

FINANCIAL SCHEMES FOR ENERGY EFFICIENCY PROJECTS: LESSONS LEARNT FROM IN-COUNTRY DEMONSTRATIONS

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Abstract: *Traditional investment institutions face a lack of understanding regarding the technical aspects of energy efficiency investments. Indeed, due to the heterogeneity of such investments and to the immaturity of the market the entry into this business is unattractive for many financial institutions, although energy efficiency projects can often present a guaranteed return. The aim of this paper is to propose a methodological framework on energy efficiency investments and robust financing programs/models in targeted case study countries that will act as first-of-a-kind demonstration for the banks, institutional investors and asset managers, with the use of approaches based on knowledge transfer and capacity building among key actors. The experience gathered from in-country demonstration will also facilitate and accelerate the replicability, while findings could then be used to lead to concrete recommendations towards a successfully energy efficiency financing.*

Key Words: *Energy efficiency; funding schemes; risk mitigation; stakeholder dialogue; best practices; lessons learnt; capacity building; knowledge transfer; in-country demonstrations*

1. INTRODUCTION

Indeed, one of the main actions to tackle climate change and its impact is energy efficiency (Doukas et al., 2011; Doukas et al., 2014; EC, 2014; Karakosta & Askounis, 2010; Marinakis, et al. 2013; Miller & Carriveau, 2018). European Commission (EC) in 2008 has reached a political agreement which includes a binding energy efficiency target of 32.5%, for 2030, for the EU, with a clause for an upwards revision by 2023. Moreover, the European Union (EU) has set itself a long-term goal of reducing greenhouse gas emissions by 80-95% compared to 1990 levels by 2050.

Moving forward, the EC adopted the Paris Agreement (UNFCCC, 2018) on climate change and the United Nations (UN) 2030 Agenda for Sustainable Development (UN, 2015) in 2015 and thus many of its priorities (EC, 2015; EC, 2014; EC, 2018a) for 2014-2020 feed into the Union's energy and climate goals and work towards delivering the 2030 Agenda's for Sustainable Development Goals (SDGs). At the end of 2016, the Commission appointed a High-Level Expert Group on sustainable finance (EC, 2018c). In 2018, the expert group published its final report (EC, 2018d; EC, 2019a) offering a comprehensive vision on how to build a sustainable finance strategy for the EU.

One of the open questions today in mainstreaming energy efficiency finance is; what the effective ways are to drive new finance for energy efficiency investments (Becqué et al., 2016; G20 Energy Efficiency Investment Toolkit, 2017). In this respect, literature review indicates, among others, a lack of evidence on the performance of energy efficiency investments benefits, as well as of commonly agreed procedures and standards for energy efficiency investment (Cooremans & Schönenberger, 2019; EEFIG Underwriting Toolkit, 2017; Karakosta et al., 2011; Painuly et al., 2003; Sarkar & Singh, 2010; Zhan et al., 2018). There are also many problems that a potential investor needs to put up with the initial investment (Schlein et al., 2017), and the (small in most cases) project developers are struggling to finance their needs. This is particularly true during the first stages of investments generation and pre-selection/ pre-evaluation (Doukas, 2018; Triple-A, 2019).

The "gap" can be identified in the concept development phase of energy efficiency investments. Indeed, project developers spent a huge amount of hours auditing one plant's potential energy savings, but in most cases, never actually carrying out the project, because they cannot convince investors to give the capital needed to do the work (BPIE, 2010). Private investors often lack the knowledge to understand how project developers do business, especially at an early state of project identification (Boza-Kiss et al., 2017). At the same time, project developers don't have the expertise or resources to make a convincing case for investors (BPIE, 2014).

Indeed, partly due to the heterogeneity of energy efficiency investments and to the immaturity of the market for such investments, the relative costs for project development, finance documentation, processing and aggregation (together "transaction costs") are high, making entry into this business unattractive for many financial institutions (EEFIG, 2015). The investment institutions lack the technical understanding of the essence of energy efficiency

investments; this often creates a lack of trust in such investments, acting as a barrier to including energy efficiency projects in the investment portfolio, even though they are often robust, with a guaranteed return. These institutions seek strong evidence of profitability in such projects, before they are willing to support them and this is particularly important for the small-scale projects.