

Verification of Interstate Power & Light's Performance Contracting Projects: A Practical Application of the International Performance Measurement & Verification Protocol (IPMVP)

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The Art of Balancing Risk

The essence of electric and gas utility ratepayer funded performance contract programs is risk. Using utility ratepayer funds collected for energy efficiency, projects have been developed with an expectation of energy savings. One could assert that prior to conducting any measurement and verification (M&V), the risk associated with the expected savings is at a maximum. Similarly, one could argue that the risk is minimized after M&V activities have been completed. The difficulty is that M&V is not a formula but a process, and minimum risk implies maximum M&V, which is rarely, if ever, cost-effective.

In this case, the program of interest is Interstate Power and Light's Performance Contracting program, which provides incentives to program participants (project developers) that are equal to 1.5 times the annual bill savings of the project. As filed, the program requires the use of the IPMVP as the basis for conducting project level M&V. As guidelines, the IPMVP provides a framework from which one of four M&V options can be selected. What is missing is a procedure to select the option that balances the amount of risk that the program administrator is willing to allow, within the budget available to conduct M&V activities. In our experience, virtually no project falls neatly into the options that are presented in the IPMVP guidelines. In order to effectively use the IPMVP a hybrid approach, combining the options outlined in the M&V Guidelines with practical experience conducting M&V, was required.

For M&V to be cost-effective at a program level, we assumed that projects would need to be verified at a cost of between 5% and 15% of the project's Risk Premium (Incentive). With these parameters in mind, the targeted cost of M&V at the program level was approximately 10% of all incentives. Given an available M&V budget based on the project's Risk Premium and an initial assessment of the application, the level of field data collection was determined. Projects were classified as: Review Only; Review with Site Visit; or Review with Site Visit and Metering. The type of field data collection selected was based on the complexity of the project, comparison of savings estimate to industry standards, size of project, and ratio of annual savings to annual energy bills. The available data were then used as the driver to select the appropriate IPMVP option(s) to be implemented.

As of May 2003, a total of 23 projects have been verified through the process and an additional seven are currently under review. By using the approach of balancing a limited budget with the need for technical rigor, we were able to effectively assess each site and provide an independent estimate of project savings. As an added benefit of the M&V effort, several calculation and baseline issues were identified that consistently resulted in reduced project savings estimates. Since the M&V activities were conducted relatively close to the time that the projects were completed, it was possible to provide feedback to program participants resulting in more robust savings calculations on future projects.

