

The Beginning of an Industry

By Douglas Powell

PEARL President

It is widely believed that our electrical power system is exposed to terrorist attack, cyber-attack, and EMP electromagnetic pulse. Our industry is the “first responder” when disaster strikes. We provide millions of square feet of electrical equipment storage securely in hundreds of warehouses located in hundreds of cities throughout the country, with electrical equipment ready to ship within days or hours when needed.

The electrical surplus equipment market is a major contributor to the speed at which we are able to get our electrical power grid and major industrial infrastructures up and running so quickly after a natural disaster. PEARL, its members, and the industry in general, offers high speed solutions for utility, industrial and commercial users of electrical equipment during major equipment failures as well and offering valuable solutions to utilities, industrial and commercial users of electrical equipment when maintaining and updating the reliability of their power distribution systems.

To tell the PEARL story, you have to go back in time about 140 years. In 1876, Thomas Edison opened his laboratory Menlo Park, NJ, and out of that laboratory was to become perhaps the greatest invention of the age - a successful incandescent electric lamp.

From the invention of the first practical incandescent light bulb, the industry quickly evolved to the establishment of America’s first Central Power Station.

At 3:00 pm on September 4, 1882, the “jumbo generator” at the Pearl Street Generating Station began to spin. Electricity was transmitted by DC lines to the Wall Street office of J. P. Morgan and to the editorial room of the New York Times. The first electrical power generating station had just gone online. It wasn’t but 26 years after the start of that very first Generating Station that we can trace the beginning of our industry, The Electrical Surplus and Equipment Reconditioning Industry with the opening of the Belyea Equipment Company, started in 1908 in Manhattan, New York, just a few miles away from Thomas Edison's Pearl Street Generating Station.

Changes in our industry have been driven by a variety of factors, not the least of which are environmental issues, such as reducing our carbon footprint and reducing the amount of waste going into landfills. We all know how much recycling does for our environment, but there is in fact research studies that compare reconditioning to recycling that offer strong support for the services we provide. Because Reconditioning uses human labor instead of energy resources like recycling, it’s quickly becoming recognized as the ultimate form of recycling.

How about technology drivers that also support our industry? While the basic function of a circuit breaker hasn’t changed much since their introduction in the mid 1920’s, today’s circuit breakers are packed with new technologies designed to meet safety and reliability goals. Arc flash can be mitigated,

ground fault protection is possible, interrupting and current limiting capabilities have increased and communication options are now available.

In the 1980s, engineers traced the sudden rash of breaker malfunctions to reconditioned breakers from overseas, and suddenly, buyers everywhere were skittish about using any reconditioned breakers. Those few offshore companies who did the bad reconditioning didn't follow industry practices or manufacturer guidelines. These companies mislabeled their breakers, didn't test them properly, and often sold them as new.

The resulting furor left a stain on the breaker reconditioning industry. It was a classic case of "guilty by association."

Counterfeiting was another concern that continues to be an ongoing problem in the industry. This is a side-effect of the global trade initiatives with manufacturers shifting their production operations to developing countries, where intellectual property rights enforcement lags behind more developed countries, creating an opportunity for counterfeiters. On a few occasions, unethical offshore manufacturers were found producing legitimate factory parts during the day, and counterfeit parts sold to unscrupulous distributors at night.

Another driving force behind the counterfeiting problem is the constant advance of technology. Contract manufacturing plants are constantly improving their ability to create — or reverse-engineer and recreate — anything a client wants in short time frames at low cost. In fact, the quality of the duplication has gotten so good that, in some cases, even the intellectual property owner is hard-pressed to identify the fake without breaking it open and testing it. In the mid-1980s, surplus equipment in federal court was forced to admit to selling counterfeit electrical parts in circuit breakers.

In 1996, a group of surplus equipment dealers gathered together in Denver, Colorado to discuss some of the specific issues of the industry at that time. It was out of this meeting that a small group of 20 charter companies decided to join forces, pool funds and knowledge, and form the Professional Electrical Apparatus Recyclers League (PEARL).

The Industry was still struggling to recover from a stained reputation of the 1980's. There were no standards or testing methods to follow, no formal training or education available, and the industry was ostracized by many of the electrical equipment manufacturers. In the formation of PEARL, the primary mission was to create a marketable distinction in quality, safety, and integrity for PEARL members in the eyes of their customers.

From its inception, the original founders had a vision for PEARL - to change the culture and image of the industry. A mission statement was created challenging the industry "to create a marketable distinction in quality, safety, and integrity for PEARL members in the eyes of their customers." The uncompromising commitment to these three foundational pillars, quality, safety, and integrity, has been at the core of PEARL initiatives since its beginning.

But, changing the image of an industry requires a commitment to a strategy. For PEARL, that strategy has evolved over the years, but today it looks something like this:

- PEARL has taken a firm stand against counterfeit products and has worked to make sure unsafe electrical equipment does not make it into the marketplace and to end-users.
- PEARL is committed to joint participation with manufacturers to eliminate counterfeit products from the supply chain, and has worked with manufacturers to address issues like counterfeiting and labeling issues.
- PEARL is committed to partnering with other Industry Associations, such as National Electrical Manufacturers Association (NEMA), to discuss a variety of subjects, including participating on NEMA's Codes and Standards Task Force on refurbishing electrical products. PEARL was invited to and is working with the Canadian Standards Association (CSA), the primary industrial and commercial standards development body for Canada, as part of its Technical Committee on Electrical System Maintenance. CSA's invitation comes after the association's decision last year to reference PEARL's electrical reconditioning standards in the first edition of CSA's Z463 Electrical Maintenance Guidelines. PEARL also met recently with the Remanufacturing Industries Council (RIC) to promote the U.S. remanufacturing industry. In its support of RIC, PEARL also participates in education and promotional initiatives in the U.S. remanufacturing industries. RIC represents some of the U.S.' largest manufacturing companies, including Caterpillar Inc., General Electric Co., and General Motors.

As an American National Standards Institute (ANSI) accredited standards developer, PEARL is working on making its reconditioning standards for electrical equipment an ANSI standard for which the balloting process is currently underway. PEARL has created two distinct sets of electrical standards for servicing various types of electrical equipment, its reconditioning standards and a set of standards for the inspection and testing of electrical equipment. Each set of standards are based on the original equipment manufacturers (OEM) operating and repair manuals, as well as industry accepted best practices and existing internationally-accepted electrical standards, and are reviewed by third party engineers.

A relatively new initiative is the development of the PEARL Technician Certification Program in 2012. The first certification exams were delivered in late 2014 and to date, there are more than 50 technicians that have either applied or earned their certified designation. This program is yet another step in PEARL's commitment to its vision and mission. This program is intended for technicians who are regularly engaged in inspection, reconditioning and/or remanufacturing, testing, and periodic maintenance of electrical power equipment.

Since its beginning in 1996, PEARL has maintained its commitment to bring educational opportunities and technical training to its membership through its Annual Electrical Safety, Reliability, and Sustainability Conference.

As we look to the future of PEARL and the industry we represent, the Board of Directors will meet next month in Chicago to examine the progress that has been made over the years and to develop a strategic plan intended to lay out a “road map” designed to expand the industry leadership that PEARL has already established, to achieve growth for the organization and its members, and to establish new goals and objectives that will move PEARL to its next level of excellence.