About:

Safety, Codes, and Standards

HELC's hydrogen safety, codes, and standards projects focus on ensuring safe operation, handling, and use of hydrogen and hydrogen systems through safety sensors and codes and standards for buildings and equipment.

Safety Sensors

To facilitate hydrogen safety, HELC is testing hydrogen sensors that detect leaks and monitor gas purity at the Safety Sensor Testing Laboratory. Because hydrogen is colorless and odorless, sensors are important for safe hydrogen fueling stations, equipment, and facilities.

For remote hydrogen sensing, HELC is assessing sensor requirements and design options for innovative hydrogen sensor technologies and the feasibility of using analytic techniques.

International Collaboration

Scientists and engineers at HELC's Safety Sensor Testing Laboratory collaborate with a variety of partners from industry, academia, and other research organizations to develop and test hydrogen sensor technologies. In addition to partnering with organizations in the United States, HELC has formalized a Memorandum of Agreement (MOA) with the Hydrogen fuel Cell Centre, University of Birmingham,UK. Hydrogen and fuel cell research Centre, Chemical Engineering department, University of GRAZ, Austria.

Codes and Standards

HELC facilitates developing and promulgating building and equipment codes and standards for hydrogen systems in commercial, residential, and transportation applications. HELC also provides technical resources to help international standards development organizations.

By developing and promulgating codes and standards, HELC contributes to making hydrogen a more significant energy carrier and fuel. Codes and standards are critical for the commercialization of hydrogen-based products and systems. In

support of this, NREL developed national templates for hydrogen codes and standards.