# HECA™
# HIGH-ENERGY CONTROL ASSESSMENTS

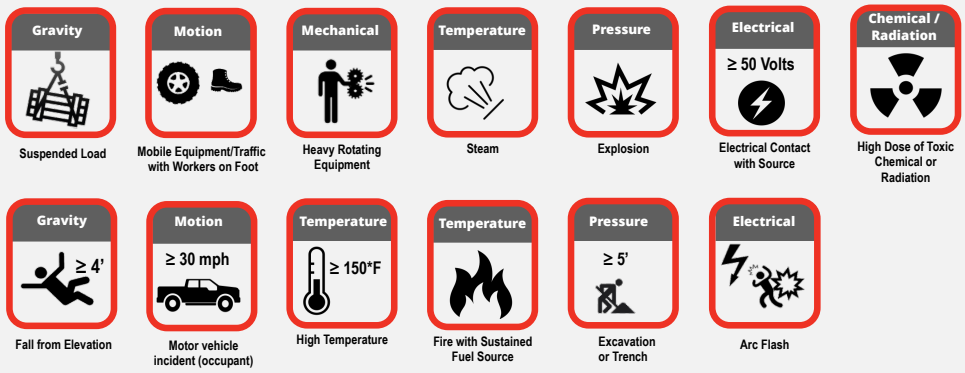
## *What is HECA?*

High-Energy Control Assessments (HECA) is a new method of measuring performance by assessing the extent to which front-line employees are adequately protected against life-threatening hazards. Specifically, HECA is computed as the percentage of high-energy hazards that have a corresponding direct control. By applying precise definitions of 'high-energy' and 'direct control,' we can ensure that HECA is consistently measured within and across companies. HECA may be assessed during typical site visits by observing work conditions and engaging with front-line employees.

## *Three-Step Process for HECA*

### Step 1

**Identify all high-energy hazards.** When the energy associated with a hazard exceeds 500 ft-lbs, the most likely outcome is a serious injury or fatality (SIF). Therefore, high-energy hazards can be considered life-threatening hazards or the stuff that kills you (STKY).




***Common high-energy hazards.***

***This list does not include every possible high-energy exposure.***

### Step 2

**Controls Assessment.** For each of the high-energy hazards identified, mark which have a corresponding direct control *when you made your initial observation.* To be considered present, controls must meet all three strict criteria shown below.

1. Specifically targeted to the high-energy source
2. Effectively mitigates exposure to high energy
3. Effective even when someone makes a mistake

When a high-energy hazard has a corresponding direct control, it is marked as "success" and when a high-energy hazard does not have a direct control, it is marked as "exposure."

### Step 3

**Compute the HECA Score.** Apply the equation below to determine the proportion of high-energy hazards that had a corresponding direct control.

$$HECA = \frac{Success}{(Success + Exposure)}$$

***Success:*** total number of high-energy hazards with a corresponding Direct Control

***Exposure*** total number of high-energy hazards without a corresponding Direct Control



*HECA was created by Dr. Matthew Hallowell, evaluated and tested by the Construction Safety Research Alliance, and operationalized by the Edison Electric Institute and the INGAA Foundation. HECA is a pending trademark of the Colorado Construction Safety Laboratory, LLC.*