Regional Workshop on:
« Developing a Regional Energy Efficiency Investment Pipeline »

Detailed Presentation of the Guidebook and Methodology

19-20 June 2014
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- Required project development and implementation steps
- Preparing a business plan
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Why this guidebook?

- A basic tool
- To support local project developers to prepare energy efficiency projects and present them for financing request.
- It provides guides for project identification and feasibility studies that can meet the requirements of potential financing institutions and related instruments.
Required project development and implementation steps
Required project development and implementation steps

**Step 1: Project identification**

1- **Sources of idea**
   - Energy audits
   - Benchmark with similar projects
   - National programs of energy efficiency
   - Existing studies...

2- **What to pre-assess?**
   - Regulatory and normative requirements
   - Initial analysis of the institutional and political support to the project
   - Technical and financial feasibility

3- **Financial resources**
   - Do I have the required equities?
   - Are there any sources of financial support?
   - What are the best options for other sources?
Required project development and implementation steps
Step 1: Project identification

Project Note Identification
- Brief presentation of the developer
- Brief description of the project
- Compliance with the national context and the local regulation
- Key risks and their mitigation
- Investment cost including project preparation costs
- Operation cost
- Energy saving or energy output assessment
- Revenues or energy bill saving
- Outline of the financing scheme
Required project development and implementation steps

Step 2: Project development

1- Project manager
- Good managerial skill and capacity of communication with technical experts

2- Specialized experts
- Technical, financial, legal, etc.
- On the base of ToRs and agreements

3- Technical feasibility study
- Baseline situation analysis
- Optimal technical options to save energy
- Expected energy saving, investment and operations costs
- Tender documents for material and contractors

4- Financial feasibility study
- Simulation of the business plan of the EE activity
- Financial scheme
- Profitability indicators
- Risks and sensitivity analysis

Development:
- Appointment of a project manager
- Recruitment of specialized experts for the project development
- Technical feasibility study
- Financial feasibility study
- Feasibility studies
  - Business Plan
  - Tendering documents
  - List of suppliers
Required project development and implementation steps
Step 2: Project development

Project feasibility documents
- Document on the detailed technical feasibility study
- A detailed business plan with a clear financial analysis of project including:
  - Investment costs,
  - Proposed financing scheme
  - Robust evaluation of the profitability of the project
  - Capacity to reimburse the equity and the loans.
- Detailed tendering documents for the services and the materiel required for the project implementation
- Identification of the best potential services and equipment’s suppliers
Required project development and implementation steps

Step 3: Project Financing

1- Provide and secure adequate equity
   - Self equity
   - Capital venture, capital Risks...

2- Understand and analyze the financing terms
   - Loans providers
   - Equities providers

3- Prepare and negotiate term sheets and draft contracts
   - Role of the shareholders in the decision making
   - Guarantee required by the banks for the loans
   - Interest rate, duration and grace period for the loan
   - Required profitability and exit conditions for the equity providers

4- Negotiate and sign the legal agreements
   - To be assisted by the legal advisor
Required project development and implementation steps

Step 4: Project Implementation

1- Works supervisor designation
- Coordinate and supervise the technical and financial implementation phase
- He should have the minimum technical expertise to be able to communicate and follow up the contractors interventions
- He can be the project manager if he have the required competences

2- Implementation monitoring
- Establishment of an implementation planning
- Organise, provide and ensure appropriate methods for the MRV of the project

3- Procurement
- Turnkey procurement
- Procurement by lot, or
- ESCOs approach
Required project development and implementation steps

Step 5: Project Operation

1- Defining the rules of operation and allocate responsibilities between the actors
   - Operation manual
   - Responsibilities, etc.

2- Creating an operating team
   - Internal team (needs for training)
   - Outsources operation on the base of operation contract

3- Agree and implement a long term strategy for operating the project
   - Replacement of the equipments
   - Exit strategy, etc.

4- Ensure the day to day operation and maintenance of the system
   - Control mechanism
   - Reporting…
Required project development and implementation steps

Step 6: Measurement, Reporting and Verification

1- Why MRV energy saving?
- Public incentive programs require MRV to verify project savings
- Some financing sources require MRV
- To adjust the project in case of saving lower than expected
- Energy performance contract bases project (e.g., ESCO)

2- How determining Energy Saving?
- “Deemed savings” approach
- Engineering calculations (or modelling)
- Energy consumption measurement.

3- How to report?
- Description of analysis methodology used to calculate savings.
- Assumptions and sources of data used for calculations
- Equations and technical details of the calculations
- Energy tariffs used to calculate saving revenues
- Expected annual savings....
PREPARING A BUSINESS PLAN

Description of the developer profile
• The developer presentation activity including the services and products marketed
• The historical data on its activity development
• General business strategy and future development of the activity
• The experience and the skinless of the management staff
• The structure of capital and major shareholder
• Presentation of the market and the position of the company regarding to competition
• Financial situation of the developer and its assets based on the certified financial statements

Summary of the business plan
• What are the main features of the project
• How the project meets the developer needs
• The cost of the project and its financial scheme
• The profitability of the project and the likely benefits that will provide
PREPARING A BUSINESS PLAN

- Project description
  - Project components
  - The implementation planning of the project
  - Who and how the implementation will be made
  - The strategy for the project operation and the means to be provided

- Financial and economic analysis
  - The investment cost details by component
  - The financial scheme of the project
  - The terms of the debts
  - The financial profitability by presenting the main profitability ratios. Eventually a benchmark analysis can be done comparing to alternative projects.
  - The other impacts of the project such as job creation, local pollution reduction, CO2 emission reduction, etc.
PREPARING A BUSINESS PLAN

- The project solvability
  - Forecast of the cash flows of the project during the loan period.
  - Check the capacity of reimbursement of loans

- Sensitivity analysis
  - Sensitivity of the profitability ratio to main assumptions of the business plan

- Risks’ mitigation
  - Technical Risks
  - Commercial Risks, etc.
PROFITABILITY CALCULATION

- Some basic concepts
  - Inflation
  - Discounting
  - Discount rate
  - Weighted Average Cost of Capital

- Profitability indicators
  - The Net Present Value (NPV)
  - The payback period
  - The Internal Rate of Return (IRR)
  - The Profitability Index (PI)

- Conditions for profitability
  - Net present Value > 0
  - Simple Payback Period < 1/Ka(t,n)
  - Discounted Payback Period < n (economic observation period)
  - Internal Rate of Return of the project > WACC
  - Profitability Index > 0

Simple Calculation tool is provided
ENERVONRMENTAL AND OTHER BENEFITS EVALUATION

- **Energy saving**
  - Final energy saving
  - The primary energy saving

- **Socio-economic impacts**
  - Energy bill reduction
  - Energy subsidy saving
  - Job creation

- **CO2 emissions mitigation**
FINANCIAL INSTRUMENTS FOR ENERGY EFFICIENCY PROJECTS

- Equity financing
- Third party financing
- Leasing
- Project financing
- Vendor financing (equipment supplier/vendor credit)
- Mezzanine financing (subordinated debt finance)
CRITERIA AND REQUIREMENTS OF FINANCIAL INSTITUTIONS

- Project documentations required by the financial institutions
  - Letter of Intent
  - Financial Information on the Applicant
  - Project documents

- What the financial institution want to examine? : Creditworthiness appraisal
  - Analysis process
  - Components of the credit analysis

- What financial institution do not like: Early Warning Signs of Financial Distress
  - Debt
  - Balance sheet and income statements
  - Cash Flow
Thanks