Renewable Energy Sustainability Metrics 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 Sustainability Metrics Training Course equips professionals with practical knowledge to measure, interpret, and improve the sustainability performance of renewable energy projects, enterprises, and portfolios. As the energy transition accelerates, organizations increasingly need credible ESG metrics, carbon accounting, Net-Zero indicators, Life Cycle Assessment (LCA), energy efficiency metrics, circular economy measures, climate-risk indicators, and sustainability reporting to support investment and operational decisions. Recent research emphasizes integrated assessment across the economic, environmental, and social dimensions of the Triple Bottom Line, while combining stakeholder-informed indicators with quantitative benchmarking can strengthen sustainability decision-making.

The course focuses on converting sustainability data into measurable KPIs, dashboards, benchmarks, and actionable insights. Participants explore GHG emissions, Scope 1–3 accounting, carbon intensity, energy yield, Energy Return on Investment (EROI), Energy Payback Time (EPBT), water and land footprints, material criticality, waste, biodiversity, social impact, ESG performance, and climate-aligned reporting across solar, wind, hydro, biomass, and emerging technologies such as green hydrogen. LCA and multidimensional sustainability metrics are increasingly important because renewable technologies can involve different lifecycle environmental and resource trade-offs.

Programme Curriculum

Renewable Energy Sustainability Metrics Training Course

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Course Objectives

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

1. Apply renewable energy sustainability metrics to projects, portfolios, and organizations.
2. Develop ESG and Triple Bottom Line performance indicators.
3. Calculate and interpret Scope 1, Scope 2, and Scope 3 GHG emissions.
4. Apply carbon accounting and carbon-intensity methodologies.
5. Use Life Cycle Assessment (LCA) to evaluate environmental performance.
6. Assess EROI, Energy Payback Time, capacity factor, and energy productivity.
7. Evaluate water footprint, land footprint, biodiversity, and resource-efficiency indicators.
8. Build Net-Zero, decarbonization, and climate-transition KPIs.
9. Develop sustainability dashboards and data-driven KPI scorecards.
10. Apply ESG reporting, impact reporting, and sustainability disclosure principles.
11. Evaluate circular economy, materials, recycling, and end-of-life performance.
12. Use benchmarking, multi-criteria decision analysis, and sustainability scoring for strategic decisions.
13. Translate sustainability metrics into investment, operational, policy, and continuous-improvement decisions.

Target Audience

1. Renewable Energy Project Managers
2. Sustainability and ESG Professionals
3. Energy and Environmental Consultants
4. Engineers and Technical Specialists
5. Corporate Sustainability and Reporting Teams
6. Investors, Asset Managers, and Green Finance Professionals
7. Government, Regulators, and Energy Policy Professionals
8. Researchers, Academics, and Energy Entrepreneurs

Course Modules

Module 1: Renewable Energy Sustainability Fundamentals

- Sustainability frameworks.
- Core metrics.
- Renewable technology scope
- KPI architecture.
- **Case study:** Sustainability benchmarking of a renewable energy enterprise using environmental, economic, and social pillars, based on a recent enterprise-level assessment framework.

Module 2: Carbon Accounting and GHG Emissions Metrics

- GHG Protocol concepts.
- Carbon footprint.
- Baseline development.
- Net-Zero metrics.
- **Case study:** Measuring the annual GHG impact of a renewable energy project using emissions pathways and renewable-energy assessment principles.

Module 3: Life Cycle Assessment and Environmental Metrics

- LCA fundamentals.
- Environmental indicators
- Lifecycle carbon.
- Data quality.
- **Case study:** Comparative lifecycle assessment of solar PV technologies using environmental and economic indicators such as lifecycle GHG emissions, energy demand, water use, and LCOE.

Module 4: Energy Performance and Resource-Efficiency Metrics

- Energy KPIs.
- EROI.
- EPBT.
- Resource efficiency.
- **Case study:** Comparing wind, solar PV, biomass, and green hydrogen using EROI, EPBT, carbon footprint, water footprint, and material-criticality indicators.

Module 5: ESG, Social Impact, and Governance Metrics

- Environmental metrics
- Social metrics
- Governance metrics
- Stakeholder metrics
- **Case study:** Developing a balanced ESG scorecard for a renewable energy company, drawing on comparative energy-transition ESG approaches.

Module 6: Circular Economy and Sustainable Renewable Energy Value Chains

- Circularity metrics.
- Renewable technology lifecycle
- Critical materials.
- Waste metrics.
- **Case study:** Creating an end-of-life sustainability strategy for solar PV and wind assets, addressing material recovery and circular-economy opportunities.

Module 7: Sustainability Dashboards, Benchmarking, and Decision Analytics

- KPI dashboards.
- Data visualization.
- Multi-Criteria Decision Analysis (MCDA)
- Performance benchmarking.
- **Case study:** Building a weighted sustainability ranking using **AHP-MCDA** and composite sustainability scores for renewable energy enterprises.

Module 8: Sustainability Reporting, Impact Measurement, and Net-Zero Strategy

- Sustainability reporting.
- Impact reporting
- Climate strategy.
- Continuous improvement
- **Case study:** Preparing an impact-reporting dashboard for a renewable energy project using quantitative GHG and sustainability indicators

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
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0

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