

**Topic name:** Energy-based hazard recognition

**Length:** 2-3 hours

**Targeted Levels:** All levels

**Executive Description:** Recognizing hazards is a fundamental skill for nearly every injury prevention technique. Through a series of brief psychological activities, participants will experience systematic human limitations in hazard recognition. A research-validated technique - energy-based hazard recognition - will be introduced and novel strategies for implementation will be demonstrated.

**Detailed Description:** Research has consistently shown that workers across industries identify and discuss fewer than half of the hazards that they will face during a work period. The limitation is not complacency or lack of effort. Rather, there are systematic blind spots related to the way that we are conditioned to see dangers in our environment. Simply, we tend to see some forms of hazards easily by instinct, while others go unnoticed because they require more complex problem solving. Fortunately, a series of published research studies have shown consistent evidence that systematically searching for distinct forms of energy enables workers to see and discuss a wider array of hazards more easily.

Via a series of engaging activities and mental games, participants will experience first-hand the common human strengths and limitations in hazard recognition. Then, the concept of energy-based hazard recognition and the 'energy wheel' are introduced along with published field experiments showing that they reliably increase hazard recognition skill by an average of 30%. The workshop ends with a description of the qualities of a world-class pre-job meeting and a demonstration of a tool for assessing and improving the quality of these meetings. Experience with implementation of these techniques will be shared, along with a practical vision for future use of the method.

In this session, participants are enabled to see their own systematic strengths and weaknesses related to hazard recognition and, using new tools, are equipped to recognize hazards more broadly and with lower cognitive demand. A variety of options for integrating energy-based hazard recognition are presented and demonstrated.

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**Experience:** Dr. Hallowell has been invited keynote speaker at over 30 conferences and workshops in the past 3 years. These include keynote presentations at the Edison Electric Institute, INGAA Foundation, Stanford Project Leadership Institute, the International Pipeline and Offshore Contractors Association, and safety summits for Quanta Services, Aecon, Price Gregory, Exelon, Chevron, ConocoPhillips, Wolfcreek Group, and others.