



Efficiency
Valuation
Organization



ENERGY EFFICIENCY PERFORMANCE MEASUREMENT AND VERIFICATION **EXPERT**

TRAINING AND CERTIFICATION PROGRAM



INTERNATIONAL
PERFORMANCE
MEASUREMENT
& VERIFICATION
PROTOCOL



PERFORMANCE MEASUREMENT
AND VERIFICATION EXPERT

EVO is a non-profit organization whose products and services help people engineer and invest in energy efficiency projects. EVO owns and manages the International Performance Measurement and Verification Protocol (IPMVP®), the globally recognized reference for reliably measuring and verifying savings of energy efficiency projects.

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 impact of energy efficiency and sustainability projects are accurately measured and verified. EVO's capacity-building activities include measurement and verification protocol development, M&V and IPMVP training courses, and professional certification programs.

TRAINING PROGRAM OVERVIEW

CURRICULUM

- *M&V Planning in Practice*

PREREQUISITE

- *M&V Fundamentals and IPMVP*

CERTIFICATION

- All participants will receive a certificate of attendance.
- Participants interested in receiving the *Performance Measurement and Verification Expert (PMVE)* certification must take the certification exam.

KEY FACTS

- EVO has deployed this training program since 2019
- Duration: 2 days + exam
- Learning approach: practical
- Reflects the latest version of the *International Performance Measurement and Verification Protocol (IPMVP)*
- EVO's senior instructor team supports this program through continuous review

TRAINING CONTENT (6 ADVANCED MODULES)

1. Introduction
2. Practical M&V Challenges
 - a. With Energy Performance Contracts
 - b. With Utility Energy Efficiency Schemes
3. IPMVP Adherent M&V Plan in detail
 - a. Before ECMs are Implemented
 - b. The 14 Elements of the Plan
 - c. Adherence
4. M&V Calculations in Practice
5. M&V Plan in Practice
6. M&V Plan Verification in Practice

LEARNING OBJECTIVES

- Understand the challenges associated with the practical application of M&V
- Be able to prepare an IPMVP compliant plan along with the associated M&V calculations
- Be able to review an M&V plan for compliance with the IPMVP
- Be able to produce an M&V report compliant with the IPMVP

TARGET AUDIENCE

- Industry professionals (PMVA) looking for advanced training on applied M&V, specifically advanced guidance in preparing and implementing detailed M&V plans
- Utility demand-side management senior program designers, managers, and evaluators
- M&V team leaders at ESCOs
- Energy users implementing comprehensive energy efficiency measures
- Energy efficiency project facilitators and other M&V consultants
- Facility managers and buildings owners deploying energy efficiency projects in multiple buildings.



PROFESSIONAL CERTIFICATION

The *Performance Measurement and Verification Expert (PMVE)* professional certification establishes the primary standard for individuals engaged in preparing or analyzing measurement and verification plans. PMVEs typically work as M&V specialists and design, elaborate, and implement M&V plans for comprehensive and complex energy efficiency projects. PMVEs also work as consultants and project facilitators for facility managers and building owners. PMVEs work as senior M&V analysts for public administration, utilities, and financial institutions. PMVEs typically have advanced applied expertise in various aspects of M&V and are capable of preparing/challenging M&V plans and reports. Most PMVEs will hold a technical degree and have a solid understanding of various energy efficiency measures.

NOTE: EVO's PMVE certification is earned by demonstrating advanced field M&V work achieved through a mix of M&V relevant education, professional expertise, and experiences.

REQUIREMENT

- *M&V Planning in Practice Training Course*, or
- Demonstrate significant field experience (minimum 5 years) in the preparation of M&V plans

CERTIFICATION EXAM

- The *M&V Planning in Practice* exam tests the candidates' competencies in:
 - » Understanding the challenges associated with the practical application of M&V
 - » Preparing an IPMVP compliant plan along with the associated M&V calculations
 - » Reviewing an M&V plan for compliance with the IPMVP
 - » Produce an M&V report compliant with the IPMVP
- The exam involves preparing key elements of M&V plans and determining savings in accordance with IPMVP within 4 hours.
- And independent EVO instructor assesses by the exam
- The instructor's assessment includes written observations which provide feedback to the examinee.

PMVE APPROVAL CRITERIA

- Hold current PMVA certification or took the *M&V Fundamentals and IPMVP* course and passed the related exam with a mark of 70 % or higher within the last 3 years.
- Take the *M&V Planning in Practice* course and pass the certification exam with a mark of 70 % or higher.
- Have a technical college/university degree (provide a copy of the diploma)
- Work in the M&V/energy field for two years – could be M&V specialists at ESCOs, involved in design, elaboration, and implementation of M&V plans for energy efficiency projects, consultants and project facilitators for facility managers and building owners, senior M&V analysts for government, utilities, and financial institutions, or related.
- Complete the PMVE electronic application form available on EVO's website and pay the certification fee
- The PMVE certification is **valid for 36 months** from the date of inception.



ALTERNATE PATHWAY

- Hold a current PMVA certification.
- Have **significant and demonstrated field experience** (minimum 5 years) in the preparation of M&V plans.
- Pass the *M&V Planning in Practice* examination with a 70% or higher mark.
- Complete the PMVE electronic application form available on EVO's website, upload information as required, and pay the certification fee.



PMVE RENEWAL CRITERIA - Mix of the following:

MANDATORY

- Prepared at least two detailed M&V plans (names should be on the M&V plan; should provide the title of the M&V plan, when it was prepared or implemented – should be in the same renewal cycle, and contact details for reference)

OR

- Review of M&V plans. Must provide evidence of administrative and technical work in reviewing such plans for programmatic and other purposes.

ADDITIONAL CRITERIA

- Being employed in the field for the period of the certification (require start/end dates of employment and description of the duties. The duties should be the same or similar to the ones for PMVE approval)
- Teaching M&V, energy, EE, energy financing, etc. courses/webinars/masterclasses (should provide the title of the courses, dates when delivered, program/agenda showing they were the instructors, reference contact details)

- Speak at conferences on relevant topics (should provide the title of the event, dates within the renewal cycle, programs showing they were the speaker/presentation)
- Trainee to relevant courses (provide the certificate of attendance within the renewal cycle)
- Author of published articles, papers (provide the title, date of publication, copy or link to the publication; names should be on the publication)

OR

- Being registered M&V specialist in your country (if such certification exists in the country, the candidate should provide an certification number and link to a website where this can be verified, or contact details for reference, and a short outline of the requirements for that certification)

NOTE: If your government requires you to be IPMVP certified, please make sure you apply for renewal 2-3 months before your certification is due to expire. Thus, it will not lapse, and you will have been continually certified without interruption.



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www.evo-world.org



www.pbjtechhub.com