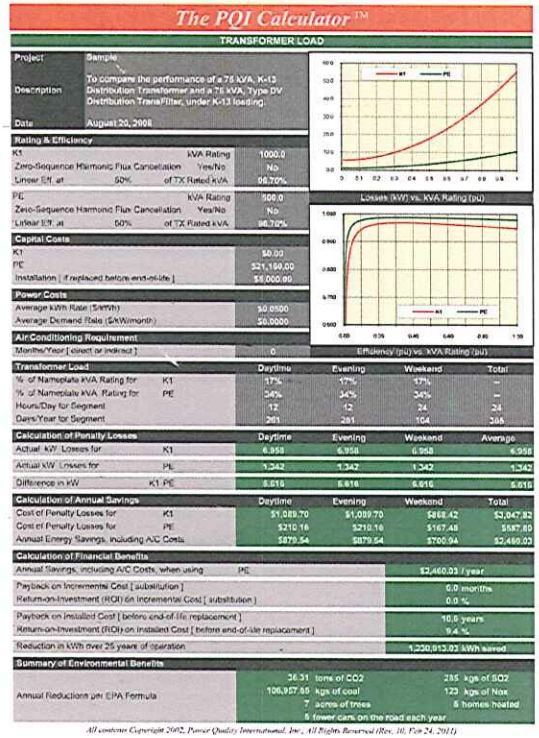
The PQI Calculator™ will allow an engineer to compare any two transformers, each having the same or different kVA and voltage ratings, under the same or different harmonic current profiles, at any load level.

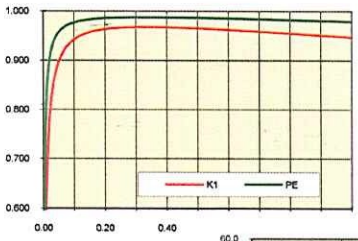


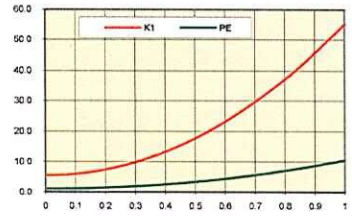
The PQI Calculator™

TRANSFORMER LOAD

Project	Sample		
Description	To compare the performance of a 75 kVA, K-13 Distribution Transformer and a 75 kVA, Type DV Distribution TransFilter, under K-13 loading.		
Date	August 20, 2008		
Rating & Efficiency			
K1	kVA Rating		1000.0
Zero-Sequence Harmonic Flux Cancellation	Yes/No		No
Linear Eff. at 50%	of TX Rated kVA		98.70%
PE	kVA Rating		500.0
Zero-Sequence Harmonic Flux Cancellation	Yes/No		No
Linear Eff. at 50%	of TX Rated kVA		98.70%
Capital Costs			
K1			$0.00
PE			$21,150.00
Installation [if replaced before end-of-life]			$5,000.00
Power Costs			
Average kWh Rate ($/kWh)			$0.0500
Average Demand Rate ($/kW/month)			$0.0000
Air Conditioning Requirement			
Months/Year [direct or indirect]			0

Transformer Load		Daytime	Evening	Weekend	Total
% of Nameplate kVA Rating for	K1	17%	17%	17%	–
% of Nameplate kVA Rating for	PE	34%	34%	34%	–
Hours/Day for Segment		12	12	24	24
Days/Year for Segment		261	261	104	365
Calculation of Penalty Losses		Daytime	Evening	Weekend	Average
Actual kW Losses for	K1	6.958	6.958	6.958	6.958
Actual kW Losses for	PE	1.342	1.342	1.342	1.342
Difference in kW	K1-PE	5.616	5.616	5.616	5.616
Calculation of Annual Savings		Daytime	Evening	Weekend	Total
Cost of Penalty Losses for	K1	$1,089.70	$1,089.70	$468.42	$2,647.82
Cost of Penalty Losses for	PE	$210.16	$210.16	$167.48	$587.80
Annual Energy Savings, including A/C Costs		$879.54	$879.54	$300.94	$2,460.03
Calculation of Financial Benefits					
Annual Savings, including A/C Costs, when using	PE				$2,460.03 / year
Payback on Incremental Cost [substitution]					0.0 months
Return-on-Investment (ROI) on Incremental Cost [substitution]					0.0 %
Payback on Installed Cost [before end-of-life replacement]					10.6 years
Return-on-Investment (ROI) on Installed Cost [before end-of-life replacement]					9.4 %
Reduction in kWh over 25 years of operation					1,230,913.03 kWh saved
Summary of Environmental Benefits					
Annual Reductions per EPA Formula		36.31 tons of CO2		285 kgs of SO2	
		106,957.65 kgs of coal		123 kgs of Nox	
		7 acres of trees		5 homes heated	
		5 fewer cars on the road each year			





Case Study Snapshot

HP Mega Data Center Consolidations

The most ambitious data center consolidation projects ever, which consolidated 85 data centers worldwide into six larger centers located in three U.S. cities - Atlanta, Houston and Austin, PQI got the call.

The consolidation will help HP reduce its IT spending by approximately $1 billion in the coming years.

PQI Project Solution: $250,000 ultra-efficient transformers

The Capitol Building, Washington, D.C.

PQI was awarded the replacement of all distribution transformers.

PQI Project Solution: $100,000 ultra-efficient transformers

Bellagio Hotel & Casino

PQI 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 has resolved the identified operational and system incompatibility problems.

PQI Project Solution: $360,000 with annual savings of $240,000 - payback in 1.5 years

To learn more contact

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POWER QUALITY PRODUCTS

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PQI

POWER QUALITY INTERNATIONAL, INC.

The Ultimate Transformer Standard!

Manufacturers of ultra efficient transformers and ultra efficient harmonic mitigating transformers.

Ultra Energy Efficiency

for

Schools & Universities
Government Facilities
Commercial Buildings
Data Center Operations
Corporate Campuses
Casinos & Hotels

POWER QUALITY INTERNATIONAL, INC.

The Ultimate Transformer Standard!

That's right.

PQI manufacturers and delivers ultra efficient transformers and ultra efficient harmonic mitigating transformers that simply are ***The Ultimate Transformer Standard!***

POWER QUALITY INTERNATIONAL, INC. is uniquely qualified to assist facility owners, managers, and their engineering professionals with the reduction of power system and load losses and efficiency improvement.

We've been providing unique engineered solutions for more than forty years for both new construction as well as retro-fitting existing facilities with state-of-the-art ultra-high efficiency transformers and harmonic mitigating solutions.

The Opportunity

Many organizations are committed to achieve improved energy efficiency by implementing a number of proactive initiatives that include investing in strategic projects that can control and even lower power consumption for its operations. PQI's goal is to create maximum system efficiency for the loads with its system design. The improved total system efficiency through PQI's power distribution transformers can have the single biggest impact in the overall system performance, that not only pays for itself, but over time yields tremendous results in the bottom line.

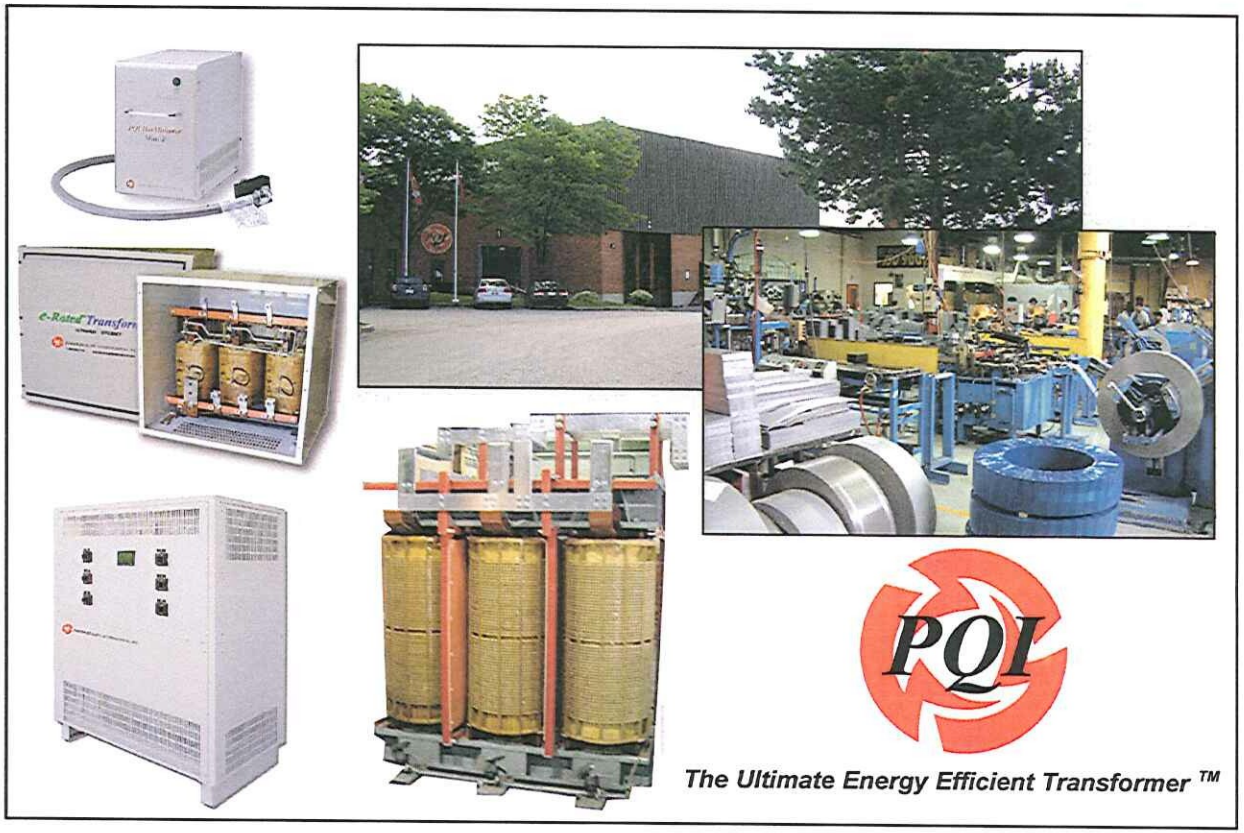
e-Rated

ASHRAE
Advanced Energy
Design Guide
K-12 SchoolBuildings

The PQI COMMITMENT ™

POWER QUALITY INTERNATIONAL, INC. guarantees the Power Quality [1] outcomes of its engineered system solutions, as detailed in ***The PQI Solution***™, and the Payback and Return-on-Investment [2] results, generated by ***The PQI Calculator***™.

If ***PQI*** recommended solutions are implemented by the owners or their engineering professionals, ***PQI*** will increase its standard transformer warranty from 10 to 20 years.



[1] As defined in IEEE Std 519-1992 - IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.

[2] Results from ***The PQI Calculator***™ are based on information received from the facility owners or their representatives. For new construction, the load profiles and their harmonic current spectrums are normally estimated as having K-Factors of K-4, K-7, K-9, K-13, K-20 or K-30. The K-Factor spectrums used are as defined by IEEE. For the renovation of existing facilities, load profiles and their harmonic current spectrums are normally based on actual measurements.

If measurements are unavailable, load profiles and their harmonic current spectrums are normally estimated, as described above. It must be understood that building loads are dynamic in nature. We utilize the best available information in order to provide the most accurate technical analysis and financial benefits.

www.PowerQualityInternational.com