



# REDUCING ARC FLASH DANGER FROM EXTREME TO LEVEL 1

## CASE STUDY

Pioneer Power Group was contracted to perform an arc flash study. At Pioneer Power Group, the safety of our customers and their clients is our absolute, number ONE priority.

### ▶ CHALLENGES



The crux of this project was that two main switchboards were recorded to be in extreme danger. Anytime this situation occurs, personnel cannot interact with the equipment safely without the risk of severe injury or death. There are several factors that could cause incident energy to be high at a given location. This is particularly true at a main distribution switchboard. Our customer reached out to discuss this scenario and ways to reduce high incident energy level at these two switchboards.

#### CONTACT US:

## ▶ OUR SOLUTION

Our team immediately addressed the problem and provided several possible solutions for the customer to choose from. We explored three options:



Find solutions to drop the fault level current flowing through the switchboards. Since this was a customer owned transformer, this could be achieved by increasing the impedance of the supplying transformers. In addition, the cable lengths to the switchboards could be increased in order to drop the fault current.



We consulted with the client to reset the main breakers of those switchboards so we could reduce the arc fault clearing time, which results in clearing the arc fault as quickly as possible. This did not provide a significant change for the arc flash level at either switchboard.

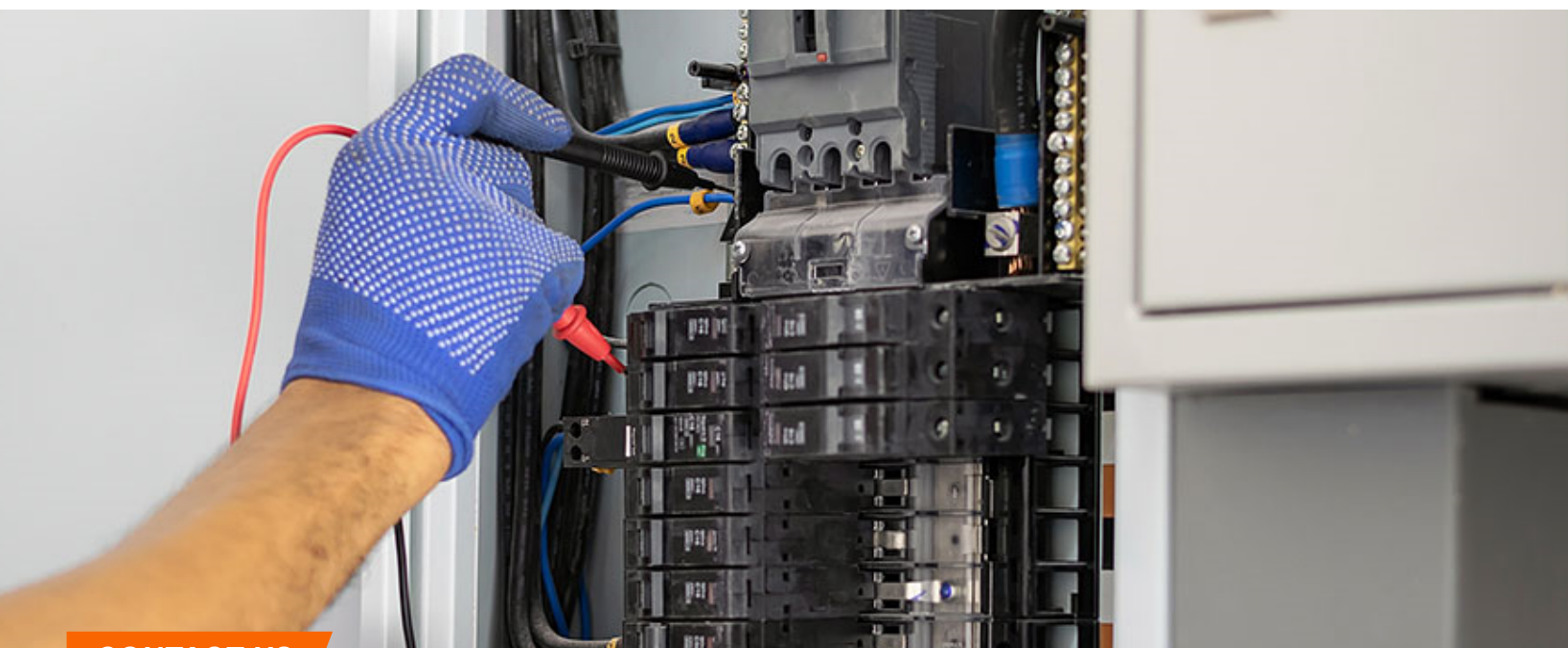


We also added maintenance mode options to the main breakers in the switchboards. This enabled a reduction in the fault clearing time, thereby drastically reducing the arc flash level from Extreme Danger to a Level 1 at the load-side of both switchboards.

## ▶ RESULTS



No “PPE Space Suits” will be required now! Our customer chose to add maintenance mode options to the main breakers in the switchboards. The customer was very pleased with the result, as well as the time we took to patiently go over all the options to provide a solution. Our team does everything we can to provide a safe and workable results for your project location!



**CONTACT US:**