

Hydro Bill Analysis

Importance of Power Factor Correction

Billing period January to May 2013

Billing Period	Power Factor %	Penalty Charges \$	Key Notes	Additional Notes
January	88%	\$8.66	Charged for only wasted energy at \$1.64 per kWh (Additional kW PF Chg)	
February	89%	\$3.77	Same as above	
March	88%	\$39.96	OPA increased rates to \$2.59 per kWh from \$1.64 PF charges now apply to Additional kW PF Chg, Trans.Netw.kW PF Chg and Trans.Conn.kW Pf Chg	
April	86%	\$89.04	Same as above	
May	98%	\$0	Power Factor maintained over 90% thus no penalty charges	
June	98.4%	\$0	Power Factor maintained over 90% thus no penalty charges	

Hydro consumption changes daily and is billed at a monthly rate per Kilowatt-hour. Typically, consumers that require more than 50kW per day are subject additional charges and a more elaborate billing system. We all need to reduce our carbon foot print, however, we cannot neglect the fact that we all need and use electricity daily. One of the best ways to save on energy via consumption and cost is the KVAR PS units. These units help electric systems become more efficient by correcting Power Factor. Not all consumers are penalized for poor factor, however, it is always present when electricity is consumed.

Becoming efficient through Power Factor Correction via the KVAR PS unit will not only help you save money, but will help reduce our carbon foot print along with other key benefits.

The following information has been published by Mike Thornton, the National Power Quality Sales Manager from ABB Ltd.

- Eliminating expensive utility penalties for poor PF
- Improved energy efficiency - reduced system currents and kW losses
- Security of supply - reduction in peak currents prevents fuse failure and loss supply
- Release additional capacity - to take advantage of the current capacity available in existing transformers, switchgear and supply cables
- Increase system load without the need to invest in additional infrastructure
- Environmentally friendly - reduced kWh losses mean that less power needs to be generated, so less CO2 is produced
- Increased infrastructure service life - since the amount of heat generated within cables, switchgear, motors, transformers and other equipment is reduced.

Power Factor Correction and becoming Energy Efficient by means of the KVAR PS Units, will not only help save on energy and equipment, but will help reduce our Carbon Footprint.