

Introduction to Measurement & Verification



The one-day workshop introduces the basic concepts of measurement and verification (M&V) and the IPMVP (International Performance Measurement & Verification protocol) that has become the most prominent reference of M&V in North America and around the world. It highlights the purposes of M&V, summarizes the range of possible M&V methods and points out the need for specific M&V design for each project.

The program is designed primarily for facility energy managers, energy efficiency program designers, as well as project managers, consultants, and anyone interested in acquiring a basic understanding of the state of the art on M&V and to get acquainted with IPMVP.

Topics Covered

Introduction

- Definition of M&V
- The range of M&V protocols for energy efficiency and carbon trading projects
- Background on EVO and the IPMVP
- Reasons for M&V

Key Concepts

- The basic savings equation
- The four IPMVP options with quick examples
- Steps in applying the IPMVP
- M&V cost and uncertainty
- M&V in EPC

Short Examples

- Examples with calculation tasks for the class and review of advantages and disadvantages of each option:
 - ⇒ Option A - Lighting efficiency
 - ⇒ Option B¹ - Compressed air leakage control
 - ⇒ Option B² - Industrial heat recovery
 - ⇒ Option C - Multiple retrofits in a building
- Class-suggested case studies for discussion

Partner: This training is presented in collaboration with the Efficiency Valuation Organization (EVO).



Who should attend?

This short thematic course is ideal for the following clientele:

- Building or industry owners who wish to measure the energy savings generated by their projects
- Building or industry owners who wish to partner with ESCOs to implement Energy Efficiency projects
- Employees responsible for EE program evaluation and operation
- Engineering firms or professional firms specialized in energy efficiency
- ESCO employees required to conduct energy audits, prepare Measurement and Verification (M&V) plans or monitor project savings



Logistics

CEUs: 0.7
CSEP Points: 2

Visit cietcanada.com for more information on training options and registration or contact us at info@cietcanada.com.