workforce needs

The value chain perspective offers a unique opportunity to have a clear picture of current and future trends and their implications for workforce needs. Upstream segments may have more information on technological trends and downstream segments will know on how many workers are available. All stakeholders can then work together to identify discrepancies that may arise in the future.

See the French example



Derive forecasts from assertive and predictable plans

National authorities have to set a clear and predictable direction of travel when planning their energy transition. Governments must endeavour to plan ahead in a way that offers the most visibility to (labour) market actors and use these plans as a basis for their own projections.

See the French, Swedish and Belgian examples



Assess the number of workers in each identified job profiles

It can be tempting to do a workforce assessment with some 'quick and dirty' calculations, for instance assessing tasks (such as installations of devices) needed and apply employment factors (e.g. jobs/MW for energy generation technologies). However, as many job profiles work across different technologies there is an inherent risk of double counting. Rather, assessors should work bottom-up by looking at the relevant job profiles and number of workers available to then understand if there are workforce gaps for specific targets. Additionally, overly specific technology-based workforce forecasts are unreliable as the technology mix can vary rapidly.

See the Swedish example



Carry out extrapolations on the basis of the real vacancy rate and broad metrics

Starting with the assessment of real vacancies as a basis, forecasts should rely on broader targets and metrics. Instead of task-based assessment with employment factors for single technologies, broader targets can provide insight that takes the versatility of job profiles across tasks into account. Technology deployment trends can also heavily be affected by exogenous factors, such as changes in public incentives or energy price fluctuations, and hence a broader target can be more reliable over longer forecasting timeframes. Very broad targets such as the planned electrification rate, or even economic growth could be used. Sector-specific targets could also work, such as planned renovation rates, or investment forecasts for each sub-sector (e.g. investment in buildings for EPBD targets).

See the French and Belgian examples



Estimate up-skilling and re-skilling needs

A significant number of current workers will see evolutions in their skillset and careers as a result of energy transition policies. While it is difficult to extract reliable and precise predictions, the assessment should estimate the number of workers that will need to undergo upskilling or lifelong learning to address modern clean technologies. Similarly, the assessment should estimate the number of workers that can be re-skilled into clean energy sectors (for instance, reskilling an electrician working in coal mining into a residential electrician).



Set an appropriate timeframe

Workforce planning means looking far enough ahead as it takes time to train and educate workers and change mindsets about careers that are needed but not attractive enough. However, looking too far into the future makes it more difficult to have reliable projections. Workforce assessments should look 5 and 10 years ahead to ensure enough time is available to roll out necessary educational and employment policies. Planning requirements such as NECPs or NBRPs can offer some predictability for workforce projections and it may make sense to match their timeframes.

See the Swedish, French and Belgian examples



Mind regional differences

Depending on the degree of decentralization of energy policy, it may be relevant to add another layer of granularity in the assessment that factors in regional differences. Regions with specific geographies may have specific energy targets that will affect workforce needs. In larger countries, distance is a key factor for workers and a locally grown workforce is the best bet.

See the French example



Steer the forecasting exercise towards the creation of quality jobs

If this assessment is made a priority, it could serve as a basis for the development of educational and employment policies and potentially foster the creation of quality jobs. Focusing on existing occupational profiles rather than specific tasks, leads to higher skilled and more fulfilling jobs instead of single-task and repetitive jobs. Finally, it should be added that fully qualified workers will be more resilient to specific changes in technologies, year-on-year.

See the French example

STEP 4

Add a qualitative component to the quantitative assessment



Analyse root causes of identified workforce shortages

Keeping in mind Step 1 recommendations, the quantitative assessment should serve to identify the best way forward to address workforce issues. To this end, it is critical to understand why there are shortages, if any. This is a key component of this assessment as only then can policymakers identify the measures needed.

See the French and Belgian example



Map training routes for relevant job profiles

Where shortages have been identified, it is important to understand how applicants can access the relevant careers. This means looking at the educational system and how it provides for the job profiles identified in Step 1, including the lifelong learning or upskilling opportunities needed for practicing professionals. In addition, assessors should also quantify the capacity of the educational routes that are identified in light of the quantitative workforce assessment. Examining the number of applicants and graduates per educational path can also serve to identify shortcomings.

See the Swedish example



Identify priority occupations

By cross-referencing national targets, real vacancies and the timeframe (both of the targets and educational needs), assessors should identify job profiles that will be the most needed in the short term and where shortages will certainly cause bottlenecks for the attainment of national targets.

See the French example



Identify priority solutions to remedy worker shortages

Workforce shortages can stem from the lack of overall applicants entering the labour market, the lack of workers with needed skills on labour markets, or both. The former entails an increase in students in initial education and the latter more focus on upskilling and lifelong learning. Stakeholder platforms are also an ideal venue to exchange on best practices from the relevant sectors. Assessors should clarify the best suited solutions, in cooperation with stakeholders, to inform corrective measures effectively.

See the French, Swedish and Belgian example



Factor in digitalization

Digitalisation stands to revolutionise many sectors but is likely to evolve too quickly to be reliably incorporated into the quantitative assessment. Rather, qualitative insight on how digitalisation will impact work processes, productivity, and skillsets can help administrations and stakeholders in adapting to rapid changes when they occur.

STEP 5

Follow up on the findings with corrective measures



Work with stakeholder networks to define the best way forward

Stakeholder platforms as described above are in a unique position to support the identification of best suited measures to attract more workers, deploy effective upskilling opportunities, and support the implementation of corrective measures.

[See the French example](#)



Exchange best practices on policy options to address worker and skills gaps

Member States can learn from one another about the most effective and future-proof measures that can be deployed to address shortages. The proposed Net Zero Platform can offer an EU forum to exchange best practices and success stories. This is a crucial first step before seeking to overhaul educational systems.



Assess what measures are needed on training capacity

After the mapping exercise, administrations should brainstorm to see how and if the educational system is fit for purpose. Technology and digitalisation trends can call for more focus on lifelong learning. Further, vocational education is poised to be increasingly relevant over academia for the energy transition. These are transformative trends that may require deep changes in educational systems and that should be evaluated carefully before innovative and meaningful reforms are undertaken.

[See the Swedish example](#)



Understand the awareness raising needs

While training and education opportunities are dependent on governmental policies, people are still the main drivers of change. In many cases, awareness of the opportunities and transformations ahead may not be sufficient among the general population. Measures on communicating the results of these assessments, both quantitative and qualitative, may be needed to make corrective measures effective and foster gender diversity. See [our dedicated publication on awareness raising initiatives](#).



Define KPIs to meet until next report

As the obligation under the EED (as well as other mentioned reporting tools) are periodical and mandates an assessment every 4 years, national administrations should conclude their assessments with specific KPIs that address the identified shortcomings. KPIs could include number of apprentices, VET school capacity, awareness campaigns, increase in gender diversity and more.

See the [Belgian example](#)



Evaluate and refine the methodology

Designing the right methodology for quantitative assessments, and especially this kind of workforce assessment can be the most difficult part. As this assessment it to be repeated every 4 years, national administrations should take stock of the previous exercise to fine tune their methodology for the next deadline.

See the [French example](#)

2.1 Three points of attention

1. Real vacancies – It is of utmost importance to assess the “real” vacancy rate, which means understanding how many workers companies would hire, if enough adequately qualified workers were available on labour markets. This is in contrast to the vacancies reported in many employment agencies, which are usually based on published job ads.

In sectors such as electrical contracting, unemployment is practically non-existent. Employers don't bother to publish job ads as they know they will most likely go unanswered and are just a loss of time. However, this does not mean that they would not hire additional skilled workers if there was a thriving labor market[5], as most electrical contractors report they would immediately hire qualified personnel if available. Indeed, recruitment difficulties are not caused by financial constraints as a majority of companies in the electrical contracting sector report that their financial turnover is actually limited due to their difficulty to hire more employees. It should be noted this trend is also fuelled by the need for professionals with a sufficient skillset, as electrical work cannot be undertaken by partially- or un-skilled workers.

Assessing the real vacancy rate on an annual basis is ideal as the evolution of this rate year-on-year can offer valuable insight on the demand trends and recruitment needs.

The German example showcases a reliable assessment of the real vacancy rate through a large-scale survey of relevant companies. In this survey, respondents were asked specifically about how many workers would be hired if there were plenty of qualified workers on the labour market.

2. Working with stakeholders – The data available from national authorities on the status of relevant workforces can vary greatly in granularity, quality and scope from one Member

[5] <https://www.zveh.de/news/detailansicht/e-handwerke-bedarf-an-hoehere-qualifizierten-fachkraefte-steigt.html>

State to another, leading to different starting points to carry out a workforce assessment. Stakeholder representatives are the best placed to provide up to date data from the ground and their expertise should be harnessed from the start of the assessment's process.

Member States should set up a stakeholder network comprised of the relevant national authorities (in this case education and energy authorities) and social partners that will continuously work on the workforce dimension of the relevant sectors and keep national and EU administration informed on the status of their sector.

The French example provides a template for stakeholder engagement. The EDEC model is based on a tripartite cooperation between public administration, employers and unions. Through this platform, stakeholders have been able to provide input to the assessment and ensure it is based on the best available data.

3. Fostering quality jobs by using broad targets – We urge assessors to refrain from using employment factors for single technologies and adding them up when doing their projections for job growth and labour demand. Basing this analysis on the tasks to be achieved, rather than on the contribution of each occupational profile, entails a narrower view of future jobs where each worker counted only does one task. Narrow jobs that use partially skilled workers who can only tackle a limited number of tasks imply repetitive workdays and low job quality. Further, workers with a limited set of competences are much less resilient to market changes and more limited in the development of their careers. For example, workers that can only install PV systems, as opposed to full electricians that are able to undertake a wide array of electrical installations, will be in limbo if the PV market crashes or will be heavily impacted by periodic market fluctuations.

There are several targets or coefficients that can be used to project workforce trends in the future. While traditional variables are still relevant for this sort of exercise - retirements, demographic variations, new entrants on job market, and more – the assessments addressed here are aimed at ensuring the workforce needed for energy efficiency, or rather for the wider energy transition, is sufficiently available with the right skills and won't act as a bottleneck.

Keeping this in mind, metrics based on the energy transition can be more appropriate:

Electrification rate: this is especially relevant for jobs in the electricity sector and can give a broad estimation of growth across this sector. Electricity accounts for 23% of the EU's energy consumption in 2023 and will need to grow significantly, up to 35% by 2030[6], to achieve climate objectives.

Renovation rates: under the EPBD, member states will have to renovate a large share of their buildings, for which they will have to plan in advance at the national level. These plans can be useful to understand the need for skilled workers. If current renovation rates are at 1%, reaching 3% could entail a three-fold increase in labour demand. Public works such as grid expansions, public building renovation, or public infrastructure projects are also easier to predict as they have to be planned far in advance by public authorities themselves.

Investment plans: impact analysis of wide energy transition plans often leads to an estimation of investment needs. The EU's climate targets will require an additional €260 billion annually[7], and a Green Deal Investment Plan could be drawn up as part of the next Commission. Such analysis could provide a basis to assess workforce needs by using the number of workers in each sector by billion euros of turnover.

Economic growth: while this is not specific to the energy transition, economic growth can still be interesting if used in combination with other, more specific, indicators such as presented above.

The Swedish example identifies the professions that will be needed to electrify Sweden, and then assesses their capacity to take on the work needed to achieve national electrification goals.

The Belgian example uses the Flemish Long-Term Renovation Strategy to project the number of additional workers that will be needed to achieve its aims, using an input-output model based on the investment needs derived from the Strategy.

[6] https://cdn.eurelectric.org/media/6551/extended-full-report_decarbonisation-speedways-h-68C8EB8E.pdf?_gl=1*4xvyln*_ga*MTEzOTQxODcxOS4xNjY1NzZmZmZmZm*_ga_CB82F90MQ6*MTcwNTMzMjM1Ni4xMTUuMS4xNzA1MzMyNDg1LjYwLjAuMA.

[7] https://ec.europa.eu/commission/presscorner/detail/en/ip_20_17

3. Policy

Recommendations for EU and National Policymakers

- **European policymakers should seek to integrate workforce reporting obligations**

Member States have to report on the workforce component of the EED, EPBD, and to a certain extent in NECPs. Integrating all those reporting tools would provide for a better overview of each country's workforce relevant for the energy transition, especially when considering the broader range of technologies that some types of workers can address.

- **European policymakers should harness the Net Zero Platform to centralise workforce intelligence**

The Net Zero Platform offers an opportunity to streamline these obligations. Under the NZIA, the Platform is tasked with “assessing, continuously monitoring and forecasting” the Net Zero workforce. As it is composed of the Commission and Member States representatives, this is a perfect venue to oversee the merging of reporting obligations, as well as sharing best practices for corrective measures. Addressing workforce needs in the Platform will endow policymakers (both EU and national) with a bird's eye view of the situation, both in terms of technological and territorial scope.

- **European policymakers should make funding more easily accessible where it matters**

The EU has significant funding instruments that could support stakeholders, and especially smaller ones, in closing the workforce gap. However, EU funds are too difficult to access except for larger entities with dedicated staff. SMEs, who face the most difficulties with labour shortages, are particularly not equipped to access and apply for EU funding.

- **European & National policymakers should set clear and stable targets**

Predictability is the most essential tool for stakeholders and employers to plan their workforce needs. Setting clear targets and, even more importantly, sticking to them allows employers to see what is coming and adjust their hiring strategies accordingly, as well as to confidently invest in upskilling their current employees.

- **European & National policymakers should always consider workforce in energy and climate planning**

As the energy transition is picking up pace, workforce shortages have become more salient and led to more policy action. Considering workforce availability to reach stated objectives should be mainstreamed at all levels of policymaking and target setting. Authorities from the EU, national and local level should always assess workforce availability as a key enabler of climate and energy plans.

- **European & National policymakers should promote the creation of quality jobs**

Through funding, educational programmes, regulation of professions and training opportunities, authorities (mainly national, but also at EU level) can foster the quality of jobs that will be created. Promoting a fully qualified and expert workforce is a good way to ensure workers can have access to engaging and meaningful jobs, as opposed to low-skilled and partially qualified workforce that can only attend to limited types of tasks.

- **European & National policymakers should harness social partners' expertise**

As highlighted in the Renovation Wave Communication[8], “Social partners, including

[8] <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1603122220757&uri=CELEX:52020DC0662>

workers' and employers' representatives of the construction sector at national and European level, have solid expertise in upskilling workers, attracting new talent and promoting an inclusive working environment and should be involved in the design and implementation of measures to achieve these goals". This should become the template for the formulation of green workforce policies.

- **National policymakers must support SMEs and independent workers to upskill**

National support (also using EU funding) for upskilling should be geared towards SMEs and independent workers. Beyond ringfencing funding and training opportunities, national and local authorities should raise awareness about what is available and proactively secure the participation of concerned individuals and companies.

- **National policymakers should heavily invest in the attractiveness of technical education and careers**

Technical education, VET and technical jobs suffer from a lack of recognition and an unjust poor image. VET is often seen as a last resort option, after academic education, and needs to be promoted to reach parity of esteem. Dual education and apprenticeships need to be recognized for their true value. Fixing this imbalance requires massive awareness raising activities and communications campaigns, addressing youth, parents as well as career changers.

- **National policymakers should assess the potential of third-country migration to alleviate worker shortages**

In a context of high employment, it can be difficult to see how all workforce gaps can be filled by local individuals. National authorities are the competent ones to devise migration policy and should examine the potential for third country migrants to join the national workforce. The EU can also have a supporting and coordinating role in this strategy[9].

[9] https://home-affairs.ec.europa.eu/news/commission-proposes-eu-talent-pool-help-address-labour-shortages-across-europe-2023-11-15_en

4. National examples



Skills Supply for Electrification – Mapping and analysis

Country: Sweden

Author: Swedish Energy Agency (Energimyndigheten)

Concept: In depth review of the availability and skills in necessary professions for the electrification of Sweden

Method: Data collection from authorities cross-referenced with in-depth stakeholder input through existing publication and dedicated interviews of sectoral representatives

Timeframe: 2 years to complete, outlook to the next 3 to 5 years

Result: identification of 35 career tracks that are in short supply and need attention for the achievement of national energy targets

Notable features:

- Initiative started by the government and coordination by the relevant governmental entity (energy agency)
- Close and coordinated cooperation between authorities, stakeholders and industry players
- Focus of the analysis is on the professions that have been identified as particularly important to enable the planned transition in the short term (3–5 years)
- Investigation of the main educational paths leading to work in the shortage areas
- In depth review of education system

Link: <https://energimyndigheten.a-w2m.se/Home.mvc?ResourceId=216839>

Workforce analysis of the ZVEH

Country: Germany

Author: Zentralverband der Deutschen Elektro- und Informationstechnischen Handwerke (ZVEH) / National trade association for electrical contractors

Concept: quantitative assessment of current real vacancies in the electro technical sector

Method: large survey of companies, asking how many workers they would hire if there were qualified individuals on labour markets

Timeframe: annual figures updated every year

Result: 96.580 vacancies in the German electrical contracting sector

Notable features:

- Reliability of large scale and quality survey
- Examination of real vacancies
- Vacancies split according to skill and experience level
- Vacancies split according to company size
- Vacancies split according to company's field of expertise (IT, industrial, energy transition)
- Repetition of survey over several years, allowing to understand y-o-y trend and vacancy growth

Link: <https://www.zveh.de/news/detailansicht/e-handwerke-bedarf-an-hoeher-qualifizierten-fachkraefte-steigt.html>

Engagement de Développement de l'Emploi et des Compétences de la filière électrique (EDEC)

Country: France

Author: tripartite consortium including (1) the national government (2) the unions and (3) relevant trade associations, final deliverable done by external consultancy

Concept: quantitative and qualitative assessment of current and future workforce needs in the electricity value chain

Method: two methodological approaches were used:

1. Main approach: direct counting of jobs within identified companies in a value chain, followed by the identification of the share of the activity that fits within the sector's scope and extrapolation of associated jobs
2. Secondary approach: demand-based counting by selecting a demand data point, establishing a ratio of job by unit of demand on each activity type and extrapolation from available data

Timeframe: 18-month long study from 2020 to be updated soon

Result: over 600k jobs currently in the electricity sector, almost 200k positions to be filled by 2030

Notable features:

- Involvement of public authorities and education ministry with social partners
- Consideration and inclusion of stakeholder input
- Cooperation among value chain actors
- Follow up on quantitative assessment with qualitative study
- Workforce projections using also broader targets such as nationwide building stock renovation target
- Workforce projections use a 10-year timeframe
- Replicability of the quantitative assessment (review planned in 2024)

Link: <https://www.metiers-electricite.com/2020/09/30/edec-de-la-filiere-electrique-une-cartographie-inedite-des-emplois-et-des-metiers-un-potentiel-de-200-000-emplois-a-creer-dici-2030/>

Skills Supply for Electrification – Mapping and analysis

Country: Belgium (Flanders)

Author: BE-REEL! & Flemish Energy and Climate Agency (VEKA)

Concept: quantitative and qualitative assessment of current and future workforce needs to achieve the Flemish Long-Term Renovation Strategy (LTRS), in the framework of the “BE-Reel!” project funded by the EU Life programme

Method: Cross-referencing of public and stakeholder data, and input-output model based on investment needs for the LTRS

Timeframe: outlook to 2050

Result: comprehensive assessment of the construction sector capacity to achieve LTRS

- Estimation of 10.000-11.000 missing workers currently
- Estimation of additional workers needed: 17,200 to 20,800 by 2030, and 28,800 to 38,000 by 2045
- Estimation of workers needed including replacements for retirees: 30.000 by 2030 and 40.000 by 2045
- Identification of key policy actions

Notable features:

- Use of available EU-funding to support the analysis
- Use of stakeholder data already available
- Estimation of workforce needs on the basis of clear trajectories (LTRS)
- Projections of workforce growth on the basis of broad investment targets
- Identification of needed policy actions, including commitment to devising KPIs

Link: <https://www.vlaanderen.be/veka/nieuwsberichten/behoefte-aan-bijkomende-capaciteit-in-de-bouwsector-voor-vlaamse-renovatiedoelen>

A Checklist for Green Workforce Assessments

EuropeOn Guidelines for the Implementation of the Energy Efficiency Directive's workforce provisions



<https://europe-on.org/>



<https://www.linkedin.com/company/europe-on/>



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