



ELECTRICAL SHOCK RISK ASSESSMENT & MITIGATION PROGRAM

REDUCING EXPOSURE. IMPROVING SAFETY. PROTECTING PEOPLE.

Overview

Electrical shock incidents—ranging from nuisance shocks to serious injuries—are often the result of legacy electrical designs, evolving operational practices, and inconsistent protective measures at the point of human interaction. While facilities may meet electrical code requirements, shock exposure can still occur during normal operations and maintenance activities.

Interstates' Electrical Shock Risk Assessment & Mitigation Program is designed to identify where personnel are exposed to electrical shock hazards, evaluate the level of risk, and provide practical, prioritized solutions to reduce or eliminate exposure—without disrupting operations.

This program supports corporate safety initiatives, EHS goals, and long-term electrical reliability.

Program Objectives



Identify locations where personnel are exposed to electrical shock risk



Reduce the likelihood and severity of electrical shock incidents



Improve consistency of electrical protection across the facility



Provide clear, actionable recommendations with budget clarity



Support a proactive, preventative electrical safety culture

Our Approach

STEP 01

Understand How People Interact with Electrical Systems

We begin by walking the facility with a focus on human interaction points—where operators, maintenance teams, and contractors routinely touch, access, or rely on electrical systems.

This includes:

- | Receptacles and temporary power use
- | Control devices and operator interfaces
- | Equipment accessed during normal operation or maintenance
- | Areas affected by moisture, washdown, or conductive environments

The goal is simple: identify where exposure exists today, not just where systems were originally designed to be safe.

STEP 02

Identify & Prioritize Shock Risk

Not all electrical exposure carries the same level of risk. We evaluate conditions based on how often they are accessed, the environment they're in, and the potential severity of a shock event.

This allows the facility to:

- | Focus first on the highest-risk areas
- | Avoid over-engineering low-risk locations
- | Align improvements with safety and budget priorities

STEP 03

Reduce Risk Through Practical Engineering Solutions

Once exposure points are understood, we work with the facility to reduce risk using proven strategies, including:

- | Targeted GFCI protection in areas where personnel are most vulnerable
- | Low-voltage (24V) control device strategies that reduce shock severity at the human-machine interface
- | Grounding and bonding improvements that address hidden contributors to shock incidents

The emphasis is on reducing exposure, not just reacting to past incidents.

STEP 04

Reinforce with Awareness & Consistency

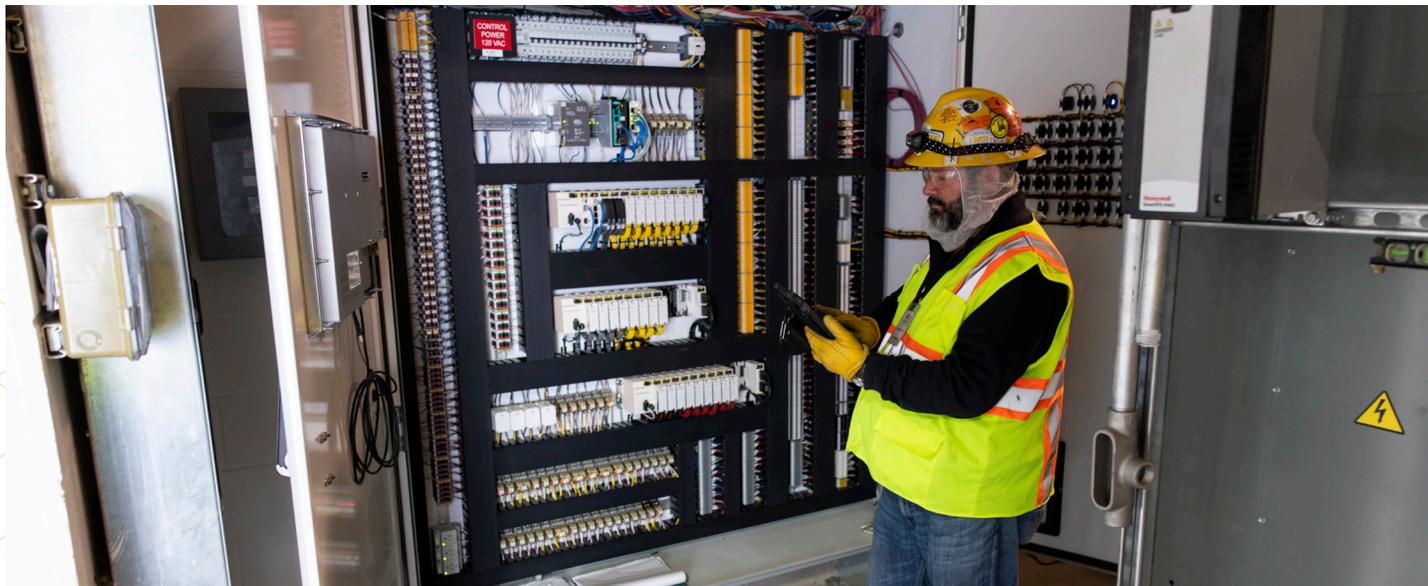
Engineering solutions are most effective when paired with clear expectations and awareness. As part of the program, we help reinforce safe interaction with electrical systems by aligning protection strategies with how people actually work in the facility.

This supports:

- | Safer daily behaviors
- | Better use of installed protections
- | Stronger alignment between operations, maintenance, and safety teams

The Result

A clearer understanding of where electrical shock risk exists, a prioritized path to reduce exposure, and a facility that is better aligned with modern electrical safety practices. The Electrical Shock Prevention Program helps clients move from reactive incident response to proactive risk reduction—protecting people while supporting reliable operations.



Why Interstates

Interstates brings together field experience, engineering expertise, and a deep understanding of industrial environments. We don't just evaluate electrical systems—we focus on how people interact with them, and how to make those interactions safer.