GTC Transforming Emerging Economies

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Financial Modelling for Power Sector Projects Using Excel

COURSE OVERVIEW

This course provides an insight into the understanding of financial modelling and valuation techniques tailored specifically for power sector projects. The curriculum blends real-world case studies from both renewable and conventional energy projects with hands-on Excel modelling practice. Participants will learn how to design dynamic and robust Excel-based financial models that capture the unique technical, operational, and financial characteristics of power projects. They will also build step-by-step financial models in Excel, incorporating assumptions for project costs, tariffs, capital structures, loan schedules, depreciation, taxes, and sensitivity analysis.

WHO SHOULD ATTEND?

This course is designed for energy finance professionals, project developers, investment analysts, engineers, consultants, and policymakers involved in power sector projects. It is especially relevant for professionals working in utilities, IPPs, financial institutions, government agencies, and energy investment firms who want to strengthen their ability to assess project feasibility and financial viability. Basic knowledge of Excel and financial concepts is beneficial, but the course is designed to guide participants progressively from foundational to advanced modelling skills.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Develop dynamic financial models for power generation, transmission, and distribution projects using Excel.
- Understand the structure and financing mechanisms of power sector investments.
- Build complete project cash flow statements incorporating revenue, cost, and financing assumptions.
- Model different project financing structures, including debt-equity ratios and loan repayment schedules.
- Perform sensitivity and scenario analyses to test project robustness under uncertainty.
- Evaluate tariff structures, power purchase agreements (PPAs), and regulatory impacts on financial outcomes.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- The fundamentals of project finance and cash flow modelling for power sector projects.
- How to structure a financial model in Excel from scratch using logical and transparent design principles.
- The linkage between technical assumptions (e.g., capacity, efficiency, outages) and financial performance.
- How to calculate and interpret key metrics such as project IRR, equity IRR, NPV, and DSCR.
- The structure and components of a Power Purchase Agreement (PPA) and its financial implications.
- How to model and assess renewable energy projects (solar, wind, hydro) versus conventional power plants.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate.
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded.