International Energy Efficiency Financing Protocol (IEEFP)

STANDARDIZED CONCEPTS

A COMPLEMENT TO THE INTERNATIONAL PERFORMANCE MEASUREMENT AND VERIFICATION PROTOCOL (IPMVP)

February 2021
EVO 40000-1:2021
International Energy Efficiency Financing Protocol (IEEFP)

STANDARDIZED CONCEPTS

A COMPLEMENT TO THE INTERNATIONAL PERFORMANCE MEASUREMENT AND VERIFICATION PROTOCOL (IPMVP)

February 2021
EVO 40000-1:2021
The Efficiency Valuation Organization (EVO)

EVO is a non-profit organization whose products and services help people implement and invest in energy-efficiency projects worldwide. EVO's Vision is to create a world that has confidence in energy efficiency as a reliable and sustainable energy resource. EVO's Mission is to ensure that the savings and impacts of energy efficiency and sustainability projects are accurately measured and verified.

IEEFP Background

In 2004, the UN-sponsored a stakeholder workshop in which a broad group of experts in energy efficiency and finance met to discuss barriers to funding energy efficiency projects. The experts agreed that local banks and financial institutions lacked the guidance and expertise to feel comfortable lending money on a cash flow basis to energy efficiency projects. A consensus was reached that a financing protocol could bridge the gap between funding sources and their financing of energy efficiency projects.

As the world's only organization solely dedicated to a mission of providing tools to quantify energy efficiency business transactions, EVO agreed to sponsor the IEEFP. It formed a global working group to oversee the development of the IEEFP, and the document was published in 2009. The IEEFP was then used as a reference during training events to raise energy efficiency financing awareness.

In recent years, the planetary movement towards a low carbon economy raised the profile of energy efficiency as one of the key energy transition tools. This renewed global focus on energy efficiency convinced EVO's leadership to dust-off the IEEFP and modernize it to align the content and language with the current IPMVP and accompanying series of application guides.

In 2019, EVO submitted a proposal to the Government of Canada to contribute to the update of the IEEFP. An international contribution agreement was signed, and EVO concluded a series of workshops with the assistance of an International Working Group and a Canadian Working Group. Members of these working groups provided technical review and input, reflected in this updated IEEFP and complementary Canadian Annex.

It is envisioned that additional country annexes will be produced, reflecting varying barriers to implementing and financing energy efficiency projects and local banking regulations.
Acknowledgments

Contributors

Thanks to the following individuals for their participation in various committees and input provided through interviews, workshops, and numerous bilateral discussions.


Financial contribution

The 2021 update of the International Energy Efficiency Financing Protocol was made possible by a financial contribution from the Government of Canada's Department of Natural Resources.
Table of Contents

1. Acronyms and Definitions ........................................................................................................... 7
   1.1. Acronyms .......................................................................................................................... 7
   1.2. Definitions .......................................................................................................................... 7

2. Goal and Scope ............................................................................................................................. 10
   2.1. Goal..................................................................................................................................... 10
   2.2. Scope ................................................................................................................................... 10

3. Energy Efficiency Technologies .................................................................................................. 12

4. EEP Development and Finance Process ...................................................................................... 16

5. Investment Grade Audit (IGA) ................................................................................................... 17
   5.1. Major items included in a properly prepared IGA ............................................................... 17
   5.2. IGA for industrial process facilities .................................................................................. 18
   5.3. Shortcomings ...................................................................................................................... 18

6. Measurement and Verification (M&V) ....................................................................................... 19
   6.1. M&V Options ...................................................................................................................... 19
       6.1.1. Retrofit Isolation ........................................................................................................... 19
       6.1.2. Whole Facility ............................................................................................................... 20
   6.2. Choosing an M&V Option ................................................................................................... 21
       6.2.1. Retrofit Isolation ........................................................................................................... 21
       6.2.2. Whole building ............................................................................................................. 22
   6.3. IPMVP-Adherent M&V Plans ............................................................................................. 23

7. EE Stakeholders .......................................................................................................................... 24

8. EEP Financing Options ............................................................................................................... 27

9. EEP Contracts ............................................................................................................................. 28

10. EE Financing Market Needs ..................................................................................................... 29
    10.1. Features ............................................................................................................................ 29
    10.2. Sample EEP Loan Structure ............................................................................................ 29

11. EEP Financing Risks and Mitigation Strategies ....................................................................... 32
    11.1. Performance Risks ............................................................................................................ 32
    11.2. Performance-Based ESCO Models ................................................................................... 36
         11.2.1. Shared Savings ............................................................................................................ 36
         11.2.2. Guaranteed Savings .................................................................................................. 37
         11.2.3. Payment Structure .................................................................................................... 38
12. Guarantee Mechanisms for LFIs

12.1. Partial Credit Guarantee (PCG)

12.2. Energy Savings Insurance (ESI)

13. EE Project Finance Evaluation Tools

13.1. Risk Mitigation Checklist

13.2. IGA Checklist

13.3. Loan Application Guidelines and Checklist