Renewable Energy Portfolio Management 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 Portfolio Management Training Course equips energy professionals with practical capabilities to build, optimize, finance, and manage diversified renewable energy portfolios in a rapidly evolving electricity market. As renewable capacity expands globally, portfolio managers increasingly need to balance solar PV, wind, hydropower, battery energy storage, grid integration, power markets, project finance, ESG, risk management, and digital technologies. The IEA projects approximately 4,600 GW of renewable capacity additions during 2025–2030, while growing variable renewable generation is increasing the need for flexibility, storage, and grid investment.

This course focuses on the strategic and commercial decisions required throughout the renewable asset lifecycle from portfolio strategy and investment screening to acquisition, financing, performance optimization, risk mitigation, and exit planning. Participants explore emerging themes including AI-powered energy analytics, digital asset management, hybrid renewable-storage portfolios, virtual power plants, grid-enhancing technologies, climate finance, energy transition investing, and 24/7 clean power. Current investment trends also show strong growth in clean-energy, grid, and storage capital, making portfolio-level decision-making increasingly important for investors and energy organizations.

Programme Curriculum

Renewable Energy Portfolio Management Training Course

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Course Duration

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Course Objectives

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

1. Develop renewable energy portfolio strategies aligned with corporate and investment objectives.
2. Evaluate solar, wind, hydro, geothermal, and hybrid renewable projects using commercial and technical criteria.
3. Apply portfolio diversification and optimization techniques to improve risk-adjusted returns.
4. Assess project finance, capital structures, PPAs, and investment models for renewable assets.
5. Analyze energy market volatility, merchant exposure, and revenue-stacking opportunities.
6. Integrate battery energy storage and hybrid assets into portfolio strategies.
7. Apply AI, predictive analytics, and digital asset management to portfolio monitoring.
8. Evaluate grid connection, congestion, curtailment, and flexibility risks.
9. Develop ESG, climate-risk, and sustainability performance frameworks.
10. Design risk management and scenario-analysis frameworks for renewable portfolios.
11. Assess M&A, asset acquisition, refinancing, repowering, and divestment opportunities.
12. Build portfolio KPIs, dashboards, financial models, and performance-monitoring systems.
13. Develop resilient portfolio strategies addressing energy transition, policy changes, supply-chain risks, and emerging technologies.

Target Audience

1. Renewable energy investment managers
2. Portfolio and asset managers
3. Energy project developers
4. Infrastructure and private-equity professionals
5. Utilities and electricity-market professionals
6. Corporate sustainability and ESG managers
7. Energy finance and risk professionals
8. Government, regulatory, and energy-policy professionals

Course Modules

Module 1: Renewable Energy Portfolio Strategy & Market Outlook

- Renewable portfolio construction and strategic positioning

- Solar PV, wind, hydro, geothermal, and emerging technologies
- Energy-transition investment trends and market drivers
- Portfolio objectives, investment mandates, and diversification
- **Case Study:** Designing a diversified renewable portfolio across solar, wind, and hydro assets

Module 2: Project Screening, Valuation & Investment Decision-Making

- Technical, commercial, financial, and regulatory due diligence
- Project pipeline assessment and investment screening
- LCOE, IRR, NPV, payback, and risk-adjusted return analysis
- Sensitivity and scenario analysis
- **Case Study:** Comparing three renewable projects and selecting the optimal investment portfolio

Module 3: Renewable Energy Finance, PPAs & Revenue Optimization

- Project finance structures and capital allocation
- Corporate and utility PPAs
- Merchant power-market exposure
- Revenue stacking and contracted-versus-merchant strategies
- **Case Study:** Optimizing revenues for a solar-plus-storage portfolio under different PPA structures

Module 4: Portfolio Risk Management & Energy Market Analytics

- Market, regulatory, technology, operational, and counterparty risk
- Price volatility and curtailment risk
- Scenario planning and stress testing
- Portfolio diversification and downside protection
- **Case Study:** Stress-testing a wind and solar portfolio against electricity-price volatility and grid congestion

Module 5: Battery Storage, Hybrid Assets & Grid Integration

- Battery energy storage system economics
- Solar-plus-storage and wind-plus-storage models
- Grid flexibility and ancillary services
- Curtailment reduction and energy arbitrage
- **Case Study:** Adding battery storage to a renewable portfolio to improve flexibility and revenue resilience

Module 6: Digital Transformation, AI & Smart Portfolio Management

- AI-powered forecasting and predictive analytics
- Digital twins and real-time asset monitoring
- Automated performance analytics and portfolio dashboards
- Data-driven predictive maintenance
- **Case Study:** Using AI-based forecasting to improve renewable generation and portfolio-performance decisions

Module 7: ESG, Climate Risk & Sustainable Investment

- ESG integration into renewable investment decisions
- Climate-risk assessment and resilience planning
- Carbon accounting and sustainability KPIs

- Green finance and transition-finance principles
- **Case Study:** Building an ESG scorecard for a multinational renewable energy portfolio

Module 8: M&A, Portfolio Optimization & Future Energy Strategies

- Renewable asset acquisitions and divestments
- Repowering and lifecycle optimization
- Portfolio rebalancing and capital recycling
- Emerging opportunities in VPPs, distributed energy, and 24/7 clean power
- **Case Study:** Rebalancing an underperforming renewable portfolio through acquisition, storage integration, and selective divestment

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

Ready to enroll or request a customized program? Book online or contact us:

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