ENERGY FINANCE



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TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
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Introduction

Energy Finance Training Course builds the financing and appraisal capability that energy analysts, project financiers, and treasury professionals need to fund capital-intensive energy assets. Energy projects demand large upfront investment, carry long payback periods, and depend on commodity prices, regulatory frameworks, and offtake agreements. Weak financial structuring there produces projects that cannot reach financial close, or that fail once prices move. This course develops the discipline that prevents those outcomes. It covers energy value chains, project finance structures, and capital budgeting. Furthermore, it applies renewable and conventional energy economics, funding sources, and risk allocation. In addition, it develops power purchase agreements, hedging, and financial modelling. As a result, participants finance energy assets with confidence.

Energy Finance Course Objectives

- Explain energy value chains and their financial characteristics.
- Apply capital budgeting to energy investment decisions.
- Apply NPV, IRR, and LCOE analysis to energy projects.
- Design project finance structures and special purpose vehicles.
- Apply debt sizing, gearing, and coverage ratio calculations.
- Evaluate funding sources: debt, equity, and green finance.
- Apply power purchase agreements and offtake structures.
- Apply risk allocation and mitigation across project parties.
- Apply commodity and interest rate hedging to energy exposures.
- Build financial models, sensitivity cases, and financing plans.

Course Methodology

- Interactive lectures with real energy project and financing cases.

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- Project finance structuring and modelling workshops.
- LCOE, coverage ratio, and debt sizing exercises.
- PPA, hedging, and risk allocation practice.
- Structured peer review with facilitator feedback on financing models.

Who Should Take This Course

- Project finance and structured finance professionals.
- Energy company finance and treasury staff.
- Investment analysts covering energy assets.
- Infrastructure and utilities finance managers.
- Banking professionals in energy lending.
- Consultants advising on energy transactions.

Energy Finance Course Outlines

Day 1: Energy Value Chains and Investment Context

- Energy value chains: upstream, midstream, power, and renewables.
- Capital intensity, asset life, and investment characteristics.
- Revenue drivers: prices, tariffs, and offtake volumes.
- Cost structures: capital, operating, and fuel costs.
- Regulatory frameworks and market design basics.
- Green finance and sustainability-linked funding trends.
- Case study: analysing the financial profile of an energy project.

Day 2: Capital Budgeting and Project Economics

- Time value of money and discount rate selection.
- NPV, IRR, and payback analysis for energy assets.
- Levelised cost of electricity and energy calculations.
- Incremental cash flow and relevant cost analysis.
- Sensitivity and scenario analysis on price and volume.
- Project ranking under capital constraints.
- Workshop: calculating LCOE and project returns.

Day 3: Project Finance Structuring

- Project finance principles and non-recourse lending.
- Special purpose vehicle design and ownership structures.
- Debt sizing, gearing, and debt service coverage ratios.
- Cash waterfall mechanics and reserve accounts.
- Security packages, covenants, and step-in rights.
- Financial close process and conditions precedent.
- Workshop: structuring a project finance package and sizing debt.

Day 4: Funding Sources and Contracts

- Senior debt, mezzanine, and equity funding structures.
- Export credit agencies and multilateral lenders.
- Islamic finance structures in energy projects.
- Power purchase agreements and offtake contract terms.
- Tariff structures, indexation, and escalation clauses.
- Concession agreements and government support mechanisms.
- Workshop: evaluating funding options and PPA terms.

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Day 5: Risk, Hedging, and Financial Modelling

- Risk identification and allocation across project parties.
- Commodity price, volume, and currency risk exposure.
- Interest rate and inflation risk management.
- Hedging instruments and derivative strategies.
- Financial model design, validation, and error checking.
- Sensitivity cases, downside testing, and financing plans.
- Course review, assessment, and action planning.

Conclusion

By successfully completing Energy Finance, participants will gain a thorough understanding of energy value chains and investment context, capital budgeting and project economics, project finance structuring, funding sources and contracts, and risk, hedging and financial modelling. They will also acquire practical skills in energy project economics and capital budgeting, project finance structuring and debt sizing, energy funding sources and power purchase agreement analysis, and energy risk, hedging and financial modelling. In addition, the course prepares them to finance energy assets with defensible structures and well-tested models. Gentex Training Center delivers this programme with a strong focus on applied energy finance and deal-ready modelling.

FAQs for Energy Finance course

Q1 What is the "Energy Finance" course about?

It is a five-day programme on financing energy assets and projects. It covers energy value chains, capital budgeting and project economics, project finance structuring, funding sources and contracts, and risk, hedging and financial modelling.

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Q2 What are the key benefits of the "Energy Finance" course?

Participants finance energy assets with stronger structures and models. The course improves project economics and LCOE analysis, sharpens debt sizing and coverage ratio work, strengthens project finance and SPV structuring, improves funding source and PPA evaluation, and raises hedging and model validation quality.

Q3 What skills will I gain from the "Energy Finance" course?

Participants gain energy project economics and capital budgeting, project finance structuring and debt sizing, energy funding sources and power purchase agreement analysis, and energy risk, hedging and financial modelling. These four skills cover the practical core of energy finance work.

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Q4 What tools, methods, or standards are covered in the "Energy Finance" course?

The course covers energy value chain analysis across upstream, midstream, power and renewables, capital intensity and asset life assessment, revenue driver analysis across prices, tariffs and offtake volumes, capital, operating and fuel cost structures, regulatory and market design frameworks, green finance and sustainability-linked funding, time value of money and discount rate selection, Net Present Value, internal rate of return and payback analysis, levelised cost of electricity calculation, incremental cash flow analysis, sensitivity and scenario testing, project ranking, project finance principles and non-recourse lending, special purpose vehicle design, debt sizing, gearing and debt service coverage ratios, cash waterfall mechanics and reserve accounts, security packages, covenants and step-in rights, financial close conditions precedent, senior debt, mezzanine and equity structures, export credit agency and multilateral lending, Islamic finance structures, power purchase agreement terms, tariff indexation and escalation clauses, concession agreements and government support mechanisms, risk allocation across project parties, commodity and currency risk exposure, interest rate and inflation risk management, hedging instruments and derivative strategies, financial model design, validation and error checking, and downside testing.

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Q5 How is the "Energy Finance" course applied in real-world practice?

Participants apply the methods to real and simulated energy projects. They assess project financial profiles, build capital budgeting models, calculate LCOE and project returns, design SPVs and ownership structures, size debt against coverage ratios, model cash waterfalls and reserves, evaluate senior debt and mezzanine options, review PPA and tariff terms, allocate risk between sponsors and lenders, structure commodity and interest rate hedges, build and validate financial models, and run downside cases and financing plans. Many leave with a project finance model template, an LCOE calculation workbook, and a financing plan structure ready to use.