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**Abstract Title: Validating the Effectiveness of Strategic Energy Management (SEM) Programs through Measuring the SEM Adoption**

Abstract Text:

Strategic Energy Management (SEM) holistically reduces energy use in buildings and facilities by incorporating both efficient equipment and efficient behaviors. Measuring SEM adoption is crucial to validate the effectiveness of SEM programs. This requires a comparison between the market baseline and the progress of SEM program participants, and measuring persistence of participants' SEM activities after participating in a program. Most comparable programs are still in the pilot stage and there is limited information since there was not a standard definition until the Consortium for Energy Efficiency recently set threshold criterion for strategic energy management practices. A leader in SEM research, the Northwest Energy Efficiency Alliance (NEEA) has managed several SEM programs targeting commercial or industrial customers. NEEA has also sponsored market characterization studies to establish the market baseline for SEM activities. This paper will present the methodologies used to develop the survey and to score the level of SEM adoption in commercial buildings and industrial facilities. It will share examples of how the survey responses were used to assess the adoption of each SEM element. The examples will provide insight into the relationship between behavior changes and energy savings, and showcase proven methodologies to evaluate the changes due to a SEM program and the persistence of those changes. Other regions can build upon the findings of this paper to conduct similar studies to measure the adoption of SEM activities and to measure how long those behavior changes persist.