

Training workshop on “Financial modeling for Renewable Energy Projects”		
Training workshop	5-7 October, 2026	Colombo, Sri Lanka

Introduction

Sustainable energy development implies an effective use of economic, human, technological, and renewable natural resources. Financially viable and environmentally sound exploitation of Renewable Energy (RE) is the need of the day for a sustainable future. RE projects such as solar, wind and hydro do not emit pollution into the environment. However, they require significant amount of capital cost, possess considerable risk and incur operational costs. Therefore, the financial modeling of these project is to be carried out to evaluate the project's profitability and cost-effectiveness. The results of the financial model are also used to compare alternative projects to select the most suitable one for implementation.

SAARC region has vast potential for untapped renewable energy, and India alone has a plan to develop 500 GW from renewable energy by 2030. Similarly, Bangladesh is in the process of adding onshore wind power in its electricity mix. Pakistan, Sri Lanka, and Maldives are considering expanding the solar power contribution in their renewable energy mix. But these renewable projects require a significant amount of investment where the investor looks primarily on the renewable project's cash flow for debt repayment. This necessitates a detailed analysis of the project's cash flows tested under a range of assumptions and scenarios to establish the confidence of lenders, and equity providers to fund the project.

Objectives

The overall objective of this event is to acquire knowledge of financial modeling for RE Projects and to develop and analyze the financing options for renewable energy projects. This event will help the participants to make financing decision on renewable projects.

Major Aspects /Topics to be covered during the training

The following aspects will be covered in the event (but not limited to):

- i. Basic of Renewable energy development: Solar, wind, small hydropower
- ii. Risk assumed and expected return of RE
- iii. Financing terms used in RE: Capital cost (plant and machinery, balance of system, project development and management), Land and Cost of Land (capitalize the land cost or take it as O&M cost), Debt, Equity, Drawdown (Equity and Debt), debt tenure, grace period, construction period, operating cost, working capital, financing cost, interest (during and after construction), insurance (during and after construction), depreciation, tax, Return on investment, return on equity during construction, equity redemption, etc.
- iv. Tariff model (tariff structure (energy/capacity), fixed and variable O&M costs, insurance, ROE, ROEDC, debt service (monthly/quarterly/biannual/annual),
- v. Types of finance and sources: Equity, Debt, Grants, Insurance, Guarantees
- vi. Assumption and Basic of modeling of capacity, plant life, land availability, capacity utilization factor, gross vs net generation (wake losses, shear effect, shading, resource direction, technical

- losses, etc.) plant load, plant availability, RE resource variability, electricity generation (gross and net), electricity sales, EPA/PPA terms (Project Development, Plant Construction, Construction of Interconnection Facilities, Testing and Commissioning, SCADA, Dispatch Instructions, Grid Code Compliance, Carbon Emissions Reduction, Insurance, Term, Tariffs, Metering, Billings and Payments, Taxes and Liabilities, Government Guarantees (Sovereign/Financial, etc.), Event of Defaults and Remedies, Security, Force Majeure, Delayed Payments, Dispute Resolution, Arbitration, General/Miscellaneous, etc.
- vii. Building of project finance model from scratch in Excel for wind, solar and small hydro projects
 - viii. Case study of financial management of RE projects
 - ix. Sizing of debt based on multiple covenants for wind and solar projects
 - x. Consideration of multiple probability exceedance generation profiles (P50, P99, etc.) into the financial model
 - xi. Development of cash flow statements: income statement, balance sheet, financial and economic analyses

Potential Professional Resource

The resource person(s) from regional/ international market shall be engaged for a training workshop. They shall conduct the training through presentations, group discussions, and experiences, and respond to questions by the participants.

Venue of the Training workshop

The proposed training workshop will be organized for 3-days in Hotel Galle Face, Colombo, Sri Lanka, from 5 to 7 October, 2026. It will be attended by 10-20 delegates from the host Member State (Sri Lanka) and 2 delegates from the rest of the Member States.

Contact

You may contact the following SEC official for any query or clarification concerning the training workshop:

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