Energy Investment Project Analysis and Planning Course

26 – 30 September 2027
Johannesburg

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Ref: 973_174193 **Date:** 26 – 30 September 2027 **Location:** Johannesburg **Fees:** 4500 Euro

Overview

Energy Investment Project Analysis and Planning Course is a one-week advanced course for developers, analysts, engineers, finance teams, and decision-makers who need an Energy Investment Decision File. Participants connect energy project analysis, investment planning, project cash flow, energy project risk, and investment appraisal to technical and delivery evidence. The course resolves gaps between engineering options and capital decisions through models, scenarios, stage gates, and committee briefs. Agile Leaders Training Center delivers this energy investment course.

Who Should Attend

- Teams responsible for screening energy opportunities and development pipelines
- Personnel responsible for project economics, financial models, and investment recommendations
- Engineering functions responsible for resource, demand, technology, and delivery assumptions
- Commercial teams responsible for contracts, revenue structures, and financing inputs
- Decision-makers responsible for capital allocation, risk acceptance, and stage-gate approvals

The course assumes participants interpret project estimates and spreadsheet outputs at work, while it leaves out specialist legal drafting and detailed engineering design.

Departments and Industries

The course applies investment analysis across energy technologies and organizations with different revenue, risk, and implementation structures.

- Project development, engineering, and capital planning in power and utilities
- Investment, finance, treasury, and commercial functions in energy businesses
- Strategy, sustainability, and portfolio teams in industrial organizations
- Infrastructure funds, lenders, advisory firms, and development institutions
- Public-sector planning and investment-governance functions

Learning Objectives

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

- Analyze demand, resource, technology, and delivery assumptions
- Build capital, operating, revenue, and project cash-flow models
- Apply financial and economic investment-appraisal methods
- Evaluate financing structures, contracts, and risk allocation
- Use scenarios and sensitivities to test decision resilience
- Prioritize stage-gate evidence and implementation actions

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Course Agenda

Day 1: Opportunity Screening and Project Logic

- Energy Opportunity Screening Scorecard for Strategic Fit
- Demand, Resource, and Capacity Evidence Map
- Technical Option Comparison Matrix for Energy Assets
- Project Boundary and Counterfactual Definition Method
- Stage-Gate Readiness Checklist for Development Decisions

Day 2: Cost, Revenue, and Cash-Flow Modelling

- CAPEX and OPEX Cost Breakdown Structure
- Production, Availability, and Degradation Assumption Sheet
- Tariff, Offtake, and Merchant Revenue Driver Model
- Construction and Operations Project Cash-Flow Timeline
- Working Capital, Tax, and Terminal-Value Assumption Register

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Day 3: Financial and Economic Appraisal

- Discounted Cash Flow Model for NPV and IRR
- Payback and Discounted Payback Decision Comparison
- Levelized Cost Logic for Technology Comparison
- Economic Cost-Benefit Framework for Externalities
- Financial versus Economic Appraisal Reconciliation

Day 4: Financing, Risk, and Bankability

- Debt and Equity Funding Structure Model
- Contract and Counterparty Risk Allocation Matrix
- Project Risk Register with Mitigation Ownership
- Sensitivity Tornado and Break-Even Threshold Analysis
- Scenario Model for Price, Cost, Delay, and Output Risk

Day 5: Investment Practice and Capstone

- Exercise on Opportunity Screening and Technical Comparison
- Exercise on Project Cash Flow and Appraisal Metrics
- Exercise on Financing Structure and Risk Allocation
- Exercise on Scenario Findings and Stage-Gate Recommendation
- Capstone Exercise: Energy Investment Decision File

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Practical Exercises

The course uses suggested activities that turn assumptions and analysis into traceable investment recommendations.

- Suggested activity: screen a portfolio of generation, efficiency, and infrastructure opportunities against defined criteria
- Suggested activity: build and audit a project cash-flow model with capital, operating, revenue, and financing assumptions
- Suggested activity: test value resilience through sensitivities, scenarios, break-even thresholds, and risk responses
- Suggested activity: present a stage-gate decision brief with evidence gaps and implementation conditions

FAQs

Who suits Energy Investment Project Analysis and Planning and what does it assume?

Developers, analysts, engineers, finance teams, and capital decision-makers suit the course. It assumes familiarity with project estimates and spreadsheet outputs, but it does not require participants to be specialist model auditors or design engineers.

How does energy investment analysis differ from general project management training?

Energy investment analysis tests technical assumptions, cash flows, economic value, financing capacity, contracts, and risk before capital approval. General project management training usually emphasizes delivery scope, schedules, resources, and stakeholder coordination after a project has been authorized.

Why should energy projects use both financial and economic appraisal?

Financial appraisal tests cash flows and returns from the project or investor perspective. Economic appraisal examines wider resource costs and benefits, including effects that market prices may not capture. Decision-makers use both views when their mandates require them.

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How does sensitivity analysis improve energy investment decisions?

Sensitivity analysis shows which assumptions most affect value and financing resilience. Testing price, output, capital cost, operating cost, delay, and discount-rate changes helps teams identify break-even points, mitigation priorities, and information that needs stronger evidence.

What makes an energy investment project ready for a stage-gate decision?

Stage-gate readiness depends on credible technical options, site and resource evidence, cost and schedule estimates, revenue logic, contracts, permits, financing assumptions, risks, scenarios, delivery plans, and clear conditions for the next commitment.

Conclusion

Participants take back an Energy Investment Decision File linking technical evidence, cash flows, appraisal results, financing choices, risks, and implementation conditions. The file changes disconnected assumptions into an auditable basis for capital decisions. Teams can update it as development evidence improves and use it to frame stage-gate recommendations.