

Reducing risk to personnel
and business operations.



Electrical Arc Flash HAZARD STUDY



SIEMENS

Global network of innovation



Arc Flash Hazards

In the fraction of a second that it takes copper to expand to vapor, an arc flash can generate skin-searing heat — four times hotter than the surface of the sun.

Recent revisions to NFPA70E require that an Arc Flash Hazard Analysis be performed prior to working on or near electrical equipment containing exposed energized conductors. The analysis determines the arc flash boundaries (AFB), incident energy levels and the required level of personal protective equipment (PPE). The recommendations in the analysis can be used to determine hazards in your workplace. Implementing the recommendations will help protect your workers and help you satisfy OSHA requirements.

The Siemens solution to minimize risks from arc flash hazards

Working within NFPA and IEEE guidelines, our experienced power systems engineers will perform systematic and accurate Arc Flash Hazard Studies as follows:

1 Short Circuit Calculations

Siemens will either use your data, or make calculations for you, to identify bolted and arcing fault levels at key points in a power distribution system.

2 Protective Device Coordination

Using the customer's electrical systems coordination study, Siemens determines the duration of the arcing faults.

3 Arc Flash Hazard Calculations

The incident energy level, the flash hazard boundary, and the PPE required are then calculated for each location.

4 Documentation

The information above is compiled for you into a comprehensive report, which contains information necessary to comply with regulatory requirements.

5 Unsafe Work Locations

The report will identify work locations having incident energy levels in excess of available PPE ratings.

6 Arc Flash Hazard Mitigation

Recommendations will be made to minimize Arc Flash Hazards by changes in system protection or operational procedures.

7 Arc Flash Hazard Labels

In addition to the report, our customers will receive a field label containing the flash hazard boundary distance, incident energy level, PPE category and shock hazard for each location.

Implementing recommendations from a Siemens Arc Flash Hazard Study can bring you the following benefits:

- Improve employee safety
- Improve your electrical system
- Provide safety information to subcontractors
- Assist in compliance with regulations
- Provide you with documentation that may bring about reductions in workers compensation and insurance rates

Turn to Siemens for Arc Flash Hazard Studies, comprehensive safety training and other related services that will enhance the safety of your personnel and the reliability of your operation.

Siemens Energy & Automation, Inc.

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Siemens Energy and Automation, Inc. is a GSA contract holder.

SARRACS — Complete arc flash protection for switchgear racking.

Racking medium voltage circuit breakers (>1000V) into and out of a live bus is one instance where the PPE required may not be adequate to protect personnel from arc flash. Siemens SARRACS effectively removes the operator from the arc flash boundary by allowing for remote installation or removal. In addition, SARRACS provides torque monitoring to detect improper breaker connection.

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