



**This Month's Question of the Month** – Power factor is the ratio of \_\_\_\_\_ power or watts to \_\_\_\_\_ power or volt amps. – See the correct answer on page 2.

● **Note From The Chief – protect yourself by using a licensed electrical contractor**

Homeowners, beware of unscrupulous general contractors who say they are qualified to do your electrical work. Any contractor doing any type of electrical work – wiring, maintenance, repair, etc. – must be a licensed electrical contractor. Here is a true story example of how you can be taken advantage of.

An unknowing homeowner hired a general contractor to do a kitchen remodel. The general told the homeowner no electrical permit was necessary even though outlets and lighting were being relocated and added. The homeowner did ask if the general was going to do the electrical work or if he was going to sub it out. The general responded by saying the John (not the real name) was an electrician and worked for him, the general part time.

The first problem happened when digging outside the basement stairs. The general dug up and damaged the utility service conductors going to the house. John made the repair by cutting the wires, relocating them, and re-splicing the wires. It was only three wires. That evening the exterior garage's mercury vapor light outside came on and within a couple of minutes turned red hot and began to burn. Luckily, the homeowner was outside and knew enough to quickly turn off the garage panel's main breaker. Unluckily, the homeowner was shocked after just getting close to the panel. Luckily, the homeowner knew enough to retreat and turn off the main breaker to the house. The next day, the general had his "electrician" – John – make a repair and actually connect the correct wires together. Two days later, the general "had" to undo the wires again and relocate them because they were in the way of a concrete pour.

Unfortunately, that was not the end to the story. The general installed several can lights and had to call the "electrician," John, in again to troubleshoot. Most of the wire nuts were loose and the wiring had come apart. One receptacle in a nearby bedroom is still not working after the remodel.

The homeowner has since hired a legitimate electrical contractor to make the necessary repairs, but only after paying the general contractor several thousand dollars for his high quality electrical work. The only good news in this story is that nobody was killed as a result of the incompetence of the general and his "electrician."

PROTECT YOURSELF! Use the L&I website to look up your contractor and his compliance history.

<http://www.lni.wa.gov/TradesLicensing/Contractors/HireCon/default.asp>

Make certain he has an electrical contractor's license. You can also check the contractor's permit history at:

<http://www.lni.wa.gov/TradesLicensing/Electrical/FeePermlnsp/LookupPermlnsp/>

● **Nonprofit Organizations – Contractor Exemptions**

In the 2003 Legislative Session a bill was passed that allows an electrical contractor licensing exemption for a nonprofit corporation under 26 U.S.C. Sec. 501 (c)(3). The bill also allows the nonprofit corporation to use appropriately certified electricians and supervised trainees to perform electrical installation, repair, or maintenance on the corporation's facilities. Volunteer electricians and trainees cannot receive any type of compensation for the work.

The total value of the electrical work (e.g. design, labor, materials, equipment, permits, etc.) – entire project – cannot exceed \$30,000. The work cannot be parceled into smaller portions in an attempt to stay below the \$30,000 maximum.

**Safety Tip of the Month!**

Don't even think about bypassing or removing a ground fault circuit or arc fault circuit protection device(s).

They protect lives and property!

This is a serious violation and you will lose your license or certificate if you do it.

Although exempt from electrical contractor licensing, the nonprofit corporation must obtain the proper electrical work permits and ensure they follow all electrician certification and trainee supervision ratio requirements of chapter 19.28 RCW. Any group attempting to purchase a permit under this new exemption should be prepared to supply a copy of the “qualifying” letter from the Internal Revenue Service (IRS) granting the entity the right to claim 501(c)(3) non-profit status. According to federal requirements, U.S.C. Sec. 501 (c)(3) nonprofit corporations include corporations, and any community chest, fund, or foundation organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary, or educational purposes, or to foster national or international amateur sports competition, or for the prevention of cruelty to children or animals. None of the corporation’s net earnings may benefit any private shareholder or individual. No activities may carry on propaganda, influence legislation, or intervene in any political campaigns for public office.

The statute change did not grant these exemptions to U.S.C. Sec. 501(c)(4) entities (e.g. civic leagues, social welfare organizations, and local associations of employees with earnings devoted exclusively to charitable, educational, or recreational purposes).

● **Air Conditioner or Heat Pump – Class B Usage**

A heat pump is considered to be the same as an air conditioner for the purposes of using a Class B inspection label. The use of a Class B label is allowed for the:

- Like-in-kind replacement of the internal wiring of an air conditioner/heat pump; or
- Like-in-kind replacement of and air conditioning/heat pump unit not exceeding 240 volts, 30 minimum circuit amps (MCA) when the unit is connected to an existing branch circuit.

● **Identification Plates/Labels/Signs**

It is important that identification plates/labels/signs be installed to identify the equipment/circuit that is being disconnected. This identification plate/label/ sign must be an identification plate as described in WAC 296-46B-100(38) or an adhesive label approved by the electrical inspector.

Identification plates are required in several locations in the National Electrical Code. Here are some locations:

110.22	Disconnecting means	690.5	PV system – ground fault protection
404.6	Switches	690.7	PV system – bipolar source and output
430.75	Motor control circuits	690.53	PV system – DC power source
430.102	Motor controllers	690.64	PV system – Inverter output connection
430.113	Multiple sources of power	700, 701, 702	Emergency, legally required, and option standby systems (700, 701, & 702.8)
490	Over 600 volts (490..21, .22, & .44)	705.12	Interconnected system – inverter output connection
520.27	Stage switchboards		

Don’t forget to install all the required identification plates, labels, and signs that help remind people of electrical hazards.

● **Arc Fault Circuit Interrupters – New Products**

There are now some solutions available that will allow contractors to meet National Electrical Code AFCI requirements. With the release of the UL listed Cooper AFCI receptacle you no longer have to change out the panel if an AFCI breaker won’t fit. It will also work for protecting some circuit extensions. Siemens also now has a listed 2-pole AFCI breaker that will be useful in some situations.

● **Answer to This Month’s Question of the Month:**

Power factor is the ratio of true power or watts to apparent power or volt amps.