



WHEN TRUST MATTERS

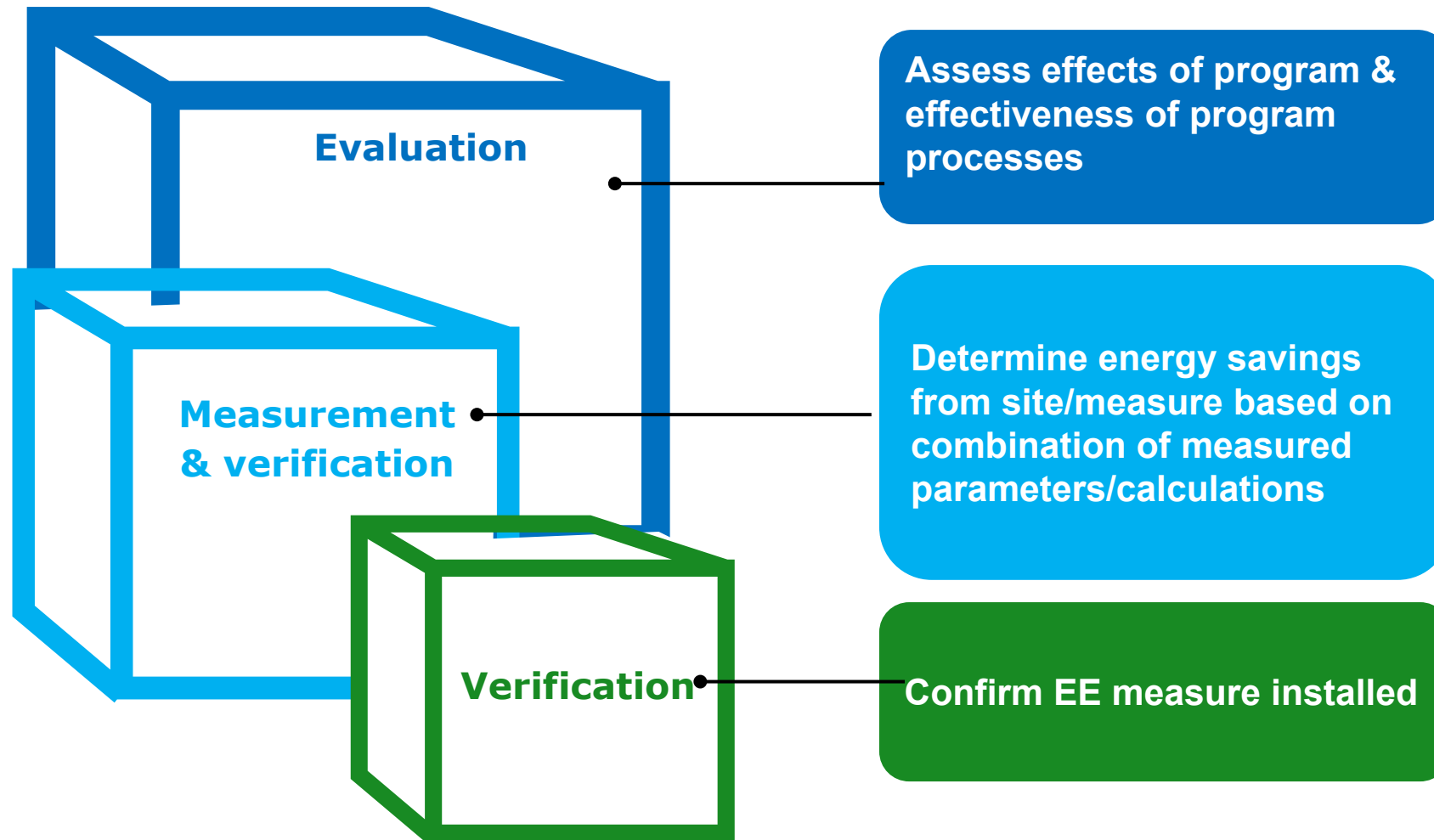
Program Impact Evaluation, Measurement, and Verification

CPUC RD&D Uniform Impact Analysis Framework Working Group Kickoff
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What are E M & V?



California and Energy Efficiency Have Long Established Protocols for Impact Analysis

California and National Standards

- International Performance Measurement and Verification Protocol (IPMVP)
- California Evaluation Framework 2004
- California Evaluation Protocols 2006
- ASHRAE Guideline 14
- NREL Uniform Methods Project (UMP)

Other Relevant Standards

- Federal Energy Management Program (FEMP) M&V
- Bonneville M&V Protocol
- PJM Manual 18B – EE M&V

California Evaluation Protocols

- To reliably document program effects, and to improve program designs and operations to be more cost-effective at obtaining energy resources.
- Consistent, systemized approach, cyclic approach for planning and conducting evaluations includes M&V Approaches, Process, Market Effects, C&S, Sampling and Uncertainty and EUL
- http://www.calmac.org/events/EvaluatorsProtocols_Final_AdoptedviaRuling_06-19-2006.pdf

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Uniform Methods Project(UMP)

- A set of protocols for determining savings from energy efficiency measures and programs
- Method for evaluating gross energy savings for residential, commercial, and industrial measures
- Based on IPMVP Option, but provides more detailed approach to implement that option
- <https://energy.gov/eere/about-us/ump-protocols>

Questions?

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