

experts in **power quality**and the **electromagnetic environment** 

CONSULTING

EDUCATION, TRAINING, SPECIAL PROGRAMS

ENGINEERING, PROJECT MANAGEMENT

PRODUCT EVALUATION

FORENSIC STUDIES

ELECTRIC UTILITY DEREGULATION

CONSULTING



# QUALIFIED, EXPERIENCED PROFESSIONALS DEDICATED TO REAL WORLD SOLUTIONS

Since 1986 PowerCET has focused on enhancing the productivity and reliability of electronic equipment and systems operating in an increasingly complex electrical environment. During this interval, the complexity of electronic equipment, the potential for interaction between equipment, the reliance upon the equipment for day-to-day operations, and even the overall economic viability of modern-day companies have all increased dramatically. PowerCET approaches the problems posed by power quality, equipment compatibility, and electromagnetic interference issues in the same careful, pragmatic manner. No modern electronic device is totally immune to interference problems. Whether the problem is inexplicable failure of X-ray tubes in a CT scan, imaging problems in magnetic resonance imaging equipment, equipment interaction with variable speed drives, or data integrity problems in local area networks serving stock-trading and financial organizations, PowerCET has the experience and knowledge to investigate and resolve the problems.

### OUR INTERESTS ARE

Fundamental to our business philosophy is a strict policy of non-alliance with any vendor or manufacturer of environmental mitigation equipment or protection devices. So whether we are recommending a solution, instructing you on power quality principles or investigating the causes of a problem, there is never a hidden agenda with PowerCET.

## WORLD CLASS SERVICE TO WORLD CLASS COMPANIES

Thousands of individuals have participated in PowerCET training and educational seminars, workshops, and courses. Among hundreds of consulting clients are federal agencies and many Forbes 100 companies from the healthcare industry, financial institutions, semiconductor fabricators, data network and telecommunications facilities, and electric power utilities.

Join the growing number of companies that rely on PowerCET for solutions.



# PowerCET the experts in power c

#### Consulting

PowerCET conducts facility audits and investigations directed at power quality and electromagnetic interference problems.

Additional services include lightning risk analysis, and facility-wide evaluation and hardening against the effects of lightning and transients.

PowerCET facility investigations follow a thorough, highlystructured format. This proven methodology pinpoints problems and solutions in an efficient, cost-effective manner. In addition to traditional power quality investigative and monitoring techniques, PowerCETs arsenal includes advanced approaches to gathering and analyzing data across the entire electromagnetic spectrum. Main Event, a proprietary data analysis software package, was developed as an outgrowth of PowerCET's long experience in the power quality analysis field.



PowerCET educational courses are designed to provide participants with a working understanding of the causes and solutions to power quality problems. Courses range from one-day intensive seminars to in-depth three-day sessions.

PowerCET also offers a wide variety of skills-based instructional courses designed to bring participants up to speed on the use of power quality analyzers, energy analyzers, harmonics analyzers and other instrumentation systems. Students completing a PowerCET educational experience are armed with the knowledge to make an immediate contribution.

#### Course Topics include:

Power Quality Problems, Analysis and Solutions

Power Frequency Harmonics & Reactive Power

Lightning & Transient Protection

Equipment Sensitivity Issues

Grounding

Effects of Adjustable Speed Drives

Courses can be tailored for in-house programs.



## Engineering, Project Management

PowerCET can eliminate power quality problems while a project is still on the drawing board, before costly mistakes are built into a facility. Deploying experienced engineers, project managers and state-of-the-art CADD capability. PowerCET can work alone or alongside your own designers. Bringing our years of experience solving power quality problems to the drawing board, PowerCET can save you money during the start-up and acceptance of new or modified facilities.

Clients requiring a turn-key resolution of power quality problems need look no further. PowerCET can identify the cause, engineer the solution, and manage the correction of your power quality problem. PowerCET engineers have the experience to address the most complex issues. Our managers excel at completing projects on time and within budget.

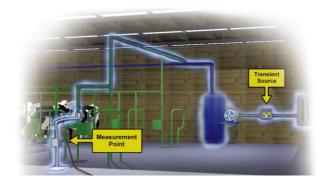
#### Product Evaluation

PowerCET product testing laboratories maintain the same standards of excellence and impartiality as our consulting services. PowerCET's laboratory is equipped to test product performance and determine the susceptibility of equipment to power and data line disturbances over the full electromagnetic spectrum.

#### Services include:

- Evaluation of devices and systems against real-world standards
- System profiling and sensitivity testing for EMI, RFI and ESD
- Surge testing of electronic equipment and electrical protection equipment
- · Specification and documentation reviews
- · Benchmark testing against regulatory standards

PowerCET will investigate manufacturability issues and even recommend design changes to improve product performance.





#### Forensic Studies

Utility companies and corporations must frequently determine the underlying causes for power-related phenomena that have resulted in property and equipment damage, injury and death. Unless careful forensic analysis can prove otherwise, they can face the prospect of expensive legal judgments returned by juries without command of the technical issues or exculpatory evidence.

PowerCET brings the same logical and systematic analysis in arriving at the probable cause for the events in question as we do in our power quality consulting work. An understanding of the myths, popular misconceptions and mistaken beliefs as they apply to electrical phenomena helps identify pitfalls and likely opposition strategies.

And as accomplished classroom educators, PowerCET expert witnesses can explain complex issues in clear, simple language, easily understood by non-technical members of a jury.

## Electric Utility Deregulation Consulting

Utility deregulation is rapidly changing the industry we have always known and understood into an unfamiliar new world. Even though electric utility deregulation is a new field, PowerCET has people who have participated in the deregulation of other regulated utilities who can provide the help that you need. PowerCET brings much needed perspective to the decision-making process in this climate, helping you avoid the costly mistakes, missed opportunities and outright blunders that are so common in this environment.

PowerCET does not and will not market electricity. We are not affiliated with any energy broker or marketer. Consequently, you get the unbiased information you will need to understand and assess the many claims and the "good deals" that will come your way. We do not offer a sales pitch but rather the answers that you need.



# WORLD-CLASS CONSULTING, EDUCATION AND TRAINING SERVICES WITH OFFICES IN NORTH AMERICA AND CLIENTS AROUND THE GLOBE

CONTACT THE POWERCET TEAM FOR SOLUTIONS TO YOUR POWER QUALITY PROBLEMS.



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