Renewable Energy EPC 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 EPC Management Training Course is designed to equip professionals with practical capabilities to plan, manage, execute, and control Engineering, Procurement and Construction (EPC) projects across the rapidly evolving renewable energy sector. The course addresses the complete project lifecycle from feasibility, engineering and design through procurement, construction, commissioning, handover, and performance management with emphasis on solar PV, wind energy, battery energy storage systems (BESS), hybrid renewable projects, grid integration, and sustainable infrastructure. Current industry priorities increasingly include AI-enabled project management, digital transformation, supply-chain resilience, energy storage, cost discipline, contract management, and accelerated project delivery.

Participants will develop an integrated understanding of EPC strategy, project controls, CAPEX management, procurement, vendor management, construction management, HSE, quality assurance, risk management, stakeholder engagement, commissioning, and commercial performance. Through practical exercises and case studies, the training connects technical knowledge with real-world project decisions, helping participants manage schedule pressure, procurement constraints, contractual interfaces, cost overruns, design changes, and construction risks. The program also incorporates emerging practices such as BIM, cloud-based collaboration, digital twins, predictive analytics, AI, drones/LiDAR, data-driven decision-making, and solar-plus-storage project delivery.

Programme Curriculum

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5 days

Course Objectives

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

1. Master Renewable Energy EPC Lifecycle Management from development through commissioning and handover.
2. Develop effective EPC Project Execution Strategies aligned with commercial and technical objectives.
3. Apply advanced Project Planning, Scheduling and Project Controls techniques.
4. Strengthen CAPEX, Cost Control and Earned Value Management capabilities.
5. Develop robust Strategic Procurement and Supply Chain Resilience strategies.
6. Evaluate EPC Contracts, Risk Allocation, Claims and Change Management requirements.
7. Manage engineering deliverables using BIM, digital engineering and integrated design coordination.
8. Apply effective Construction Management, Site Management and HSE Leadership practices.
9. Implement Quality Assurance, Quality Control and Inspection & Test Plans (ITPs).
10. Manage Grid Connection, Commissioning, Testing and Performance Guarantees.
11. Use AI, digital platforms, analytics and digital-twin technologies to improve project visibility and decision-making.
12. Strengthen Stakeholder, Contractor, Vendor and Interface Management.
13. Optimize renewable EPC delivery for cost, schedule, quality, safety, reliability and long-term asset performance.

Target Audience

1. Renewable Energy Project Managers and EPC Managers
2. Engineering Managers, Project Engineers and Design Engineers
3. Procurement, Contracts and Supply Chain Professionals
4. Construction Managers, Site Managers and Supervisors
5. Project Controls, Planning, Cost and Commercial Managers
6. Owners, Developers, Investors and Asset Management Professionals
7. O&M, Commissioning, QA/QC and HSE Professionals
8. Consultants, Contractors, EPC/EPCM/PMC Professionals and Renewable Energy Entrepreneurs

Course Modules

Module 1: Renewable Energy EPC Fundamentals & Project Lifecycle

- **EPC vs EPCM vs PMC vs Split-Scope** delivery models and responsibility matrices.
- Renewable project lifecycle
- Solar PV, wind, BESS and hybrid-project EPC characteristics.
- **Project governance, stage gates, KPIs and execution strategy**.
- **Case Study:** Developing an EPC execution strategy for a utility-scale solar-plus-BESS project.

Module 2: Engineering Management, Design Coordination & Digital Engineering

- Engineering deliverables, design basis, specifications and **design maturity management**.
- **BIM, 3D coordination, digital engineering and document control**.
- Design optimization, constructability reviews and **value engineering**.
- Managing engineering changes, RFIs, technical queries and multidisciplinary interfaces.
- **Case Study:** Resolving a design coordination issue between civil, electrical and BESS engineering teams.

Module 3: Procurement, Contracting & Supply Chain Management

- **Strategic sourcing, vendor qualification and procurement planning**.
- Long-lead equipment
- Supplier expediting, inspection, logistics and **supply-chain risk management**.
- EPC contracting strategies, commercial terms, warranties, liquidated damages and performance guarantees.
- **Case Study:** Managing a delayed transformer and developing an alternative procurement recovery plan.

Module 4: Project Planning, Scheduling, Cost & Performance Controls

- Developing **WBS, CBS, baseline schedules and integrated master schedules**.
- Critical Path Method, resource loading, progress measurement and schedule recovery.
- **CAPEX control, forecasting, cash-flow management and earned value management**
- Project dashboards, KPIs, productivity measurement and **data-driven project controls**.
- **Case Study:** Recovering a solar EPC project experiencing schedule slippage and cost escalation.

Module 5: Construction Management, HSE & Quality Assurance

- Site mobilization, construction sequencing, subcontractor management and productivity.
- **HSE leadership, risk assessment, permit-to-work and construction safety management**
- QA/QC systems, inspection plans, material traceability and non-conformance management.
- Civil works, mounting structures, electrical installation, cabling and equipment commissioning interfaces.
- **Case Study:** Managing quality and construction risks during a large-scale solar farm installation.

Module 6: Risk, Contracts, Claims & Interface Management

- **Enterprise project risk management** and quantitative/qualitative risk assessment.
- Contract administration, notices, variations, extensions of time and claims.
- **Interface management** between owner, EPC contractor, suppliers, grid operator and subcontractors.
- Change control, dispute avoidance and collaborative contracting.
- **Case Study:** Resolving an interface dispute involving grid-connection delays and EPC contractual obligations.

Module 7: Commissioning, Grid Integration & Project Handover

- Pre-commissioning, commissioning, testing and **energization planning**.
- Solar PV, wind and BESS commissioning requirements.
- **Grid compliance, performance testing, reliability verification and acceptance criteria**
- Punch-list management, documentation, as-built records and operational readiness.
- **Case Study:** Coordinating commissioning and grid synchronization for a solar-plus-storage facility.

Module 8: AI, Digital Transformation & Advanced Renewable EPC Management

- **AI-powered project controls, predictive analytics and automated reporting**
- Digital twins, cloud collaboration, drones/LiDAR and remote construction monitoring.
- **Predictive maintenance, asset performance analytics and data-driven decision-making**
- Renewable EPC optimization for **energy storage, hybrid systems, smart grids and 24/7 clean power**.
- **Case Study:** Using digital dashboards and predictive analytics to identify schedule, procurement and performance risks before they impact COD.

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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Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com