



Efficiency
Valuation
Organization

IPMVP[®] PROTOCOLS
IPMVP[®] TRAININGS
IPMVP[®] CERTIFICATIONS

February 2025



VISION

Create a world that has confidence in energy efficiency as a reliable and sustainable energy resource.

MISSION

Ensure that the savings and impact of energy efficiency and sustainability projects are determined through appropriate measurement and verification.



The home of the **IPMVP**[®]

- ▶ EVO is the World's leading M&V organization with partners on all continents.
- ▶ It maintains the *IPMVP Core Concepts* current and disseminates M&V knowledge through its IPMVP application guides, multiple training, professional certification programs, and outreach and communication activities.



Led by volunteers around the world

- ▶ We work with over 150 volunteers active in various protocol, training, and certification committees
- ▶ This work is coordinated by three dedicated staff located in North America and Europe



A 24-year-old non-profit corporation

- ▶ EVO's revenues come primarily from training and certification activities and some corporate organizational support
- ▶ We have many products and services in the development pipeline and want to make them available to the M&V industry as soon as possible.

Our Partners

OUR INTERNATIONAL TRAINING PARTNERS

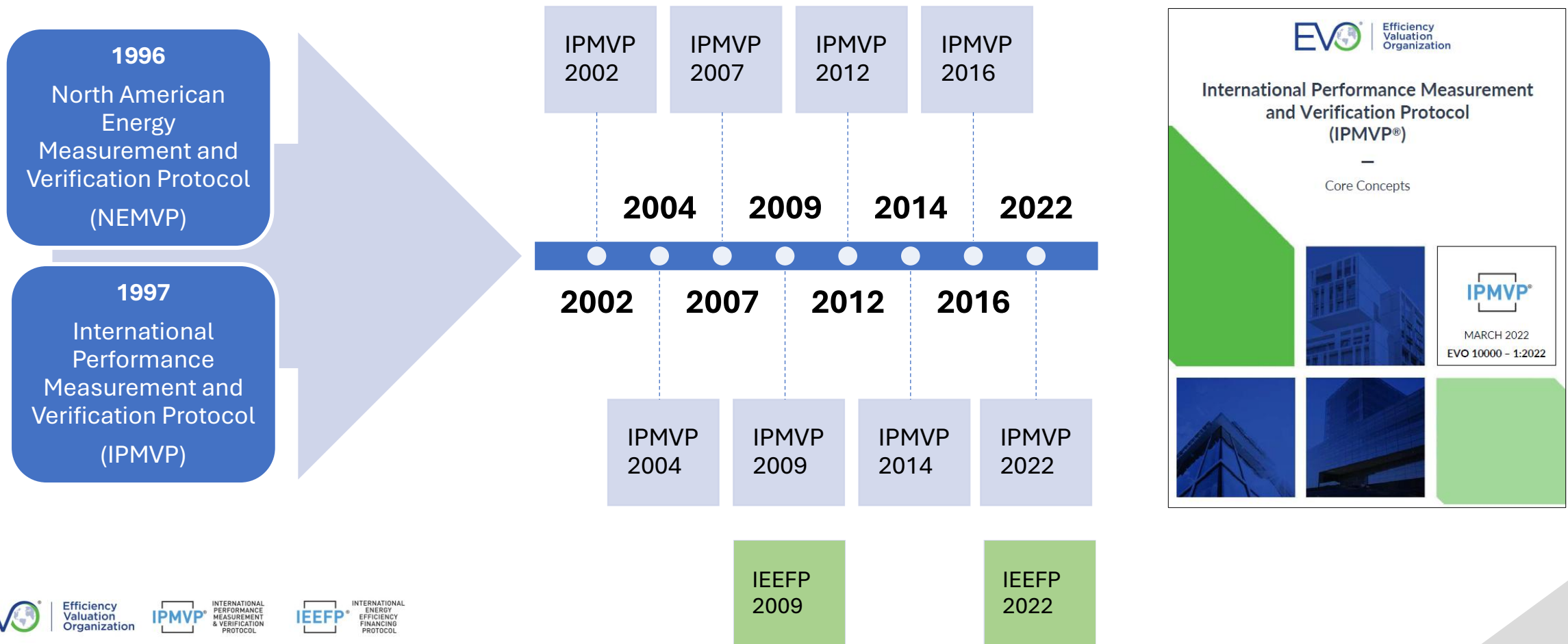


OUR CURRENT ORGANIZATIONAL SUPPORTERS

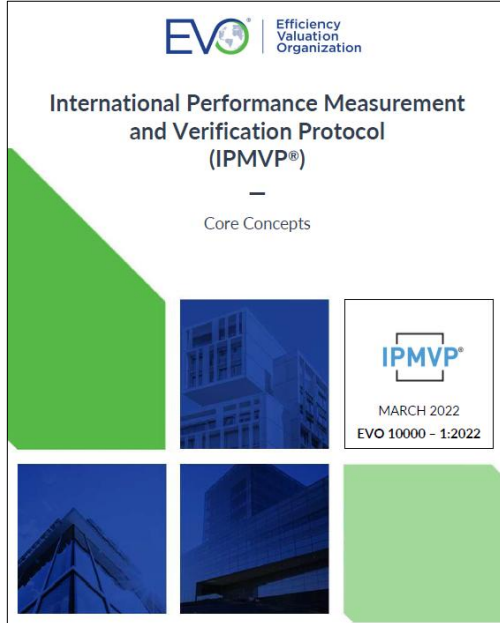


International Performance Measurement and Verification Protocol - IPMVP®

- ❖ **Maintained and updated** regularly by Efficiency Valuation Organization since 1997.
- ❖ Globally recognized as the “**mother of all M&V protocols**” with different versions translated into 22 languages.
- ❖ **Available for free** from EVO’s website, with over **20,000 downloads** since 2016.



International Performance Measurement and Verification Protocol - IPMVP®



Used by **ESCOs** all over the world since the 1990s

Required by **government** and **utilities** to validate energy savings

Normative reference in many other codes and **standards** including **ISO 50015**

Training reference for EVO's **PMVA** and **PMVE** professional certification programs

Methodology behind nearly all energy consumption **analysis software**

Reference framework for the **International Energy Efficiency Financing Protocol (IEEFP)**

IPMVP APPLICATION GUIDES

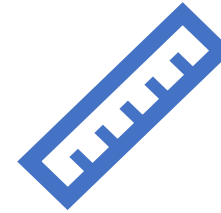
(REVISIONS AND NEW DOCUMENTS)



Non-Routine Events and Adjustment
(2022)



M&V and Performance Contracting for Facility Owners
(2025)



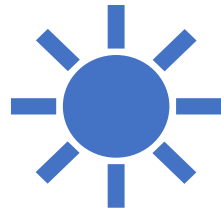
Evaluation, Measurement and Verification



Uncertainty Assessment



Advanced M&V



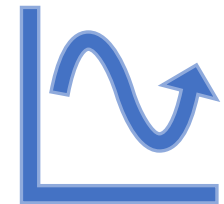
M&V for Renewables, On-Site Generation, and Storage



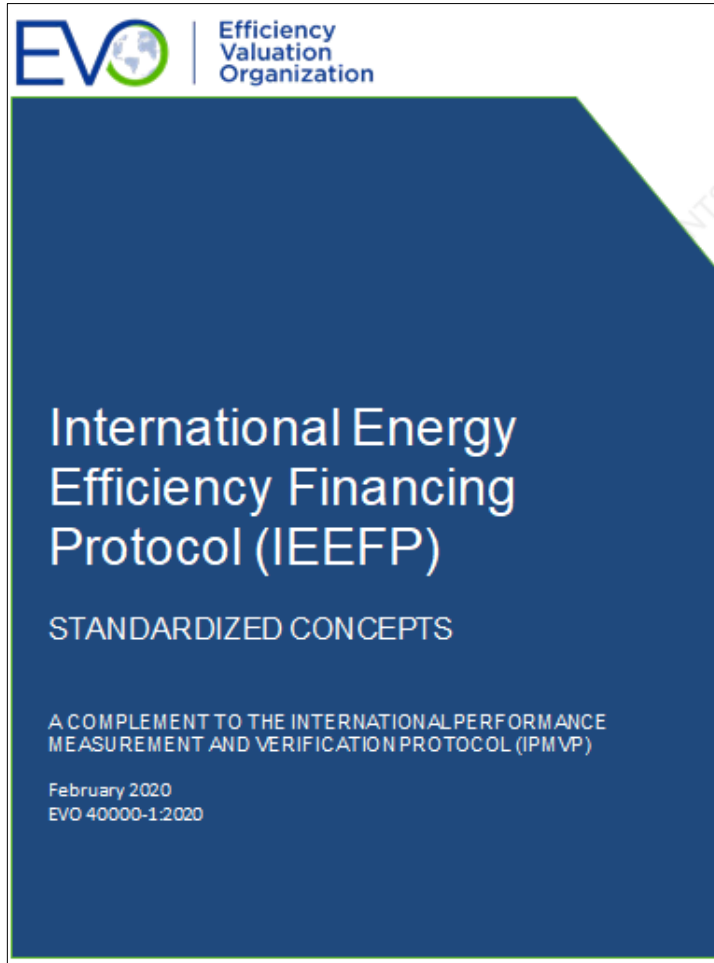
M&V for Water



M&V and IPMVP Option D



Demand Response / Flexibility



The main objective of IEEFP is to create an understanding for **local financial institutions** of how energy efficiency (EE) projects generate reliable cost reductions (savings) in a facility's existing operating expenses. The IEEFP is designed to enhance the credit officer's knowledge of the following:

- ❖ How EE Project savings can be relied upon for loan repayment & increased the facility owner credit capacity;
- ❖ How to evaluate and mitigate risks of EE projects delivering estimated savings (ignoring any attempt to educate them on how to evaluate borrower credit risk since they should already possess this core competency);
- ❖ How to structure a project-based loan that minimizes risk and provides an attractive internal rate of return (IRR);
- ❖ How the measurement and verification (M&V) of energy savings can be reliably performed is critical to documenting and ensuring sustainable EE savings.

TEN REASONS WHY FINANCIAL ANALYSTS / INSTITUTIONS NEED TO KNOW THIS PROTOCOL:

1. The pressure to finance sustainable projects will increase for banks
- 2. Energy efficiency is one of the primary vehicles for mitigation and decarbonization**
3. Within the categorization of sustainable projects, energy efficiency is the most evident
- 4. Energy efficiency projects have credit quality if accompanied and justified with M&V – Performance M&V is itself a way to mitigate risk**
5. Energy efficiency projects have a solid financial and productivity component for the benefit of those who execute them
- 6. Banks should take an active role in promoting energy efficiency accompanied by M&V**
7. The only way to demonstrate efficiency and low risk is through M&V
- 8. M&V forces technology providers to become professional**
9. Banks need to use a standard “technical-financial” language to promote, identify and analyze projects
- 10. It is essential for energy-consuming organizations to be proactive in the way they specify tasks and require their suppliers**

IPMVP and IEEFP Training Programs

CERTIFICATION TRAINING

M&V FUNDAMENTALS AND IPMVP
(3 days) + **PMVA** certification exam

M&V PLANNING IN PRACTICE
(2 days) + **PMVE** certification exam

EE FINANCING FUNDAMENTALS AND IEEFP
(2 days) + (1/2 day) group exercise

IEEFP CASHFLOW ANALYSIS
(2 days) + **EEFS** certification exam

SUPPORTING TRAINING

M&V Awareness Webinar(s)
(1 hour)

Introduction to M&V
(1/2 – 1 day workshop)

Introduction to M&V Statistics
(Self-taught on line 2-3 hours)

Introduction to Financing Terms
(Self-taught 1 hour)

Introduction to Energy Efficiency Technologies
(Self-taught 1 hour)

ADVANCED AND THEMATIC M&V COURSES

Introduction to Option D for Building Owners
(1 day)

Advanced Option D for M&V Practitioners
(3 days)

Advanced Statistics / Regression (LINE)
(3 sessions of 2 hours + homework)

Autocorrelation Functions
(4 sessions of 2 hours each + homework)

Interactive Effects in EE Projects
(1 day)

Non-Routine Events and Adjustments
(1 day)

M&V and Metering
(1 day)

COMPLEMENTARY TRAINING

ISO 50006 and the IPMVP
(1 day)

ISO 50015 and the IPMVP
(1 day)

ISO 50047 and the IPMVP
(1 day)

EVO's M&V Certification Programs

PMVA™ PERFORMANCE MEASUREMENT AND VERIFICATION ANALYST

- Primary standard for individuals applying M&V concepts to EE projects.
- PMVAs typically work in an analyst role for ESCOs, public administration, utilities, and financial institutions.
- PMVAs have demonstrated M&V capabilities, including a good understanding of applying the IPMVP to determine savings.
- PMVAs could be building technologists, HVAC specialists, engineers, architects, economists, financial analysts, etc.
- Certification and re-certification are based on M&V professional activities.

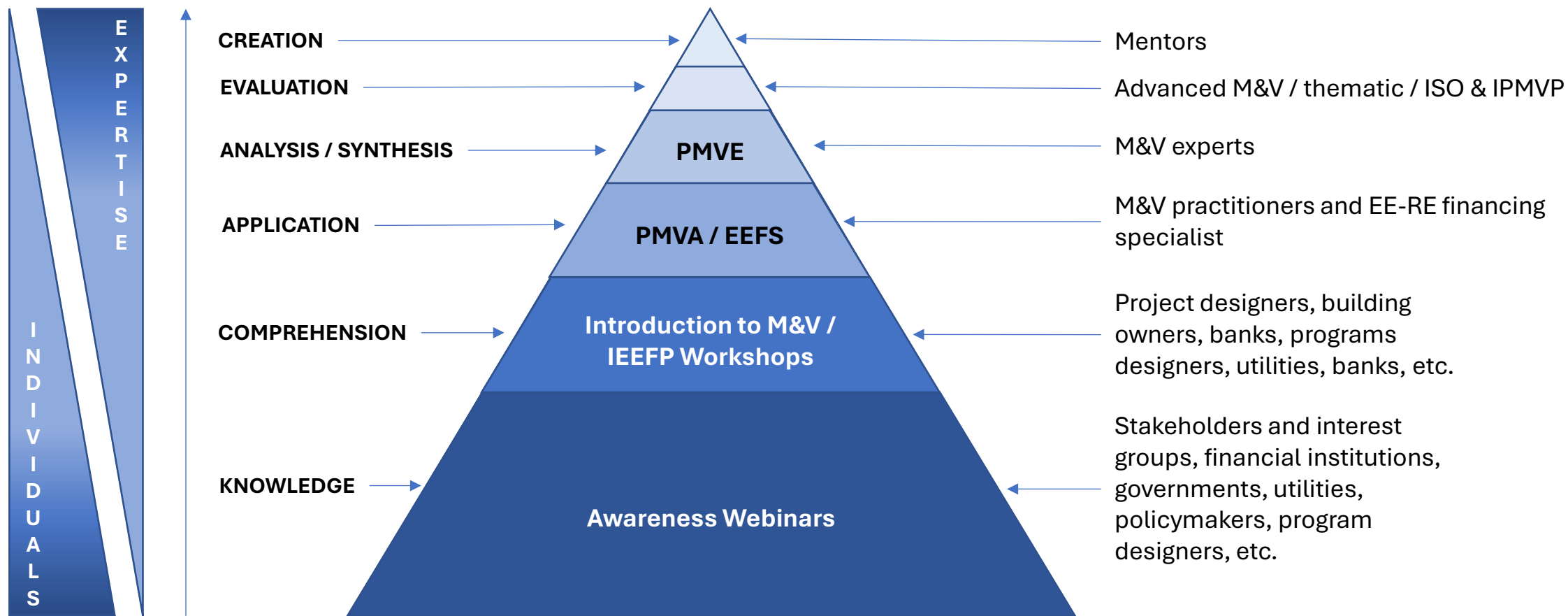
PMVE™ PERFORMANCE MEASUREMENT AND VERIFICATION EXPERT

- Primary standard for individuals engaged in preparing or analyzing M&V Plans.
- PMVEs are M&V experts. They design, elaborate, and implement M&V plans for comprehensive and complex energy efficiency projects.
- PMVEs work as consultants and project facilitators for facility managers and building owners.
- PMVEs typically have advanced applied expertise in various aspects of M&V and are capable of preparing/challenging M&V plans and reports.
- Certification requires holding a PMVA. Re-certification criteria are based on M&V professional activities, particularly preparing or reviewing M&V plans.

EEFS™ ENERGY EFFICIENCY FINANCING SPECIALIST

- Primary standard for individuals applying M&V concepts to energy efficiency project financing.
- EEFSs work in financial institutions interested in promoting energy-sustainable project financing. They know how to assess and mitigate EE project risks.
- EEFSs know how to identify energy efficiency savings-based projects and the key elements to structure loans for EE with a low-risk and commercially attractive base.
- EEFSs must take and pass the IEEFP Certification exam. The certification renewals are based on continuous EE project financing activities.

EVO's Theory of Change – Market Transformation *



19,000
TRAINEES IN
THE PAST 20
YEARS IN 60
COUNTRIES

DEPLOYMENT
WITH A
GLOBAL
NETWORK OF
TRAINING
PARTNERS

OVER 30
APPROVED
INSTRUCTORS
AROUND
THE WORLD

(*) Bloom's taxonomy inspires EVO's training and certification programs.



Efficiency
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