EFIX-Toolbox: Manual for self-directed use

What is in the Toolbox?

The E-FIX toolbox is collection of practical tools innovative sustainable energy financing mechanisms with the goal to enable energy service providers, investors and project owners/developers to prepare the financing of sustainable energy projects.

The Toolbox will support current and future E-FIX Ambassadors as well as project developers allowing them to:

• identify investment needs in their region/area of activity considering existing financing practices as well as complementing support mechanisms,

• evaluate the financial feasibility of energy projects using a catalogue of standardized evaluation and quality criteria,

• assess barriers with regard to innovative financing mechanisms in the given regulatory framework and provide counter measures,

• match energy project investments with innovative financing mechanisms considering high investment security for investors and low capital costs for project owners.

In this manual, you can find descriptions of the materials included in the Toolbox and how they are intended to be used.

1. Catalogue of Evaluation Methods and Catalogue of Evaluation Methods Guide

The Catalogue is the core technical component of the curriculum. It serves as a basic introduction to financing and energy efficiency projects. As such, it deals with relatively basic financial concepts. As detailed in the EFIX partner agreement. It serves as "a compilation of evaluation methods and feasibility criteria for energy investments the catalogue will consider territorial differences in investment costs, energy prices and current capital costs and analyze the respective influence on financing options".

Given the importance of the Catalogue to the training curriculum, the supplementary Catalogue Guide delves deeper into some of the concepts shown in the Catalogue. This guide is meant to be used by the trainers, not directly distributed to the participants of the trainings. Additionally, the Guide provides a detailed walkthrough of the practical component of the Catalogue. This includes recommended tools to solve the problems and different approaches to the solutions.

Core characteristics of the module	
What this module is:	• An energy technology-specific compilation of evaluation and feasibility criteria for energy investments • A tool to enable standardised and systematic evaluation of potential energy projects • Able to consider territorial differences in investment cost, energy prices, capital cost and influence on financing options • Hands-on and suitable for capacity-building initiatives
What this module is not:	• An exhaustive and complete list including all existing evaluation methods • A scientific study comparing different evaluation methods and proposing "one best" criterion • Applicable to all countries without reflection of local framework conditions • A blueprint for analysing EE projects

Breakdown and subtopics:

1. Introduction: why is there a need for evaluation of EE investments
2. Setting the baseline: prerequisites for the correct evaluation of EE investments
3. Overview of different types of evaluation mechanisms and criteria
    a. Payback period
    b. NPV
    c. IRR
    d. Emission reduction
    e. LCOE
4. Country-specific differences and particularities
5. Real-life computation example
6. Helpful resources

2. Training Curriculum

The purpose of the training curriculum is to provide introductory-level information to trainees on diverse topics relating to energy efficiency and financing. The general approach to the materials of the training curriculum is to include a theoretical introduction to build a knowledge base, followed by a practical component (consisting of cases, applied exercises, examples) to reinforce said knowledge base. Each session is constructed to have a theoretical part and a practical component to reinforce the important. Therefore, each module consists of two sub-modules. Each sub-module provides materials that should be covered in approximately 2 hours. Hence, each module lasts approximately 4 hours.

The target participants of the trainings vary significantly. They vary in area and level of expertise, as well as geographical location. This affects the topics of interest and also the depth of said topics. We tackle this by designing the materials to be modular. Since each of the modules consists of a theoretical part that introduces important concepts followed by an application component, they do not need to be taught in a specific sequence. Moreover, not all of the financing mechanisms are relevant for every country. Therefore, not all of the materials of the curriculum will be relevant for every training session. It is the trainer's responsibility to identify the relevant materials and to adapt them to be relevant for their specific audience.

These two aforementioned features of the curriculum, maintain the uniformity of quality and training approach, while providing sufficient flexibility for the trainers to deliver relevant content to the varying stakeholders.

The training curriculum is composed of the following:

- Didactics and how to engage an audience (introductory teaching component)
- Crowdfunding Specialist Module
- Leasing Specialist Module
- EPC Specialist Module
- Project Finance Specialist Module

a. Training Curriculum Materials

The training curriculum materials were designed by compiling the information submitted by specialists from the E-FIX partner countries and combining it with relevant teaching resources (such as books, or case studies). As detailed above, the materials are meant to serve different stakeholders, but keep a uniform approach to teaching consisting of a theoretical and a practical component. The first two components detailed below ("Catalogue of Evaluation Methods" and "Didactics and How to Engage your Audience") are the core materials. The Catalogue provides the technical base that is supposed to be disseminated to the trainees while the Didactics materials provide valuable information on how to train people.

i. Didactics and How to Engage your Audience

This is the core teaching component of the curriculum. It serves as an introduction to important teaching concepts to guarantee the quality of trainings.

Core characteristics of the module	
What this module is:	• A practical guide with tools on how to activate and engage an audience • Able to consider diverse needs of students • hands-on and suitable for capacity-building initiatives
What this module is not:	• An exhaustive and complete list of activating methods and tools • A scientific study outlining "the best" method for delivering training material • Applicable to all countries without taking local conditions into account
What are the learning outcomes:	By the end of this module participant should be able to: • Use activation methods to engage their audience • Understand different types of learning strategies and be able to deal with a diverse student body • Use tools to plan, execute, and reflect on a lecture • Gather feedback

Breakdown and subtopics:

1. Ice breakers
2. Learning Theories
3. How to plan a lecture
4. How to activate participants
5. How to receive feedback
6. How to reflect on a lecture

ii. Crowdfunding Specialist Module

Core characteristics of the module	
What this module is:	• An introduction to the financial concept of Crowdfunding • Able to consider impact of Crowdfunding on EE and REN • Hands-on and suitable for capacity-building initiatives • Builds on concepts (such as NPV and IRR) covered in other learning materials of this series
What this module is not:	• An exhaustive and complete list of all crowdfunding activities • A scientific study comparing different evaluation methods and proposing "one best" method • Applicable to all countries without reflection of local conditions • A blueprint for launching a crowdfunding campaign
What are the learning outcomes:	By the end of this module participant should be able to: • Explain what crowdfunding and how may someone use it • Distinguish between different kinds of crowdfunding • Understand the importance of choosing the right platform and support organization • Identify what are the benefits of crowdfunding and the opportunities related to crowdfunding for energy efficiency

Breakdown and subtopics:

1. Introduction: What is Crowdfunding
2. Who are the relevant actors
3. Types of Crowdfunding
   a. Non-financial
   b. Financial
4. Process and Phases
5. Crowdfunding and EE
6. Examples and Cases

iii. Leasing Specialist Module

Core characteristics of the module	
What this module is:	• An introduction to the financial concept of Leasing • A tool to enable standardized and systematic evaluation of potential energy projects • Able to consider impact of leasing on EE and REN • Hands-on and suitable for capacity-building initiatives • Builds on concepts (such as NPV and IRR) covered in other learning materials of this series
What this module is not:	• An exhaustive and complete list of all leasing activities • A scientific study comparing different evaluation methods and proposing "one best" method • Applicable to all countries without reflection of local conditions • A blueprint for analyzing lease vs buy decisions
What are the learning outcomes:	By the end of this module participant should be able to: • Explain what leasing is and how firms may use it • Distinguish between different kinds of leasing • Understand the importance of accounting and tax implications to leasing • Evaluate a lease vs. buy decision • Identify what are the benefits of leasing and what are the forces that drive them

Breakdown and subtopics:

1. Introduction: What is leasing and how does it work
2. Types of Leases
   a. Operating Leases
   b. Financial Leases
   c. Sale and Lease back
   d. Other Leases
3. Accounting and taxes
4. Evaluation of a Lease
   a. Lessee's perspective
   b. Lessor's perspective
5. Benefits of Leasing
6. Leasing and EE
7. Examples and Cases

iv. EPC Specialist Module

Core characteristics of the module	
What this module is:	• An introduction to the financial concept of EPC • A tool to enable standardized and systematic evaluation of potential energy projects • Able to consider impact of EPC on EE and REN • Hands-on and suitable for capacity-building initiatives • Builds on concepts (such as NPV and IRR) covered in other learning materials of this series
What this module is not:	• an exhaustive and complete list of all EPC activities • a scientific study comparing different evaluation methods and proposing "one best" method • applicable to all countries without reflection of local conditions • a blueprint for analyzing EPC contracts or EPC processes
What are the learning outcomes:	By the end of this module participant should be able to: • Explain what EPC is and how firms may use it • Distinguish between different kinds of EPC contracts • Understand the EPC process and how financing affects it • Identify what are the benefits of EPC and what are the forces that drive them • Birdseye view of the EPC market in the EU

Breakdown and subtopics:

1. What is EPC and who are the relevant players
2. Types of EPC Contracts
    a. Shared Savings
    b. Guaranteed Savings
        i. Benefits in Detail
3. EPC Process
4. EPC financing
5. EPC Barriers
6. EPC and the EU
7. Case study
8. Examples and Cases

v. Project Finance Specialist Module

Core characteristics of the module	
What this module is:	• an exhaustive and complete list of all crowdfunding activities • a scientific study comparing different evaluation methods and proposing "one best" method • applicable to all countries without reflection of local conditions • a blueprint for launching a crowdfunding campaign
What this module is not:	• An exhaustive and complete list of all project finance benefits and challenges • A scientific study comparing different financing methods and proposing "one best" method • Applicable to all countries without reflection of local conditions • A blueprint for corporate finance vs project finance decisions
What are the learning outcomes:	By the end of this module participant should be able to: • Who are the relevant players in project finance? • What is project finance? • How is project finance different from on-balance-sheet financing? • How are returns and risk aggregated across projects? • What is contamination risk?

vi. Supplementing Local Case Studies

The EFIX project partners have also developed case studies to serve as practical examples of energy financing project examples.

Country	Case Study Topic
Armenia	Modern greenhouse for roses
Austria	Crowdfunding for PV
Czech Republic	NGO Crowdfunding pilot case
Croatia	1. PV plant on General hospital Zabok 2. Sustainable mobility for Krugovi (NGO)
Georgia	Leasing – construction equipment
Poland	Modernization of power supply in KOMR facilities – from IOL heating to natural gas cogeneration unit

3. Energy Financing Standard for National and Transnational Energy Efficiency Financing

The lack of standardization in terms of reporting definitions and dynamic data sets is a significant obstacle to the development and improvement of energy efficiency projects, and hinders transparency, viability and risk assessment. In this way, the main objective of this report is to map and analyze the energy and financial reporting criteria, needed to define common standards for financing of energy projects, with focus on maximized investment security for investors' and project developers' environment and social impact, as a technical part of the E-FIX Toolbox.

The quality criteria catalogue, with focus on alternative and innovative financing sources and financial feasibility of energy projects, is providing a "Project Description" template together with a granular technical and financial criteria description, also an evaluation tool (provided as a separate Excel calculation file) of the proposed criteria.

Considered as an evaluation tool, it contains a project description template structured in compulsory and additional optional information, capturing general, technical and financial parameters but also environmental and social issues, creating a unitary presentation form for analyzed energy projects. Using the features from the project description template the user can easily select the necessary data for input in the calculation file.

The goal of the evaluation tool is not only to have an evaluated value for the project, it is to provide also evaluated values for the different financing mechanisms, Leasing / EPC / Crowdfunding using the E-FIX approach. For this, the tool has a calculation matrix that automatically generates value points of the impact for each defined quality criteria in using a specific financing mechanism for the energy efficiency or renewable energy project that is analyzed.