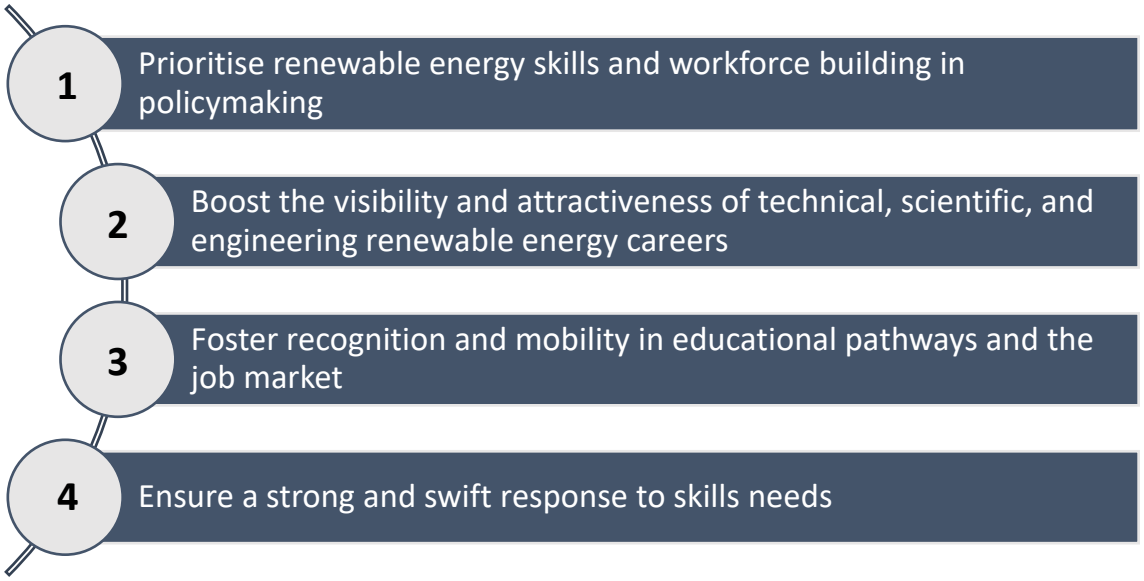
## Renewable Energy Skills Partnership

**Position paper on skills:**
**Policy recommendations and best practices for addressing the skills challenge**

The European Union has committed to reaching at least 42.5% renewables by 2030 - with a 2.5% additional indicative target. This is almost doubling our current capacities in 6 years. This transition will not happen without the right, qualified workforce. Currently, national policies fall short on providing the right incentives for prospective workers to enter the green workforce. Renewable energy workers will need to develop new skills, and be ready to adapt and work with new, emerging technologies. Workers from other sectors will also be required to learn these jobs via upskilling and reskilling. This workforce will need to be mobile across Europe. Therefore, like the energy system overall, skills policy will need to be adaptive, flexible and coordinated at the European level.

With the closing of the European Year of Skills[1], the Renewable Energy Skills Partnership has formulated 18 policy recommendations for skills, to be implemented without delay to address these challenges. The Partnership has also gathered good practices across Europe in renewable energy training. These good practices provide concrete examples of how the public and private sector can work together in driving the green transition. These policy recommendations and good practices have been integrated into the 4 priority areas below:




Disclaimer: *The views expressed in this document solely reflect the view of the Renewable Energy Skills Partnership, and do not reflect the views of the European Commission or any other members of the Pact for Skills initiative.*

[1] https://year-of-skills.europa.eu/index_en

## 1. Prioritise the renewable energy skills workforce in policymaking

We must avoid a gap emerging between countries' ambitious national renewable energy trajectories from their National Energy and Climate Plans (NECPs), and EU Member States failing to prepare for the necessary qualified workforce to accompany this transition. Mitigating it requires strong political commitment and sound policymaking. The Partnership recommends the following actions:

1. **Make workforce training in renewable energies an industrial priority,** impacting education, vocational training, and employment policies.
2. **Shape these policies through a comprehensive assessment of the current and foreseeable skill needs** across renewable energy technologies.
3. **Set-up the new Net-Zero Europe Platform quickly**, as a central coordination body for the EU-level assessment, monitoring and forecasting of workforce demand and supply, in accordance with the Net Zero Industry Act.
4. **Establish an inclusive dialogue with social partners and industrial partnerships** about skill-related policies to ensure alignment of training programmes with labour market needs.

### Best Practice No.1

Photo: Training for working at heights with manual handling © Wind Power Energy SRL

**Name of the project**: RENEWACAD-Professional Counselling and Training Academy for Renewable Energy Sources

**Technologies involved**: Solar PV and wind

**Level of education required**: Secondary

**Job Roles**: Technicians

**Description**: Solar PV and wind trainings were targeted towards miners and former miners from Valea Jiului, Transylvania, Romania, and beyond. The project ran from 2012 to 2023. It was designed to:

- Guarantee a fair energy transition for all
- Ensure a clean energy future for communities dependent on mining activities
- Modernise the economy of regions dependent on coal mining activities

As part of the project, course participants benefited from free professional counselling, free professional reskilling programmes, as well as other courses to develop a set of competitive skills for the labour market.

**Results**:

- 778 people benefited from support for participation in professional training.
- 777 people were certified following the courses completed within the project.
- 269 people found a job in the renewable energy industry as a result of the support received.
- 70 people attended other training courses at the end of their participation in the project.

**Source:** Wind Power Energy SRL

## 2. Boost the visibility and attractiveness of technical, scientific, and engineering renewable careers

Currently, the need for qualified workers as well as a diversity of technical, scientific, and engineering careers is underestimated. Raising awareness on these dimensions across the education and job market ecosystems is essential to the success of renewable energy policies. The Partnership recommends the following actions:

5. **Organise nation-wide awareness-raising campaigns** to attract more workers among students and jobseekers alike, through networks of public employment agencies, secondary schools and universities.
6. **Promote perspectives for youth and those not in employment, education or training (NEETs) in the field of technical education and vocational training**, **emphasising the equal value to academic paths,** and the crucial role of technical jobs for the energy transition.
7. **Foster early exposure to the diversity of technical careers across different renewable energies,** by including adequate learning content in primary and secondary schools.
8. **Keep career advisors, teachers and trainers across educational levels updated with market, technological and job opportunities trends**, through easily accessible lifelong learning opportunities.
9. **Promote inclusivity** by raising awareness about the diversity of career possibilities.

### Best Practice No. 2

Photo: Green Tech Skillnet with Simon Harris, Taoiseach (Prime Minister of Ireland) © Green Tech Skillnet

**Name of the project**: Green Tech Skillnet

**Technologies involved**: Onshore and offshore wind, solar PV, energy storage, hydrogen, electrification, grid, retrofit and energy efficiency

**Level of education**: Level 5-7 European Qualifications Framework, continuous professional development

**Level of job roles target** : From entry-level (including fundamental courses on market, finance and energy) to technician (e.g. wind turbine technician) to C-Suite and Management (Diploma e.g. in Strategy and Innovation and Executive Training Programme)

**Description**:

Green Tech Skillnet is a public-private partnership between the government agency Skillnet Ireland, and the contracting organisation, Wind Energy Ireland (WEI), that plays a crucial role in the renewable energy industry. Green Tech Skillnet (GTS) aims to support Ireland to meet 2030 climate targets and beyond. It does this by ensuring that the workforce has the capability, capacity, and continuity, to deliver projects that will reduce carbon emissions. It works with employers to understand urgent skill needs they see in their companies and supply chain. It communicates through surveys, one-to-one discussions, and focus groups, and it commissions skills research with industry experts. When GTS identify a skills need, they work with the industry to design and develop a programme to address the gap. GTS partner with experts, training providers, and higher education to develop courses. These courses cover various areas of expertise, and run from entry-level and graduate programmes, up to senior specialists and senior management.

Reflecting the diversification of Ireland's energy system and the climate and energy targets, the network will support the optimisation of renewables on the Irish grid over the short, medium, and long-term, through learning and development initiatives.

Skillnet Ireland model has been recognised as a best practice model by the EU Pact for Skills. The project is still ongoing.

**Results**: Since 2014, the network has successfully engaged with more than 1,000 companies, 3,200 trainees, 9,500 training days.

Skillnet Ireland was reported to enhance the general competency and employability of learners, leading to increased career mobility, and greater life opportunities.

The 2019 – 2020 Independent Evaluation reported that businesses engaged in Skillnet Ireland stated that they were adequately supported with their talent development needs, and that this support was relevant to the companies' industry.

**Source**: Wind Europe

## 3. Foster recognition and mobility in educational pathways and the job market

Educational pathways can often be too restrictive in terms of job prospects. In addition, there is often a lack of information on opportunities for workers to join reskilling programmes from one sector to another. Creating mobility possibilities is part of the short-to-long-term response to the needs of the renewable energy sector. The Partnership recommends the following actions:

10. **Promote a multi-technology approach in vocational training, where appropriate,** to allow trainees to be acquainted with different types of renewable energy systems, thus facilitating mobility across different sectors.
11. **Facilitate movement between higher education, and vocational education and training centres**, by creating recognised bridges and transferable credentials.
12. **Support the recognition of informal acquired skills and experience from related professions,** to allow the move of career changers into the renewable energy sector, while being supported by an efficient reskilling and upskilling over time.
13. **Enable the cross-border mobility of workers and students** through the cross-border recognition of qualifications and certifications.

### Best Practice No.3

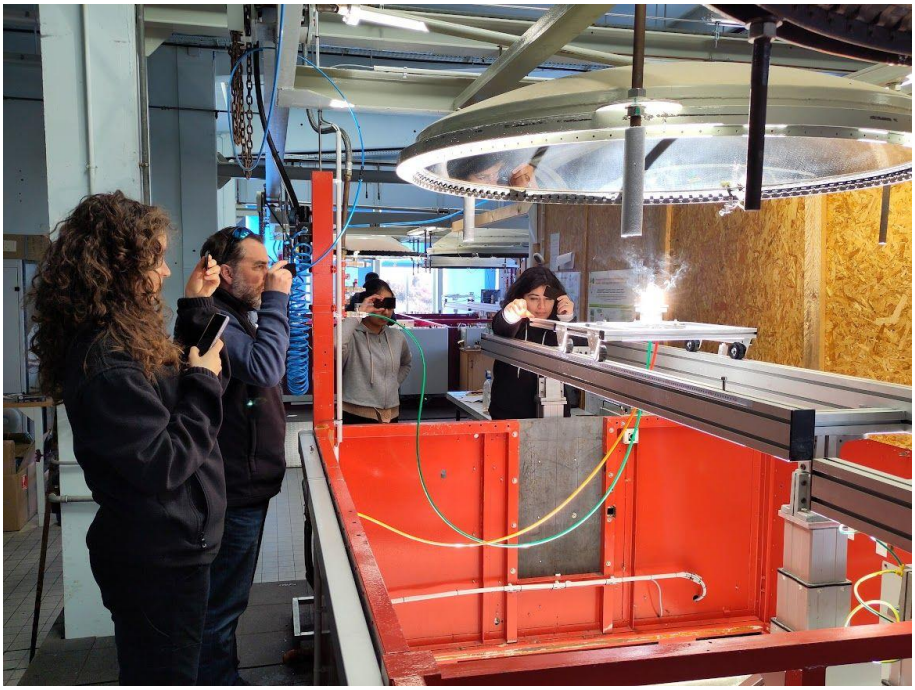


Photo: Training from EUREC's European Master in Renewable Energy © EUREC

**Name of the project**: EUREC Master Programmes: European Master in Renewable Energy and European Master in Sustainable Energy System Management

**Technologies involved**: Solar PV, wind, solar thermal, biogas/biomethane, biomass, and ocean energy

**Level of education required**: Postgraduates

**Job Roles**: Engineers, managers, directors, and PhDs students

**Description**: The European Association of Renewable Energy Research Centres (EUREC), coordinates two European Master programmes, delivered in 10 universities, from 9 different countries across Europe. The courses give students the technical, analytical, and communication skills required, to become a key member of the future energy workforce.

There are two opportunities for students to move between countries during the courses, and they must move at least once.

Since 2002, the European Master in Renewable Energy has focused on the technical understanding and implementation of Renewable Energy Technologies (RETs), with the opportunity to gain specific expertise in one of the main RETs or their integration into the energy system. Building on its success, and responding to the demand from companies and prospective students, EUREC and several universities, opened a second multidisciplinary European Master course in 2015: the European Master in Sustainable Energy System Management, which trains people in business case analysis and project management.

**Results**: More than 1,000 students have graduated from these courses, leading to the creation of a large alumni network with yearly meetings in Brussels.

In the 2023-2024 academic year, the percentage of female students enrolled for the programmes was at 40%.

**Source**: EUREC

## 4. Ensure a strong and swift response to skills needs

The need for a qualified workforce in the short to medium-term is critical to accelerate the green transition. Policymakers and the vocational training ecosystem must go further. The Partnership recommends the following actions:

14. **Promote a modular approach to vocational training where appropriate, to bridge the skills gap**. A modular approach is about structuring training around key modules that may be common to multiple technologies. For relevant professions, this can make it easier and quicker to train new workers and reskill existing ones, while avoiding duplication caused by working in silos, i.e. working in isolation from the wider team, and favouring the combination of renewable solutions.

15. **Prioritise the European Net-Zero Academies with a focus on areas where current and foreseen skills shortages are critical** for the deployment of renewable energies. In accordance with the Net-Zero Industry Act, these Academies will be new organisations, consortium or projects tasked with developing "*education and training programmes, content and materials, as well as the credentials*" for the net-zero technology value chains. Their programmes and materials will then be used by education and training centres across EU countries.

16. **Incentivise apprenticeships** in the renewable energy industry to get more qualified technicians into the job market.

17. **Invest more in infrastructure and trainers for vocational and lifelong learning, with the support of public authorities**, ensuring attractive courses that are at the forefront of new technologies, with adequately paid teachers and up-to-date equipment. Companies should be supported to increase their training capacity.

18. **Support training programmes development in the fields of permitting, impact assessment and technical regulations,** to support capacity-building in national and local administrations, and to reduce disparities in length, and complexity of authorisation procedures amongst Member States.

## Best Practice No.4


Photo: Training for working at heights with manual handling © OHKW Klimajobs

**Name of the project**: Career change programmes for solar & heat pump installers

**Technologies involved**: Solar PV and heat pumps

**Level of education required**: Secondary

**Job Roles**: Technicians

**Description**: The programmes, i.e. one to become a heating, ventilation, and air conditioning (HVAC) technician focused on heat pumps, and one to become an electrician focused on solar, started in 2024. It focuses on reskilling and upskilling career changers for the installation of solar PV and heat pumps systems in Germany. Their programme provides a subsidised, standardised, and certified career path to a state-recognised training for all.

The target groups are primarily career changers from related industries (i.e. construction workers or car mechanics), as well as unskilled and semi-skilled labourers and refugees without a full recognition of their degree. The programme can be conducted either via in-house academies, or manufacturers or private education providers' training facilities.

The programme includes 6 modules, undertaken over 3-6 months, with a skills assessment at the end of each module.

**Results**: Reskilling, upskilling, and career development for non-professionals, up to a state-recognised formal training. This will prove crucial to solar and heat pump sectors; Germany is lacking 300,000 installers until 2030[2].

**Source**: Ohne Hände Keine Wende

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## Best Practice No.5

Photo: Students at Prodeval's Training Centre © Prodeval

**Name of the project**: Prodeval Formation

**Technologies involved**: Biogas/biomethane

**Level of education required**: Undergraduate, postgraduate

**Job roles**: Technician

**Description**:

[2] Source: Allianz für Transformation

The company Prodeval, an equipment manufacturer, and specialist in the treatment and recovery of biogas, developed an in-house training centre to ensure high-quality training, and to respond to the shortage of qualified technicians in the biogas sector.

Three courses are provided:

1. Compliance training related to electricity, safety and risk prevention
2. Technical training for the biogas sector
3. Technical training based on Prodeval's products

Prodeval's training centre features a remarkable virtual reality room where trainees can learn how to operate and maintain Prodeval's biogas upgrading units.

**Results**:

- Prodeval Formation now provides 30 different courses.
- It trained 1,700 technicians in 2023.
- Prodeval Formation is developing more safety-related programmes, and aims to become a key resource for such programmes in the French biogas sector.

**Source**: European Biogas Association


**About the Renewable Energy Skills Partnership**

The Renewable Energy Skills Partnership brings together leaders from the entire spectrum of the renewable energy value chain. It ensures sustainable and systematic sectoral cooperation to have a well-trained and sufficient renewable energy workforce. This is a major factor of competitiveness for the renewable energy ecosystem, and a decisive condition for the manufacturing, deployment and management of renewable energy technologies needed to achieve the EU energy and climate objectives.

According to the EurObserv'ER report, the total direct and indirect employment from the renewable sectors is estimated at 1.69 million full-time equivalents by 2022. This figure is 15% higher than in 2021. This number is set to increase following the accelerated deployment of clean energy solutions.

Accounting for all renewable energy sectors, achieving our REPowerEU targets will require the creation of over 3.5 million jobs by 2030. This challenge is of a gigantic scale, and requires urgent action from all stakeholders and policymakers across the continent.

The Partnership provides an understanding of the sector and skills analytics, and will ensure that individuals entering the renewable energy workforce are equipped with appropriate skills, ready to face a rapidly growing and constantly evolving environment. It promotes quality careers within the renewable energy sector following the values of the just transition, and reinforces the sector's attractiveness for workers. It also aims at providing guidance and recommendations to public authorities.


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