

CASE STUDY

Bellagio Hotel & Casino

Las Vegas, NV

+ Company

The Bellagio Resort & Casino, Las Vegas, is part of the MGM Mirage Group, one of the largest hotel & casino operations. Their family of resorts includes Aria, Circus Circus, City Center, Excalibur, Luxor, Mandalay Bay, MGM Grand, Monte Carlo, New York-New York, The Mirage, and Vdara.

+ Challenge

PQI was asked to investigate the cause of several serious operational problems at the Bellagio Hotel & Casino in Las Vegas, Nevada. These problems included corruption of data in the computer and slot machine networks, and poor video quality at the surveillance system monitors. PQI uncovered two significant power quality issues, which were the cause of these network and picture quality problems. The issues included high levels of voltage distortion and neutral-to-ground voltage at these sensitive electronic loads. Power system and load incompatibility problems are common when the loads are nonlinear. PQI was next asked to find a solution and prepare a detailed proposal.

+ Solution

PQI proposed and was authorized to supply zero-sequence harmonic filters for all branch circuit sub-panels and harmonic mitigating transformers for all five targeted sub-systems. The application of these devices was guaranteed to resolve the identified operational and system incompatibility problems.



+ Impact

With annual savings of approximately \$241,381 and an installed cost of \$363,956, the payback was 1.5 years and the rate-of-return was 66%. If harmonic mitigation had been included in the original design, payback would have been achieved in less than 6 months.

POWER QUALITY INTERNATIONAL is the industry leader in the development, design and manufacturing of harmonic mitigating and energy-efficient transformer technologies. With a passion for solving problems and helping customers achieve power quality and energy efficiency, PQI delivers cost-effective solutions that ensure power quality and energy efficiency for the life of their customers facilities.

