Battery Storage Project Development 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

Battery Storage Project Development Training Course is designed to equip professionals with cutting-edge knowledge in energy storage systems (ESS), grid-scale battery deployment, renewable energy integration, and sustainable power solutions. As global demand accelerates for clean energy transition, smart grids, and decarbonization strategies, battery storage has become a cornerstone of modern energy infrastructure. This course provides participants with deep insights into lithium-ion technologies, grid resilience, energy arbitrage, and utility-scale storage projects, ensuring they stay competitive in a rapidly evolving market.

Through a blend of technical expertise, financial modeling, regulatory frameworks, and real-world case studies, participants will gain hands-on experience in developing and managing battery storage projects from concept to commissioning. The training emphasizes bankable project design, ESG compliance, digital energy solutions, and advanced energy analytics, empowering learners to drive innovation in renewable energy storage, microgrids, and hybrid power systems. By the end of the course, participants will be prepared to lead high-impact energy storage projects aligned with global sustainability goals.

Programme Curriculum

Battery Storage Project Development Training Course

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Course Duration

5 days

Course Objectives

1. Understand battery energy storage systems (BESS) fundamentals and technologies
2. Analyze grid integration and renewable energy optimization strategies
3. Develop skills in project feasibility and techno-economic analysis
4. Apply financial modeling and investment strategies for energy storage
5. Navigate regulatory frameworks and energy policies
6. Design utility-scale and distributed storage solutions
7. Evaluate battery lifecycle management and sustainability metrics
8. Implement risk assessment and mitigation strategies
9. Leverage digital energy platforms and smart grid technologies
10. Optimize energy trading, arbitrage, and demand response
11. Integrate AI-driven energy forecasting and analytics
12. Develop bankable project proposals and business cases
13. Enhance project management and stakeholder engagement skills

Target Audience

1. Renewable energy project developers
2. Electrical and energy engineers
3. Utility and grid operators
4. Energy consultants and analysts
5. Government and regulatory professionals
6. Investors and financial institutions
7. Sustainability and ESG specialists
8. EPC contractors and technical managers

Course Modules

Module 1: Introduction to Battery Storage Systems

- Overview of BESS technologies
- Types of batteries (Li-ion, flow, solid-state)
- Market trends and global adoption
- Key components and architecture
- Case Study: Tesla Megapack deployment

Module 2: Energy Storage Technologies

- Advanced battery chemistries
- Performance metrics and efficiency

- Safety standards and compliance
- Innovation in storage technologies
- Case Study: Solid-state battery pilots

Module 3: Grid Integration and Smart Grids

- Grid stability and frequency regulation
- Renewable energy integration
- Smart grid infrastructure
- Load balancing techniques
- Case Study: California grid storage projects

Module 4: Project Feasibility Analysis

- Site selection and resource assessment
- Technical feasibility studies
- Economic viability analysis
- Risk identification
- Case Study: Utility-scale BESS feasibility

Module 5: Financial Modeling and Investment

- CAPEX and OPEX analysis
- ROI and IRR calculations
- Financing structures
- Power purchase agreements (PPAs)
- Case Study: Investment in hybrid solar-storage

Module 6: Regulatory and Policy Frameworks

- Energy policies and incentives
- Regulatory compliance
- Grid codes and standards
- Environmental regulations
- Case Study: EU energy storage policies

Module 7: System Design and Engineering

- System sizing and configuration
- Electrical design considerations
- Integration with renewables
- Performance optimization
- Case Study: Microgrid battery design

Module 8: Construction and Commissioning

- Project execution planning
- Procurement strategies
- Installation processes
- Testing and commissioning
- Case Study: Large-scale BESS deployment

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

Start Date	End Date	Location	Price
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

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

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