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Poster Title: Scaling Up Behavior Change in K-12 Schools Through Technology and Data Management

Abstract: Many strategies successfully encourage energy-saving behavior change in K-12 schools: programs encouraging awareness and education, incentive programs based on observed behaviors, and competition-based programs. However, it's difficult to show a direct correlation with energy savings and behavior change; this is where technology and data management "Scale Up" energy savings! This presentation will discuss three of the more successful technologies: the K-12 ENERGY STAR score, the Eyedro current transformer sensor, and the data management software, FuseboxÂ®. The ENERGY STAR score for K-12 schools compares the energy performance of the school to its peers, accounting for regional and operational factors. A higher ENERGY STAR score indicates a more energy-efficient school. ENERGY STAR allows for intra- and inter-school quantitative comparisons. It allows a district to know which of its schools are energy efficient and which schools to place a bit more "energy" into making it more efficient. It allows districts and schools to fairly compare themselves and come up with strategies for increased energy savings. School buildings typical have one energy meter. When new buildings or additions are built, a new meter may not be installed. Multiple buildings on one meter does not allow for accurate energy monitoring when a district is trying to reduce resource use and increase sustainability. Thus, districts have begun installing current transformers (CTs) to separate out energy use when multiple buildings are on the same meter. Eyedro is installed in the breaker and uses a small sensor to provide real-time data analyzing and storing electricity usage. FuseboxÂ® provides a variety of energy management tools for school districts to use in developing and implementing an energy management program. A dashboard for each school is customized to meet their unique needs and data analytics can be managed for electricity, gas, and water. Attractive and engaging graphics show the district's energy data and costs, green team activities, energy reductions, and 15-minute interval data for use in managing electrical load. This presentation will provide examples of Arizona school districts who have successfully used ENERGY STAR, Eyedro, and/or FuseboxÂ® to save energy and implement a sustainability program. The presentation will include short clips from school district stakeholders, before-and-after energy savings, and examples of using the three technologies to successfully implement district-wide "green teams."