

## Question of the Month

According to the National Electrical Code®, what is an effective ground-fault current path intended to accomplish? – *See correct answer on page 2.*

## Note From the Chief – Solar Photovoltaic Rules Delayed

After extensive research into product availability, and feedback from stakeholders, in accordance with National Electrical Code® (NEC®) 90.4, I have made the decision to extend the delay in implementation of three requirements for Solar Photovoltaic (PV) systems until July 1, 2016. The three requirements are 690.11 Arc-Fault Circuit Protection (Direct Current), 690.12 Rapid Shutdown of PV Systems on Buildings, and 705.12(D)(6) Wire Harness and Exposed Cable Arc-Fault Protection. Oregon has a similar delay in implementation of these rules. This approach will ensure that the products currently under development to meet these requirements will be certified by an accredited product testing laboratory as meeting appropriate electrical product safety standards. Enforcement of these requirements will begin July 1, 2016. Due to the delay in implementation of 690.12 Rapid Shutdown requirements, the 2011 NEC® 690.31(E)(1) requirement to route Direct-Current PV source and output circuits at least 10 inches below roof decking or sheathing when installed inside a building will be enforced until the Rapid Shutdown requirement takes effect on July 1, 2016.

## Changes Coming Soon For Electrical Permit Fee Due Notices

The department has implemented Lean process improvement as explained in the April 2013 *Electrical Currents* newsletter to identify and eliminate waste. As part of this process, we have reviewed and modified the electrical permit Fee Due Notice process. We want our customers to be aware of the changes ahead of time so they can prepare and understand the new time line for the fee due notices that will affect them. Our goal is to reduce the fee due processing time, collect fees in a timely manner, and be consistent throughout the state. Fees are due upon receipt of the notice. For fees that are not paid upon receipt, we will be standardizing the collection of fees due along a 30 day time line. Our new procedures will include modifications to the fee due notice letters. A telephone call will be made within the 30 days serving as the second notice or where applicable a second fee due notice will be sent as a reminder of the outstanding balance that is required to be paid before it is sent to collections. The start date for this new process is July 1, 2015. Please remember, if your job requires additional inspections, a request for inspection cannot be made until all outstanding fees have been paid.

## Licensing and Certification is Required for Class A Basic Electrical Work

[RCW 19.28.006](#) defines the terms “Class A basic electrical work” and “Class B basic electrical work”. These terms are used to identify types of work for determining permit and inspection requirements. Requirements for electrical work permits and inspections vary depending on the type of work performed and you can find further clarification in [WAC 296-46B-901](#)(7). Class A basic electrical work is exempt from permits and inspections. Class B basic electrical work may be inspected on a random basis using the Class B label process described in [WAC 296-46B-908](#).

Sometimes we hear of confusion about the licensing and certification requirements associated with contractors and individuals performing electrical work that is exempt from permit and inspection requirements. Nothing in RCW

## Safety Tip of the Month

(Click on image to enlarge)

This explosion and fire occurred when a worker operated a circuit breaker. It is likely that the equipment was not rated for the available fault current. Protect yourself, always stand clear and use proper personal protective equipment when operating a circuit breaker, even when no live parts are exposed.



[19.28.041](#) or [.161](#) provides an exemption from licensing and certification requirements for performing Class A basic electrical work. Even though the work does not require permits and inspections, properly licensed electrical contractors and certified electricians or properly supervised trainees must perform Class A basic electrical work. The specialty scopes of work defined in WAC 296-46B-920 also apply to who may perform Class A basic electrical work.

## Telecommunications Workers Grandfathering Opportunity Ending in Less Than 2 Months

Do you or someone you know have unsupervised telecommunications experience gained while working for a licensed (01) general or (06) limited energy electrical contractor in Washington? For a very limited time, the legislature is allowing an opportunity to apply that valuable work experience towards eligibility for the (06) limited energy systems specialty certification examination.

Want more information?

- Please review the [May 2014 Electrical Currents](#) newsletter for eligibility requirements and the two methods that can be used to document your past work experience.

What do I do next?

- Be sure hours claimed were worked for an (01) general or (06) limited energy electrical contractor who continuously maintained a valid electrical contractor license during the period claimed.
- If you are eligible, complete the [special affidavit form](#); it must be received before July 1, 2015 by mail as instructed on the top right of the form. Please do not turn in the form at an L&I service location, as it may cause a delay in processing.
- The July 1, 2015 deadline only applies to submitting hours of unsupervised telecommunication experience for consideration. Once hours are credited toward qualifying for examination, you never lose those hours. This deadline does not apply to applying for or passing the (06) limited energy specialty examination. To be eligible to take the (06) limited energy specialty examination, applicants must have a minimum of 4000 hours of qualified work experience.

So far, the department has received 246 special affidavit forms. This opportunity began on June 12, 2014. All applications must be received before July 1, 2015. After that date, our legal authority to consider unsupervised telecommunications experience expires.

This one-time opportunity ends in less than 2 months. Questions? Call us at 360-902-5269. Do not miss out!

**Ugly Picture:** Click on the picture to open a larger image. Faulty wiring to a submersible pump in the lake electrocuted the two deer in the picture, and another one located nearby. Here is an excerpt of a message from a power company representative to an L&I electrical inspector: "All grounds from the service to the pump are broken. Someone tried to ground the electrical conduit going into the lake. When I spoke with Ron, he told me of dogs & kids that were getting shocked a few years back. They had hired an electrician who "fixed" the problem. Ron also noted that the monthly utility bill had increased recently, for no apparent reason. I believe the entire feeder from the service to the pump has failed, the current is passing through the ground energizing all in its path". The electrical inspector ordered the power disconnected from this installation immediately.



## Answer to Question of the Month

NEC® 250.4(A)(5) – Electrical equipment and wiring and other electrically conductive material likely to become energized shall be installed in a manner that creates a low-impedance circuit facilitating the operation of the overcurrent device or ground detector for high-impedance grounded systems. It shall be capable of safely carrying the maximum ground-fault current likely to be imposed on it from any point on the wiring system where a ground fault may occur to the electrical supply source. The earth shall not be considered as an effective ground-fault current path. Consequences of using the earth as a ground-fault current path are shown in this month's ugly picture.

This document may contain hyperlinks to internet web pages. To access this PDF document online, go to:

<http://www.ElectricalCurrents.lni.wa.gov>

Electrical Section Internet Address: <http://www.ElectricalProgram.Lni.wa.gov/>

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