

**SEATTLE CITY LIGHT**

**ACCIDENT**

**April 16, 2009**

Investigated and Reported by  
Morgan Rice  
IBEW Local 77 Accident Investigator

## Seattle City Light Arc Flash

On 16 April, 2009, at about 8:30 am, a Seattle City Light line crew was involved in a phase to phase, 26kv arc flash.

Two crews, a line crew, and a pole crew, were sent out to replace a pole. Upon arriving at the site, the crew noticed immediately that the two phases on the 'field' side of the pole were close together. The crew had a tailboard, and a Journeyman Lineman, and a Primary Apprentice Lineman went up in a bucket to open the electronic sectionalizers on the three phase, 26kv overhead line.

Once in the air, the Lineman and the Apprentice discussed the order they would open the sectionalizers. They opened the sectionalizer on the road side first. They then moved over below and slightly away from the middle sectionalizer, which was about nine or ten inches from the last sectionalizer. The two noted that an ear on the farthest cutout was broken, and they decided to open the middle sectionalizer next. The Apprentice used a shotgun to place the Loadbuster on the ring of the cutout door, and the ear of the cutout. The Apprentice checked with the Lineman that he was ready, then looked down and pulled open the door. Immediately there was arcing, and then an explosion as the arc reached the adjacent phase.

The Crew Chief had Hold Opens on the reclosers. When the arcing stopped, the Apprentice was able to remove the Loadbuster from the top of the cutout. The door was no longer connected, as a portion of the metal ring used for opening and closing the door was melted away. The adjacent sectionalizer was also hanging open, with a portion of it's ring melted away, too.

The Lineman and the Apprentice were seen by EMTs at the scene, and then transported to Harborview to be looked at by doctors. Both received minor flash burns, but neither required medical treatment. They were returned to their crew, and resumed working that same shift.

### **Conclusions:**

The S&C Loadbuster tool is rated for a maximum interrupting capacity of 900 amps, and requires a rebuild after 1500-2000 operations. The line current was below 200 amps, and the counter read 281 at the time of the review, and the tool was only a year old, so the job to be performed was well within the limits of the tool. Further inspection of the tool by Rohlinger showed that the tool was functioning properly, and those parts with critical measurements were checked, and found to be well above the manufacturer's requirements.

The two cutouts on the field side were very close together, a fact noted and discussed by the crew. The crew chose the Loadbuster, a tool designed to snuff the arc internally, to open the cutouts. Whatever caused the arcing that led to the explosion is not known.

**Recommendations:**

None. This appears to be a fluke incident. The crew both turned their heads away before opening, and were wearing all their PPE. Their training saved both from what could have been far worse injuries.

Respectfully Submitted by Morgan Rice, Local 77 Accident Investigator