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## **Invisible risk? Stop playing the odds by protecting and maintaining your building's power systems**

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Your electrical distribution system is the most vital aspect of your operation. Depending on your building or type of operation, electrical failure can cause a loss of goods, data, equipment, property damage - potentially even life - that will require unbudgeted time and money to repair or replace, if possible. Just because everything is working today doesn't necessarily mean that potential problems aren't lurking. Improperly maintained systems will continue to deteriorate over time, increasing the likelihood for malfunction. The more power your operation uses, the greater the risk of failure and the warning signs are invisible to the untrained eye. Left unchecked, failure happens. Suddenly. And when it does, it can be catastrophic.

McPhee Electric, Ltd, with offices in Farmington and Stratford, Conn. and Medford, Mass., has expanded its preventive electrical maintenance services under the PowerHawkesm banner, in an effort to engage more customers in what it believes is an absolute must in today's era of critical power systems. For more than a decade, McPhee has provided an array of preventive services for electrical systems, but this proactive effort is intended to significantly increase the number of customers who are actively reducing the invisible risks associated with these systems.

### Business Interruption

It's a fact that 80% of all power-related equipment problems occur on the customer side of the meter. There's no surprise that electrical system failures are among the most common and costly types of equipment breakdown. In 2008 alone, FEMA/US Fire Administration said that \$442 million in direct dollar losses occurred due to fire caused by electrical distribution system malfunction.

They also know that if a fire does occur, there's more than a 10% chance that it will be caused by an electrical distribution system malfunction. Finally, electrical distribution system malfunction is the leading cause of fires in non-residential structure fires after arson.

### Life Safety Risks

The monetary cost of a single arc flash incident can exceed a million dollars per incident, including medical expenses, plus the cost of equipment replacement, downtime, and insurance. The explosive energy of an arcing fault sends more than 2,000 workers to burn centers every year. In most cases, these could have been prevented with the proper knowledge of arc flash hazards and avoidance. In 2001, more than 10% of the causes of fire in non-residential buildings in the U.S. are linked to the distribution of electricity with an economic loss of \$17.5 million and 22 human lives. A full NFPA 70E Arc Flash Hazard Analysis is a means to protect the electrical workers and critical power systems in

your facility and is becoming increasingly requested by insurance and loss prevention professionals.

### Operating Costs

Lack of preventive maintenance results in an estimated 12% to 18% cost increase over that found in a proactive maintenance program. According to the Institute of Electrical and Electronics Engineers (IEEE), the failure rate of electrical components is three times higher for systems where preventive maintenance is not performed. For example, voltage imbalances of as little as 5% in motor power circuits result in a 50% reduction in motor life expectancy and efficiency in 3 phase alternating current motors.

This means that electrical failures, for the most part, can be avoided. A well maintained property will operate more efficiently, last longer and command a higher value than a property without the benefit of a comprehensive preventive maintenance program.

### Protect What Matters

Every day across America, assets, revenue and opportunity are lost due to electrical malfunction. Depending on your type of operation or building, electrical failure can cause a loss of goods, data, equipment, property damage - potentially even life - that will require unbudgeted time and money to repair or replace, if possible.

Over the years, we've seen case after case where business disasters could have been avoided or severely lessened if only some simple measures were put in place. Without them up and running most businesses are flat on their back and losing money by the minute. Our belief is that PowerHawke will insure today's businesses are not unnecessarily adding risk to their business that they don't need.

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