Utility Storage Project 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

Utility Storage Project Management Training Course equips energy professionals with the strategic, technical, commercial, and leadership capabilities required to successfully plan and deliver modern grid-scale battery energy storage systems (BESS) and other utility-scale storage projects. As power systems accelerate toward renewable energy integration, grid flexibility, energy resilience, decarbonization, and digital transformation, utility storage has become a critical infrastructure investment. This course explores the complete project lifecycle from feasibility studies, technology selection, business cases, permitting, procurement, financing, engineering, and construction through commissioning, operations, performance optimization, and asset management.

Participants develop practical project-management skills aligned with emerging clean energy, energy transition, smart grid, grid modernization, battery lifecycle management, project finance, risk management, ESG, and energy-market requirements. Through industry-focused case studies, scenario-based exercises, project planning activities, and commercial decision-making simulations, learners gain the ability to manage stakeholders, control schedules and budgets, evaluate project risks, coordinate EPC and OEM partners, and deliver utility storage assets safely, efficiently, and commercially. The course is designed for professionals seeking to strengthen their capability in the rapidly evolving utility-scale energy storage ecosystem.

Programme Curriculum

Utility Storage Project Management Training Course

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Course Objectives

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

1. Develop end-to-end utility storage project strategies aligned with energy-transition and grid-modernization objectives.
2. Evaluate BESS technologies, battery chemistries, system architectures, and technology roadmaps for utility applications.
3. Conduct project feasibility, techno-economic analysis, and investment screening for storage projects.
4. Build robust business cases, financial models, revenue-stack assessments, and project-finance strategies.
5. Apply advanced project planning, scheduling, cost control, and earned-value management techniques.
6. Develop effective procurement, tendering, EPC contracting, and OEM management strategies.
7. Identify and mitigate technical, commercial, safety, regulatory, supply-chain, and execution risks.
8. Manage permitting, environmental, ESG, compliance, and stakeholder-engagement requirements.
9. Coordinate engineering disciplines across grid interconnection, electrical systems, civil works, controls, SCADA, and communications.
10. Apply battery safety, fire protection, emergency response, and operational risk-management principles.
11. Establish effective commissioning, acceptance testing, performance guarantees, and handover processes.
12. Optimize storage assets using digital monitoring, predictive analytics, AI-enabled optimization, and performance management concepts.
13. Lead multidisciplinary teams toward safe, on-time, cost-effective, resilient, and commercially successful project delivery.

Target Audience

1. Utility and power-generation professionals
2. Renewable energy and clean-energy project managers
3. Battery Energy Storage System (BESS) developers and owners
4. EPC, engineering, procurement, and construction professionals
5. Energy consultants and technical advisors

6. Project-finance, investment, and commercial professionals
7. Grid operators, transmission, and distribution professionals
8. Operations, asset-management, and energy-storage specialists

Course Modules

Module 1: Utility Storage Market & Project Fundamentals

- **Energy transition and grid-scale storage** trends
- Utility storage applications: capacity, ancillary services, arbitrage, and resilience
- BESS project lifecycle and key development gates
- Project stakeholders, governance structures, and delivery models
- **Case Study:** Development strategy for a 100 MW / 200 MWh grid-scale BESS

Module 2: Storage Technology & System Architecture

- Lithium-ion, LFP, flow batteries, and emerging storage technologies
- Battery racks, containers, PCS, transformers, EMS, and SCADA
- **AC-coupled vs. DC-coupled** system architectures
- Technology selection, degradation, warranties, and lifecycle considerations
- **Case Study:** Selecting the optimal BESS technology for a renewable-energy hybrid project

Module 3: Feasibility, Business Case & Project Finance

- Site screening, grid constraints, resource assessment, and feasibility studies
- **Techno-economic analysis and levelized cost considerations**
- Revenue stacking and electricity-market opportunities
- CAPEX, OPEX, lifecycle costs, financing structures, and sensitivity analysis
- **Case Study:** Investment assessment for a merchant battery storage project

Module 4: Project Development, Permitting & Stakeholder Management

- Development roadmaps, milestones, stage-gate processes, and project governance
- Grid interconnection studies and utility requirements
- Environmental, land-use, permitting, and **ESG compliance**
- Community engagement and stakeholder communication
- **Case Study:** Resolving permitting and grid-interconnection challenges on a utility BESS project

Module 5: Procurement, Contracting & Supply Chain

- BESS procurement strategies and technical specifications
- RFP development, bid evaluation, and supplier due diligence
- **EPC, EPCM, LTSA, OEM, and performance-guarantee contracts**
- Global battery supply-chain risks, logistics, lead times, and quality assurance
- **Case Study:** Comparing competing EPC/OEM bids for a 250 MWh storage project

Module 6: Engineering, Construction & Project Controls

- Engineering coordination across electrical, civil, controls, and communications systems
- Construction planning, scheduling, resource allocation, and site management
- **Cost control, earned-value management, change management, and claims**
- Quality assurance, quality control, HSE, and construction risk management

- **Case Study:** Recovering schedule and controlling cost overruns on a delayed BESS project

Module 7: Commissioning, Safety & Performance Management

- Commissioning plans, factory acceptance testing, and site acceptance testing
- Battery safety, thermal-management considerations, fire protection, and emergency planning
- Performance testing, availability, efficiency, degradation, and warranty metrics
- SCADA, EMS, cybersecurity, monitoring, and operational readiness
- **Case Study:** Managing commissioning defects and performance shortfalls before commercial operation

Module 8: Operations, Optimization & Future-Proofing

- Asset management, preventive maintenance, lifecycle planning, and reliability
- **AI-enabled analytics, predictive maintenance, and digital twins**
- Energy-market optimization and automated dispatch strategies
- Battery degradation management, augmentation, repowering, recycling, and end-of-life planning
- **Case Study:** Optimizing a mature BESS portfolio using predictive analytics and revenue stacking

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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