ECONOMIC AND FINANCIAL ANALYSIS OF DECENTRALIZED RURAL ELECTRIFICATION PROJECTS

ECO01 ■ Tools/Methodology/Professions

DURATION

3 days

TARGET AUDIENCE

Ministries in charge of energy

Rural electrification agencies

National utilities

Engineering firms

Engineering school and training institutes

Electric systems operators

A FEW REFERENCES

CLUB-ER

USED TOOLS

RETScreen

OBJECTIVES

This course enables participants to master economic and financial analysis as a tool to facilitate decision-making at the various stages of a decentralized rural electrification (DRE) project: Planning/Pre-feasibility study (summary draft) / Feasibility study (detailed draft). Using appropriate tools and methods, participants will learn to address the following issues: How to choose between several DRE projects? What will be the production cost per kWh? From an economic standpoint, what is the benefit of investing in renewable energy production projects? What is the profitability for the developer of a DRE project? How to ensure optimal sizing ?

TRAINING PROGRAMME

1. Principles and key steps in economic and financial analysis

Presentation of the decision-making aid tool at the various stages of progress

- ♦ Planning
- ♦ Pre-feasibility study (summary draft)
- ♦ Feasibility (detailed draft)

Review of key concepts : update, depreciation…

2. Methods and tools for economic and financial analysis

Configuring a model and enunciating assumptions

Assessment criteria for investment projects: indicator and ratio reading and analysis

- ♦ Net Present Value (NPV), Internal Rate of Return (IRR) and payback time
- ♦ Economic profitability vs investor profitability

3. Sensitivity analysis / risk assessment

Assessing sensitive parameters and assumptions in the development of decentralized systems

- ♦ Types of load curves
- ♦ Demand trends
- ♦ Characterization of technologies (hydro, biomass, diesel, etc.)
- ♦ Profitability and risk for the investor

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