

Pathways & Initiatives

Bottleneck 4: Lack of Skills Poses an Implementation Gap in the Green Energy Transition

Every country and region has its unique characteristics. Nevertheless, general tendencies, synergies, and opportunities can be identified across cultures, nations, and political or legislative systems. The pathways outlined in this document represent broad strategic approaches, which should be adapted to the specific national context.

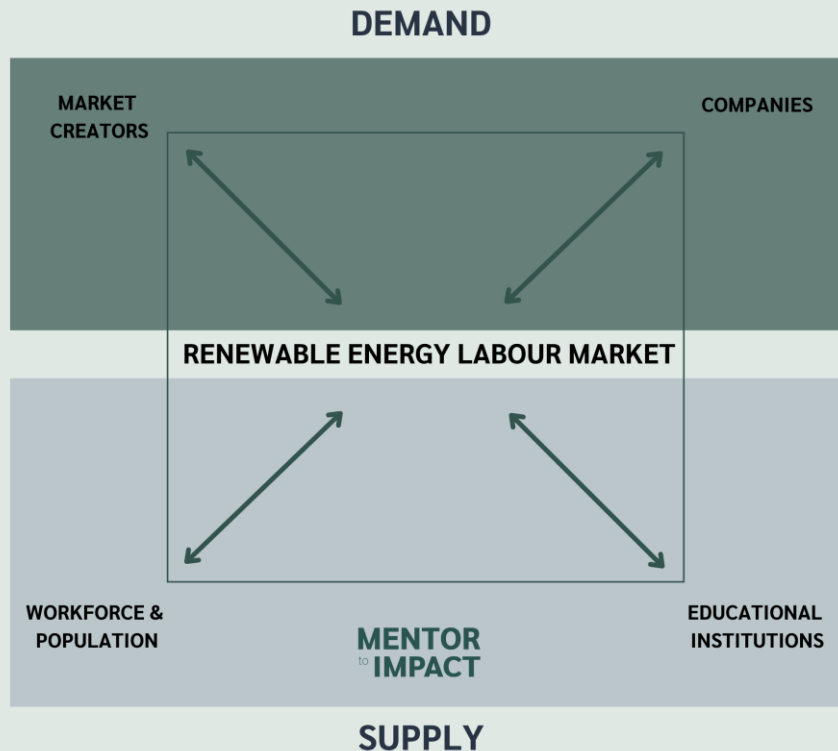
The role of each stakeholder in the Quadrature of Competencies has been mapped through an extensive exploration of the challenges in ensuring a qualified workforce for the green energy transition, as well as hearings with experts.

How can governments ensure the workforce has the required skills and competencies for the renewable energy market?

What is the role of organisations in securing the workforce that has the required skills and competencies?

What is the role of industry and companies in ensuring skills development?

What is the role of educational institutions in ensuring quality education for the renewable energy labour market?



SUPPLY

The most important actions for ensuring quality education and competencies in the renewable energy workforce include:

Market Creators

- Creating **enabling environments** for new skills development, e.g. through policy changes that can facilitate this.
- Introducing **new skill sets** in all educational entities that the government controls.
- **Providing targeted funding to training institutions** focusing on skills needed for the renewable energy sector.

Industry

- Providing **insight into needed skills for new technologies (skills mapping)** and offering these insights to educational institutions, organisations and government/authorities.
- **Developing curriculum** in collaboration with educational institutions.
- Ensuring **attractive and stable conditions** for workers in the renewable energy industry.

Workforce & Population (organisations)

- **Creating awareness** among workers that energy systems and technologies are changing, which leads to changes in the job market.
- **Motivating** workers to embrace new skills.
- Benchmarking current skills and competencies of the workforce and comparing them with the current competencies of the workforce to **identify transferrable skills**.

Educational Institutions

- **Collaborating closely with industry** to ensure an updated curriculum.
- Upgrading the current educational offering to **include needed skills for the renewable energy market**.
- Developing **targeted and specific curriculum for vocational skills**, e.g. micro-credential courses.
- Coordinate **local reskilling and education** programs.

*Strategic pathway: **Support skills development, and dissemination of training opportunities***

It is essential to develop enabling environments for upskilling and securing the recognition of prior learned skills among workers, even if they do not have a recognised certification in the country or region where they are needed.

Strategic initiatives

- **Training of technocrats/government officials/authoritative representatives:** Develop networks and learning programs for technocrats and government officials to acquire knowledge on, e.g. taxonomies, licitations, and infrastructure to accelerate the transition to a system based on renewable energy.
- **Development of curricula and training opportunities:** Support educational institutions in developing training programs that can be disseminated across regions and borders. These should be developed in close collaboration with the renewable energy industry.
- **Develop Micro-credentials:** Support lifelong learning initiatives using micro-credentials as building blocks.
- **Benchmark skills and competencies of the current workforce:** By benchmarking current skills, transferrable skills can be identified for workers seeking to change career paths. The benchmarking of current skills can also form the basis for programs which support RPL initiatives.

For more strategic elements, see the Synergy Model on p 71 of the “*Workforce and Population for the Green Transition*” report (2025)