

Author: Marty Morgan, DNV GL

Presentation Title: Place-Based Energy Audit

Abstract: Building energy audits offer a rich educational opportunity for high school students. A Midwest utility is engaging students with a multi-disciplinary project to expose them to the science and future careers of energy while showing them a path to actionable substantiality in their schools, communities, and homes. Consumers Energy created "Student Led Audit" Pilot program in 2019. Through the first year of the pilot it has engaged more than 200 students across 9 school districts. In the current year the program plans more than double that participation via a companion curriculum connecting the activities directly to state education standards. Local energy industry professionals guide high school students through the full process of a building energy assessment including survey data collection, energy and financial analysis calculations, and most importantly: presentation of findings. This last step sees students craft a persuasive speech and pitch their audit recommendations directly to district decision makers. The audit is an interactive activity which highlights energy use and efficiency opportunities for students. Investigating a building they know allows them to experience energy education that is real and meaningful while gaining the skills necessary to quantify their results. The possibility that their recommendations could lead to actual impacts deepens their personal connection to the science. Student feedback includes how it has opened their eyes to the importance of energy waste reduction and increased awareness of STEM opportunities (especially in the energy industry). Educator feedback emphasized the value of exposure to industry experts and their guidance throughout the process to ensure an authentic and impactful experience for the students.