Renewable Energy Workforce Planning Training Course

Professional Development Training Course Outline

Category	Renewable Energy	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Renewable Energy Workforce Planning Training Course equips professionals with practical capabilities to plan, develop, and sustain a future-ready clean-energy workforce. As renewable energy deployment accelerates, organizations increasingly need skills forecasting, workforce analytics, talent pipeline development, green jobs planning, reskilling, upskilling, digital transformation, AI-enabled workforce planning, and just-transition strategies. IRENA and ILO estimate that global renewable-energy employment reached 16.6 million jobs in 2024, while IRENA identifies education and training as essential to inclusive workforce development.

The course focuses on connecting energy-transition goals with workforce supply and demand, enabling participants to identify skills gaps, forecast future occupations, design competency frameworks, build talent pipelines, and create measurable workforce-development strategies. Current IEA analysis highlights evolving skill requirements, workforce shortages, limited training capacity, and the need for stronger alignment between energy policy and workforce planning. Through case-based learning, workforce-data analysis, scenario planning, practical exercises, group projects, and industry case studies, participants learn how to translate renewable-energy investment plans into actionable human-capital strategies across solar PV, wind, hydropower, bioenergy, grids, energy efficiency, storage, and emerging clean-energy technologies.

Programme Curriculum

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Course Objectives

By the end of the course, participants will be able to:

1. Develop strategic renewable-energy workforce plans aligned with organizational and national energy-transition objectives.
2. Conduct skills-gap analysis across renewable-energy value chains and occupational categories.
3. Apply workforce analytics and labour-market intelligence to identify current and emerging talent requirements.
4. Forecast future green jobs, clean-energy occupations, and critical skills using scenario-based approaches.
5. Design competency frameworks for technical, digital, managerial, and cross-functional renewable-energy roles.
6. Build effective talent pipelines through recruitment, apprenticeships, internships, TVET, and industry partnerships.
7. Develop reskilling and upskilling strategies for workers transitioning into renewable-energy occupations.
8. Integrate AI, digitalisation, automation, and data analytics into modern workforce-planning processes.
9. Design inclusive workforce strategies that expand participation by women, youth, people with disabilities, and other underrepresented groups.
10. Connect workforce planning with renewable-energy project pipelines, investment plans, and supply-chain development.
11. Establish workforce KPIs, dashboards, and monitoring frameworks for measuring skills development and talent outcomes.
12. Develop just-transition and workforce-mobility strategies for changing energy-sector labour markets.
13. Produce an actionable Renewable Energy Workforce Development Roadmap supported by evidence, scenarios, and measurable implementation priorities.

Target Audience

1. Renewable-energy executives and project managers
2. HR and **human-capital management** professionals
3. Government energy and labour-policy officials
4. Workforce-development and skills-planning specialists

5. TVET institutions, universities, and training providers
6. Energy-sector consultants and labour-market analysts
7. Utility, grid, solar, wind, storage, and clean-tech professionals
8. Sustainability, ESG, energy-transition, and corporate-strategy professionals

Course Modules

Module 1: Renewable Energy Workforce Landscape and Energy-Transition Trends

- Global **green jobs**, clean-energy employment, and workforce trends
- Renewable-energy value chains and emerging occupations
- Solar PV, wind, hydropower, bioenergy, storage, grids, and efficiency workforce needs
- **Energy-transition workforce ecosystem** mapping
- **Case Study:** Using IRENA employment trends to identify workforce priorities and emerging skills requirements.

Module 2: Workforce Demand Forecasting and Scenario Planning

- Workforce supply-and-demand forecasting techniques
- **Scenario planning** for renewable-energy deployment pathways
- Linking project pipelines to future labour requirements
- Occupation, competency, and skills-demand forecasting
- **Case Study:** Developing a workforce forecast for a rapidly expanding solar-and-storage market under alternative deployment scenarios.

Module 3: Skills-Gap Analysis and Competency Mapping

- Identifying **critical skills gaps** and shortage occupations
- Technical, digital, managerial, and transferable competencies
- Skills inventories and competency matrices
- **Skills taxonomy** and job-role mapping
- **Case Study:** Mapping skills gaps across solar PV installation, operations, maintenance, and project management roles.

Module 4: Talent Pipelines, Recruitment, and Workforce Supply

- Building renewable-energy **talent pipelines**
- Recruitment, retention, apprenticeships, and internships
- Partnerships with universities, TVET institutions, and industry
- **Work-based learning** and workforce mobility
- **Case Study:** Designing an employer–TVET partnership to increase the supply of qualified renewable-energy technicians.

Module 5: Reskilling, Upskilling, and Just Transition

- Designing **reskilling and upskilling pathways**
- Transferable skills from conventional energy into clean-energy occupations
- Lifelong learning and continuous professional development
- **Just transition** principles and worker mobility
- **Case Study:** Creating a transition pathway for experienced energy workers moving into renewable-energy operations and maintenance.

Module 6: Digital Workforce, AI, Automation, and Future Skills

- **AI-enabled workforce planning** and workforce analytics
- Digitalisation of energy systems and changing job requirements
- Data science, cybersecurity, digital operations, and smart-grid skills
- Automation, human–machine collaboration, and future-of-work planning
- **Case Study:** Assessing how digitalisation and AI could change skills requirements in a modern renewable-energy organization.

Module 7: Inclusive Workforce Planning and Workforce Development Partnerships

- **Diversity, equity, and inclusion** in renewable-energy employment
- Increasing participation of women and youth
- Accessible training and inclusive recruitment
- Government–industry–education partnerships and skills standards
- **Case Study:** Developing an inclusive workforce strategy that expands access to renewable-energy careers for underrepresented groups.

Module 8: Workforce Strategy, KPIs, Implementation, and Workforce Roadmaps

- Converting workforce analysis into an actionable strategy
- Workforce **KPIs, dashboards, metrics, and impact measurement**
- Budgeting, governance, implementation timelines, and accountability
- Building organizational and national **renewable-energy workforce roadmaps**
- **Case Study:** Developing a five-year workforce roadmap aligned with renewable-energy investment, skills demand, and employment targets.

Training Methodology

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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