

Question of the Month – What is the minimum size aluminum SE cable that may be used as a 100-ampere feeder in a single-family dwelling in Yakima, routed through the attic above the level of insulation, and down to a feeder panel in an uninsulated wall. The feeder does not carry the entire load associated with the dwelling. The expected high ambient temperature in the uninsulated attic is 120°F. The cable is marked with a temperature rating of 75°C. – See correct answer on page 2.

Legislative Updates 2016

If you are a part of the electrical or telecommunications sectors regulated by L&I, lawmakers are considering several bills this legislative session that may affect you. The first four bills are new this session. The others were introduced last session and are still available for the legislature to consider. None of this legislation is sponsored by L&I.

Take this opportunity to review the bills and comment if you desire. A comment button is located to the right of the bill number on each webpage hyperlinked below. You may also contact your legislator to share your opinion about any legislation by visiting the legislative website at: <http://www.leg.wa.gov/LIC/Pages/hotline.aspx>.

1. [House Bill 2810](#) – Requires the department of L&I to adopt the non-administrative portion of the electrical rules through a process in which the department, the Washington cities electrical committee, and the technical advisory committee have an equal vote in the adoption of the rules.
2. [House Bill 2548](#) – Provides a further reduction in the amount of appeal bond required to appeal a penalty issued by the department beyond the reduction implemented by the passage of [2014 Substitute House Bill 2146](#).
3. [Senate Bill 6085](#) – Creates an exemption from the electrical contracting, worker certification, and permit & inspection laws for work in connection with the installation, reconfiguration, or maintenance of modular electrical systems that are UL-listed for use in commercial furniture.
4. [House Bill 2886](#) – Provides authority to the department to determine by rule electrical scopes-of-work currently defined in electrical law (i.e., (07E) equipment repair, (07C) restricted nonresidential maintenance, and (09) telecommunications specialties).
5. [House Bill 1315](#) – Requires L&I to grant a variance from the allowed scope of work, upon application, to a specialty electrician, a master specialty electrician, or a specialty plumber under certain circumstances.
6. [House Bill 1375](#) – Eliminates special immunities from prosecution for criminal trespass, whether those immunities have been legislatively granted to the government or to private persons or entities. This bill would compromise an inspector's ability to gain access to ensure electrical work complies with state laws and rules, and requires property owners to be present for an electrical inspection, which would significantly reduce the number of inspections that could be performed with current inspection staff.
7. [House Bill 1590](#), [Senate Bill 6581](#) – Requiring completion of an apprenticeship program to receive a journey level or residential specialty electrician certificate of competency. See previous 2014 [HB 2500](#).
8. [House Bill 1608](#), [Senate Bill 5845](#) – Addresses certified HVAC/refrigeration specialty electricians and certified appliance repair specialty electricians concerning replacement of household appliances. See previous 2013 [SB 5682 - 2013-14](#) and [HB 1760 - 2013-14](#).
9. [House Bill 1609](#), [Senate Bill 5846](#) – Exempts from the plumbing and electrical statutes, minor or incidental work that does not require regulation for the protection of public health or safety.

Safety Tip of the Month

When you are driving, nothing is more important than driving. Give your full attention to the road and do not let yourself be distracted by anything. A habit of allowing yourself to be distracted will end in tragedy.

10. [Senate Bill 5686](#), [House Bill 2081](#) – Removes the ability of the Electrical Board to hear appeals of decisions by the Office of Administrative Hearings. Decisions made by an administrative law judge would be a final order.
11. [Senate Bill 5281](#) – Requires L&I to establish a 2000 hour nonresidential security system specialty electrician certificate allowing a trainee to take the examination after 720 hours (or 90 days) of work experience and if successful, work alone installing these systems.
12. [Senate Bill 5282](#), [House Bill 1876](#) – Exempts from licensing requirements, and permit and inspection requirements under chapter 19.28 RCW, persons, firms, partnerships, corporations, and other entities for work limited to certain installations of security system wiring in one- and two-family dwellings.

Two Solar Photovoltaic Requirements to be Effective July 1, 2016

Three important National Electrical Code® (NEC®) safety requirements for solar photovoltaic (PV) systems were previously delayed because of a lack of listed products to meet these requirements in accordance with NEC® 90.4. The delay allowed manufacturers an additional two years to develop and produce listed equipment for implementation of these requirements.

Requirements in NEC® 690.11 Arc-Fault Circuit Protection (Direct Current) and NEC® 690.12 Rapid Shutdown of PV Systems on Buildings are scheduled for implementation in on July 1, 2016. Implementation of the third requirement for Wire Harness and Exposed Cable Arc-Fault Protection in NEC® 705.12(D)(6) is delayed until further notice. This requirement is likely to be removed from the NEC® in the 2017 edition.

All solar photovoltaic (PV) installations made in conjunction with electrical work permits obtained on or after July 1, 2016 must comply with NEC® 690.11 and NEC® 690.12.

If you would like to comment on the implementation of these requirements, you may email the Electrical Program at ElectricalProgram@lni.wa.gov, attention: Rod Mutch.

This Month in History: 2009 and 2010 Electrical Program Staff Reductions

Here is an excerpt from an article from [February 2010](#) that details the effects of the electrical program staff reductions in which 59 positions were cut. In recent years, the program has been able to restore approximately 33 positions that were eliminated, but we know our stakeholders are still feeling the effects of this devastating program reduction.

The nationwide downturn in construction continues to adversely affect the electrical industry in Washington State. Electrical permit sales remain sluggish. As a result, reductions in staffing are again necessary to assure that the electrical program expenditures do not deplete the dedicated electrical fund. Just like our stake holders, the electrical program has to live within their means.

The electrical program continues to seek out and implement every process improvement possible to help us continue to provide high quality service. Just like our stakeholders, our remaining inspectors will have more area to cover after March 31st. You will likely see some changes in our inspection practices and in some instances our ability to quickly respond to inspection requests. Please help us to serve you better by making certain you have:

- Entered the correct address and posted it plainly at the jobsite.
- Entered complete directions on the permit application so we can easily find the jobsite.
- Provided a detailed description of the work that was done
- Given us any information we might need to gain access on every trip to do your inspection.
- Talked directly with your inspector in advance of needing an urgent or scheduled inspection.
- Committed to inspection timelines with your customer that we are aware of and able to meet.

Ugly Picture: *If viewing this document online, click on the picture to open a larger image. This is a quick, creative, and dangerous way to provide temporary power to a structure using an “other than code-compliant” method. If you choose to make an installation such as this, you are putting everyone on the jobsite, as well as your electrical certificate of competency in jeopardy.*



Answer to Question of the Month: 2/0 - Table 310.15(B)(16) gives ampacities based on ambient temperature of 30°C (86°F). Ampacity must be adjusted for the high ambient temperature in the attic per 310.15(B)(2). An ambient temperature of 120°F requires a correction factor of .75 for the 75°C rated cable. 2/0 aluminum, 75°C conductors have an ampacity of 135 amperes. 135 X .75 = 101.25 amperes.

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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