ABSTRACT

This paper is a synopsis of a study sponsored by BC Hydro to map and analyze the business process for the implementation and evaluation of its Power Smart Partner program, which offer a suite of energy efficiency services to large C&I customers. It describes a process for identifying the risks and uncertainties facing energy efficiency projects, assessing their relative importance, and instituting appropriate mechanisms to mitigate their likely impacts on program performance in the context of conventional portfolio management techniques. The Analytic Hierarchy Process (AHP), a method for analyzing decision situations involving multiple criteria (attributes) and multiple decision makers was used to characterize various risk factors and to develop estimates of the range of probable impacts they might have on the program’s performance. The results of the study showed that the program’s existing risk management procedures help improve reliability of savings by approximately 65%. Measure performance and persistence of energy savings were found to be the most important risk factors and, therefore, should be the primary focus in risk management. On-going M&V were identified as the most effective strategies for managing uncertainties in energy savings. Inspections and credit checks did not appear to be particularly effective. Credit checks also have the greatest adverse effect on customer relations, followed by financial and technical reviews. The study further found that the adverse effects of many of the identified risk factors are likely to be offset by the expected increase in future avoided costs, which enhancing the value of the saved energy by as much as 30%.