Power Factor Correction!

What the Hell is it? And why should I care?

What you see above is an action shot of power a factor correction unit at work.

It has no moving parts. It doesn't make much noise. There are no flashing lights.

But it is helping Millennium Place sports and recreation complex in Strathcona County save money on electrical distribution costs every day!

What is Power Factor Correction?
Besides power coming in from the electric mains, stray electric current (*reactive current*) comes from the operation of electric motors and other electromagnetic devices.

Power factor correction effectively absorbs the reactive current. The less reactive current there is, the closer power factor is to 100%.

Power factors below 90% can be very hard on computer equipment, LED lighting and other sensitive devices, as well as causing the premature thermal failure of motor windings, bearings and insulation.

How do I find out if my facility has a poor power factor?
It isn't always possible to tell if your facility has a poor power factor because there is not always enough information on invoices to be able to tell.

We are able to access raw information directly from the utility to provide a current and historical snapshot of your facility's power factor.

Why should I be concerned about reactive current and poor power factors?
The most common reason to install power factor correction is pure economics.
If you don't deal with reactive current coming from your facility, the utility company has to. When they do that, they charge you for it.
All distribution utilities in Alberta charge a penalty of one form or another for poor power factors. Most start charging at 90% and lower, but some charge for all reactive current.

The other main reason to improve power factor in your facility is to increase the life of equipment. Reactive current creates significant additional heat in equipment on top of the heat already generated by mains electricity.

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