

## **CASE STUDY**

**Bank of America  
One Independence Center  
Charlotte, NC**

### **Facility Description**

Bank of America is one of the world's largest financial institutions, serving individual consumers, small- and middle-market businesses and large corporations with a full range of banking, investing, asset management and other financial and risk management products and services.

As part of its \$20 billion commitment to support the growth of environmentally sustainable businesses that address global climate change, Bank of America has committed \$1.4 billion to meet the U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) certification requirements in all new construction of office facilities and banking centers and invested \$1.5 billion to renovate environmentally progressive office towers in Charlotte, NC and New York City.

### **Challenge**

The 30-story former corporate headquarters building, vintage mid-1970's, had twenty-two (22) low-voltage distribution transformers serving the building that were nearing end of life. Like most Fortune 500 companies experiencing a growing dependence on information technology and integrating controls, as well as supporting expanding data processing and call centers, all served by an aging power system, the decision was made to renovate this 24/7 corporate facility's power system. The goal was to achieve 100% compatibility of the connected loads with the power system. After extensive building surveys, PQI was challenged to present the case to utilize PQI Harmonic Mitigating Transformers versus K-rated Transformers as part of the renovation strategy of the building's power system.

### **Solution**

To reduce nonlinear load-generated 'penalty losses' in the distribution system, increase system and load energy efficiencies, improve system power factor, and reduce voltage distortion at the 480-volt loads, The PQI Power System Optimization Plan was implemented resulting in a new low voltage distribution system comprised of the replacement of twenty-two 45 kVA harmonic mitigating transformers, in a 24-pulse configuration.



### **Impact**

100% electrical distribution system and load compatibility was achieved. The new configuration produced an annual power saving of more than \$170,000. This renovation of the bank's corporate headquarters in Charlotte also resulted in dramatically reducing the building's carbon footprint while achieving LEED Gold™ certification, the first renovation project in North Carolina to achieve this distinction.

