



Our Arc Flash Hazard Assessment Service Explained

An Arc Flash Assessment begins with an analysis of the facility electrical power distribution system. Our engineering team will collect utility information and details about your existing equipment as the characteristics of your electrical equipment will determine the severity of the Arc Flash hazards in your facility.

Arc Flash Hazard Assessment Service Scope

Lewis Bass provides a comprehensive arc flash study including full on-site evaluation, modeling, analysis drawing, fault current and coordination studies.

Arc Flash Assessment service deliverables include:

- Recommendations to reduce arc flash hazard levels in your facility.
- An arc flash risk assessment report to satisfy OSHA and insurance requirements.
- Arc flash hazard labeling for evaluated equipment.
- General facility safety and preventative maintenance recommendations.

Arc Flash Hazard Assessment Service

As required by OSHA and the NFPA 70E, Lewis Bass's Arc Flash Hazard Assessment service helps determine if the potential for a hazardous electrical arc flash exists in equipment that employees work on or near while the equipment is exposed and energized.

We have been offering our Arc Flash Assessments to our small, medium, and enterprise business clients since 2009 and we also have experience performing non-commercial Arc Flash Assessments for the San Mateo Union High School District in 2016 at two locations.

What is an Arc Flash Hazard Assessment?

An Arc-Flash Hazard Assessment determines the degree to which a worker may be exposed to potential Arc-Flash Hazards and what kind of Personal Protective Equipment (PPE) is required to protect workers from the heat, light, and blast associated with an Arc-Flash incident.

Each piece of equipment operating at 50 volts or more and not put into a de-energized state must be evaluated for arc flash and shock protection. This evaluation will determine the actual boundaries (prohibited, limited, and restricted) and will inform the worker of the PPE requirement.

How we perform our arc flash assessment at your facility

- Collect system data for our engineering review.
- Find Configured Mode/Sequence of Operation.
- Determine Bolted Fault Currents.
- Determine Arc Fault Incident Energies.
- Identify Protective Device Characteristics and duration of Arcs (Coordination).
- Document and record system voltages and classes of equipment.
- Calculate Safe Working Distances from the equipment.
- Calculate and record Incident Energy for the equipment.
- Calculate and record the Flash-Protection boundary for the equipment.
- Provide a one-line diagram of the portion of the power distribution system analyzed.
- Finish the assessment and label all equipment included in the analysis. Our labels will comply with the current edition of NFPA 70E. Service equipment labels include information to comply with 2017 NEC section 110.24 (available fault current).



Is Arc Flash required by OSHA?

Yes.

In §1910.335(b), OSHA requires employers to use alerting techniques (safety signs and tags, barricades, and attendants) . . . *to warn and protect employees from hazards which could cause injury due to electric shock, burns or failure of electric equipment parts.*

§1910.335(b)(1) requires the use of safety signs, safety symbols, or accident prevention tags to warn employees about electrical hazards (e.g., electric-arc-flash hazards) which may endanger them as required by §1910.145.

Do you need to schedule an Arc Flash Hazard Assessment?

1. Reach out to our sales team via customersupport@lewisbass.com or call us at 1-(408)-942-8000.
2. Find and send us your one line diagram so we can identify the panels and equipment needing an assessment.
3. Meet with LBIES' assigned Project Manager to go over the list.
4. We will schedule a time for our field engineer to go onsite and perform the requested service.

Frequently Asked Questions

How Much Does an Arc Flash Study Cost?

To accurately quote an Arc Flash Study a variety of factors must be considered:

- What type of facility (manufacturing, warehouse, laboratory, etc) the equipment is installed in.
- The size of the facility and number of buildings.
- The amount of electrical equipment on site.
- The amount and type of electrical services servicing the facility.
- Availability of up-to-date data for the facility's equipment.

Note: Arc Flash Studies can be more cost effective for our clients if we have less research to do prior to work start. Make sure you provide us with the most up-to-date facility information and data such as: one line diagrams that take into account later additions to your facility's electrical system(s), your own electricians on staff to assist in data collection, and complete maintenance records for all the equipment.

How often should I get an arc flash study done?

A new Arc Flash Study should be performed every 5 years or when a new piece of equipment has been installed.

What does OSHA look for in Arc Flash Compliance?

A facility considered to be in compliance with OSHA Arc Flash standards must provide, and be able to demonstrate, a safety program with defined responsibilities such as:

1. Accurate calculations for the degree of arc flash hazards.
2. Provide the proper rate and sized personal protective equipment (PPE) for their workers
3. A facility-specific electrical safety program coupled with electrical safety training for workers on the hazards of arc flash.
4. The appropriate tools for safe working.
5. Warning labels on equipment.

What are the costs associated with an Arc Flash accident?

Total costs of arc flash accidents have been estimated to be between \$12 and \$15 million, and can include medical expenses, down time, equipment replacement, lawsuits, and insurance and litigation fees. OSHA has fined some facilities over \$500K for not being compliant with electrical safety regulations (www.osha.gov).

The biggest costs are the probable lawsuits, because the employer did not properly identify the hazards, train employees and provide proper warnings, procedures and protective equipment (PPE).