

DIVISION 311
MISCELLANEOUS ELECTRICAL RULES

918-311-0000**Design, Planning and Lay Out of Electrical Installations by Supervising Electricians**

A licensed supervising electrician may design, plan and lay out electrical installations for:

- (1) The customers of the electrical contractor for whom the supervising electrician is employed; or
- (2) The industrial plant that employs the supervising electrician.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: BCA 36-1989, f. & cert. ef. 12-27-89; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0105

918-311-0010**Electrical Plan Review Rules**

(1) Authority for Rules. The rules in OAR 918-311-0010 to 918-311-0050 are authorized by ORS 479.870 and are referred to as the "Electrical Plan Review Rules."

(2) Application:

(a) The electrical plan review rules only apply when a jurisdiction, the state or a municipality, enforcing the **Electrical Specialty Code** or the electrical aspect of the **One and Two Family Dwelling Specialty Code**, requires mandatory electrical plan review in connection with a permit for the construction, alteration or repair of electrical installations;

(b) When the state or municipality requires mandatory plan review it shall not adopt requirements that go below the threshold standards set in OAR 918-311-0040. The minimum starting point cannot be changed.

(3) Transition:

(a) An applicant for an electrical permit or a person who had submitted electrical plans for review with any jurisdiction shall be allowed to follow the plan review requirements that were in place with the jurisdiction at the time the application was filed;

(b) If a bid for electrical work was made, relying in good faith on plan review practices in place at a jurisdiction prior to a change due to the Electrical Plan Review Rules, and the bid is accepted not more than 60 days from the effective date of the change, the electrical contractor shall be allowed to follow the prior plan review procedures upon proof that the new requirements create significant unanticipated expenses or delay.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.870

Stats. Implemented: ORS 479.870

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0300

918-311-0020**Time Limit for Electrical Plan Review**

(1) Electrical plan reviews shall be approved or denied within ten working days from receipt of the complete electrical plans by the jurisdiction requiring plan review. A reviewed set of plans shall be returned to the plan applicant:

(a) If a plan is rejected, the deficiencies must be set out in writing. Upon resubmission of the necessary items, the ten-day requirement starts again;

(b) If, because of the complexity or size of the installation, additional time beyond the ten working days is required to complete the review, the jurisdiction shall notify the person taking out the electrical permit of the reasons for the delay and the date the review will be completed.

(2) Phased permits may be issued as described in OAR 918-309-0025.

Stat. Auth.: ORS 479.870

Stats. Implemented: ORS 479.870

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0310; BCD 9-2003, f. 6-13-03, cert. ef. 7-1-03

918-311-0030**Qualifications for Persons Performing Electrical Reviews**

Electrical plan reviews shall be conducted only by persons certified by the division to enforce the **Electrical Specialty Code** as an Electrical Specialty Code inspector, or its equivalent, and who have one of the following:

(1) Two years of experience as an Oregon supervising electrician;

(2) A degree in electrical engineering and three years experience in design, inspection or supervision of installations covered by the National Electrical Code or Oregon Electrical Specialty Code; or

(3) Equivalent experience and training approved by the board.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.870, 455.117

Stats. Implemented: ORS 479.870, 455.117

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0320; BCD 7-2006, f. 6-7-06, cert. ef. 10-1-06

918-311-0040**Electrical Plan Review for Complex Structures**

(1) A jurisdiction providing electrical code plan review services may only require electrical plan review for a complex structure. For the purpose of this rule, "complex structures" have an electrical system designed, constructed or reconstructed with any of the following:

- (a) A service or feeder beginning at 400 Amps where the available fault current exceeds 10,000 Amps at 150 Volts or less to ground or exceeds 14,000 Amps for all other installations; or
- (b) Installation of a 150 KVA or larger separately derived system as defined in Article 100 of the **National Electrical Code (NEC)**; or
- (c) Addition of a new motor load of 100 HP or more; or
- (d) Fire pump installations as defined in Article 695 of the NEC; or
- (e) Emergency systems installations as defined in Article 700 of the NEC; or
- (f) A service or feeder rated at 600 Amps or over; or
- (g) Voltage. More than 600 supply volts nominal; or
- (h) Renewable Energy. Renewable electrical energy systems rated over 25 KVA; or
- (i) Height. More than three stories; or
- (j) Occupancy.
 - (A) Six or more residential units in one structure; or
 - (B) An "A" (Assembly) occupancy, "E" (Educational) occupancy, or "I-2" or "I-3" (Institutional) occupancy as defined in the adopted **Oregon Structural Specialty Code**; or
 - (C) Any of the following special occupancies as described in Chapter 5 of the NEC adopted by the board in OAR 918-305-0100:
 - (i) Hazardous (Classified) locations as defined in Articles 500 to 516; or
 - (ii) Installations in patient care areas of health care facilities as defined in Article 517; or
 - (iii) Agricultural buildings used for commercial purposes, as defined in Article 547; or
 - (iv) Floating buildings as defined in Article 553; or
 - (v) Marinas and boat yards as defined in Article 555; or
 - (k) Recreational Vehicle Park. A new recreational vehicle park, or any addition or alteration to an existing park.

(2) Plan review is not required for work permitted through minor installation labels under OAR 918-309-0210 to 918-309-0260.

(3) A jurisdiction requiring electrical plan review may not require plan review on more than one building or structure under construction or reconstruction at the same job site, as long as:

(a) The electrical systems of the buildings or structures are materially alike, and;

(b) A person obtains electrical permits for the buildings or structures within a reasonable time.

(4) Standardized Format for Plan Review. When electrical plan review is required the electrical plan shall meet the following requirements:

- (a) Copies. Submit two sets of electrical plans;
- (b) Readability. The plans shall be drawn to scale, contain definitions for legends used, be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the applicable electrical code requirements, laws, ordinances, rules and regulations;
- (c) Contents. The plans shall contain the following minimum requirements:
 - (A) Feeder riser diagram showing panel location and circuit schedules;
 - (B) One line riser diagram showing bonding and grounding and conductor sizes;
 - (C) Available fault current on the line side of service disconnect;
 - (D) Complete load calculations, or provide applicable load records, for all new installations and for additions to existing installations;
 - (E) Fixture schedule, showing type, location and layout of the fixtures;
 - (F) Address of the installation and name of owner and address;
 - (G) Identification of the employer, identification and signature of person who prepared the plan, license number if the person is an electrical supervisor and professional registration number if the person is an architect or registered professional electrical engineer; and
 - (H) Location of emergency systems, identifying the power source and the system on plan.
- (5) Nothing in these rules shall prohibit a jurisdiction from requiring a lighting energy budget.
- (6) Nothing in these rules shall prohibit the owner or the owner's agent from requesting and receiving plan review for non-complex structures.

[Publications: Publications referenced are available for review at the agency.]

Stat. Auth.: ORS 479.870, 455.117

Stats. Implemented: ORS 479.870, 455.117

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0330; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 7-2006, f. 6-7-06, cert. ef. 10-1-06; BCD 13-2010, f. 9-30-10, cert. ef. 10-1-10

918-311-0050**Standards for Electrical Plan Review**

A person performing electrical plan review shall do the following as a minimum:

- (1) Load Calculations. Check load calculations for appropriateness, completeness and accuracy.
- (2) Equipment. Check and determine if the equipment is:
 - (a) Suitable for the environment; and
 - (b) Properly sized and rated to meet the minimum code requirements.
- (3) Service and Feeder. Check service and feeder installations for code compliance related to:
 - (a) Wiring method;
 - (b) Conduit and box fill;
 - (c) Conductor size and ampacity rating;
 - (d) Clearances;
 - (e) Locations;
 - (f) Accessibility; and
 - (g) Service grounding conductor size.

Stat. Auth.: ORS 479.870

Stats. Implemented: ORS 479.870

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0340

918-311-0055**Fees for Electrical Plan Review Performed by Building Codes Division**

(1) For electrical plan review performed on structures meeting the installation requirements of OAR 918-311-0040 and that are in jurisdictions where the Building Codes Division administers and enforces the electrical program, the plan review fee shall be an amount equal to 25 percent of the electrical permit fee(s).

(2) These fees do not apply to prefabricated structures, which are addressed in OAR 918-311-0060, or to electrified fixed guideway railway system installations, which are addressed in OAR 918-305-0500.

Stat. Auth.: ORS 455.020, 479.730 & 479.870

Stats. Implemented: ORS 455.020, 479.730 & 479.870

Hist.: BCD 25-2001, f. 12-28-01, cert. ef. 1-1-02

918-311-0060**Electrical Plan Review for Prefabricated Structures**

(1) Authority. The rule is authorized by ORS 479.870 and sets electrical plan review requirements for the electrical aspects of prefabricated buildings and components intended for use in Oregon.

(2) Definitions. For purpose of this rule:

(a) A “prefabricated building” is a “prefabricated permanent building” or “prefabricated relocatable building” defined in OAR 918-674-0005.

(b) A “prefabricated component” is a “component” defined in OAR 918-674-0005;

(c) “Intended for use in Oregon” means:

(A) The structure is manufactured in Oregon and is intended to be used in Oregon, or Oregon and other states; or

(B) Manufactured in another state but intended to be first delivered to Oregon for use in Oregon regardless of whether it is intended to also be used in other states.

(d) “State of manufacture” is the state where a prefabricated building or component is manufactured.

(3) Applicability:

(a) Electrical plan review is required for all prefabricated buildings and components manufactured in Oregon or manufactured out of state for use in Oregon, unless:

(A) The electrical inspector waives the plan review upon a determination that only one unit will be built and code requirements can be verified by inspection;

(B) The unit is listed by a recognized testing laboratory; or

(C) The unit is certified by special deputies.

(b) When a plan review is required by this rule, the relevant prefabricated structures rules in OAR 918, division 674 are applicable except to the extent a different requirement is provided in this rule.

(4) Requirements. When plan review under this rule is required, the manufacturer shall:

(a) Pay an electrical plan review fee as provided in section (5) of this rule;

(b) Meet the requirements of OAR 918-311-0040 for electrical plan reviews for number of copies, readability and contents; and

(c) Submit a timely request allowing the division at least ten business days to complete the plan review.

(5) Fees. The electrical plan review fees shall be \$69 per hour with a minimum charge of \$69.

Stat. Auth.: ORS 479.730 & 479.870

Stats. Implemented: ORS 479.730 & 479.870

Hist.: BCD 8-1994(Temp), f. 3-16-94, cert. ef. 3-25-94; BCD 18-1994, f. 8-30-94, cert. ef. 9-1-94; BCD 3-1995, f. & cert. ef. 3-3-95; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0345; BCD 9-2001(Temp), f. 8-15-01, cert. ef. 9-4-01 thru 3-3-02; BCD 10-2001, f. 9-28-01, cert. ef. 10-1-01

OAR 918-311-0065**Electric Vehicle Charging Station Statewide Permit and Inspection Protocol**

To ensure a path for the emerging technology and enable the installation of charging stations for electric vehicles, the following permit and inspection protocols will apply throughout the state, notwithstanding contrary provisions contained in the **Oregon Electrical Specialty Code**.

(1) Building officials and inspectors shall permit and allow installation of an electric vehicle charging station that has a Building Codes Division's special deputy certification label without further testing or certification.

(2) Persons installing an electric vehicle charging station must obtain a permit for a feeder from the inspecting jurisdiction. No other state building code permit is required.

(3) The jurisdiction may perform up to two (2) inspections under the permit issued in subsection (2) above.

(4) Inspection of the installation is limited to examining the feeder for compliance with the following **Oregon Electrical Specialty Code** provisions:

(a) Overcurrent protection, per articles 225 and 240;
 (b) Physical protection of conductors, per article 300;

(c) Separation and sizing of the grounding and neutral conductors, per article 250.20; and

(d) Provisions for locking out the breaker for maintenance, per chapter 4.

(5) For the purpose of this rule, the service, feeder, and charging station pedestal will be considered a single structure as defined by the **Oregon Electrical Specialty Code**. The structure's owner may opt to install a grounding electrode system to supplement lightning protection, but cannot be required to do so.

(6) An electrical contractor employing a general supervising electrician in accordance with OAR 918-282-0010 is authorized to use a minor installation label to install a new branch circuit limited to 40 amps 240 volts for the purpose of installing a wall mounted Electric Vehicle Supply Equipment (EVSE) unit in the garage of one and two family dwellings, and connect a listed wall mounted EVSE unit to that branch circuit. The electrical panel where the circuit originates must be in the garage within sight from the EVSE unit. This provision does not apply to installations in wet or damp locations.

Stat. Auth: ORS 455.065

Stat. Implemented: ORS 455.065

Hist.: BCD 16-2008(Temp), f. & cert. ef. 9-26-08 thru 3-25-09; BCD 30-2008, f. 12-31-08, cert. ef. 1-1-09; BCD 8-2010, f. 6-15-10, cert. ef. 7-1-10

918-311-0070

Use and Content of a Written Request to Reconnect an Electrical Installation

(1) As used in this rule:

(a) "Authority having jurisdiction" means the state or local government agency with authority under ORS chapter 455 to inspect an electrical installation.

(b) "Electric utility" has the meaning given that term in ORS 469.300(10).

(c) "Uncontrollable event" means an event beyond the reasonable control of any person, including but not limited to, fire, floods, and severe weather.

(d) "Remote location" has the meaning given that term in OAR 918-271-0020.

(2) A licensed general supervising electrician may request that an electric utility energize a completed electrical installation before an authority having jurisdiction has inspected the completed electrical installation. Upon receipt of a request from a licensed general supervising electrician, an electric utility may energize an electrical installation to:

(a) Restore electrical service that was interrupted or disconnected because of a service change or uncontrollable event; or

(b) Initiate or restore electrical service to a remote location.

(3) A request made by a licensed general supervising electrician under subsection (2) of this rule shall be made in writing, using a form prescribed by the Building Codes Division, and must include the following information:

(a) The name, license number, and signature of the general supervising electrician who directed, supervised, made, or controlled the making of the electrical installation described in subsection (2) of this rule;

(b) The name and license number of the electrical contractor employing the general supervising electrician described in paragraph (a) of this subsection;

(c) The name and address of the electrical contractor's customer who contracted for the electrical installation;

(d) The address or location of the electrical installation if different than the customer's address;

(e) The date on which the electrical installation was completed by the general supervising electrician described in paragraph (a) of this subsection;

(f) The name, mailing address, and telephone number of the authority having jurisdiction to inspect the completed electrical installation;

(g) The name, mailing address, and telephone number of the electric utility receiving the request;

(h) Either the number of an electrical permit, if a permit is attached to the electrical installation, or a copy of a temporary permit, if a copy of the permit is posted at the job site; and

(i) Whether the request is for the purpose of restoring electrical service that was interrupted or disconnected because of a service change or uncontrollable event, or initiating or restoring electrical service to a remote location.

(4) A licensed general supervising electrician who makes a request under subsection (2) of this rule shall provide a copy of that request to:

(a) The electrical contractor described in subsection 3(b) of this rule;

(b) The customer described in subsection 3(c) of this rule; and

(c) The authority having jurisdiction described in subsection 3(f) of this rule.

(5) By the close of business on the first business day following the energizing of an electrical installation by an electric utility in response to a request submitted under subsection (2) of this rule, the electrical contractor described in subsection 3(b) of this rule shall:

(a) Notify the authority having jurisdiction described in subsection 3(f) of this rule that the electrical installation has been energized; and

(b) Request that the authority having jurisdiction described in subsection 3(f) of this rule inspect the completed electrical installation.

(6) Notwithstanding ORS 756.040, 756.060, 757.035, and any rules adopted under those statutes, an electric utility may not energize a completed electrical installation as requested by a licensed general supervising electrician before an authority having jurisdiction has inspected the completed installation, unless the submitted request complies with subsection (3) of this rule.

(7) A civil penalty may be assessed against a person for violating subsections (2) through (6) of this rule in a manner provided by OAR 918-001-0036. In assessing a penalty under this subsection, the director may consider any appropriate factors, including, but not limited to, any prior violations of:

(a) Subsections (2) through (6) of this rule; or

(b) The Electrical Safety Law, ORS 479.510 to 479.945 and ORS 479.995, and any rules adopted under the Electrical Safety Law.

Stat. Auth.: ORS 479.570

Stats. Implemented: ORS 479.570

Hist: BCD 18-2008, f. 9-26-08, cert. ef. 10-1-08

918-311-0080

Alternate Certification for Installation of Small Wind Turbines

(1) Wind turbines with a name plate capacity of not more than 100kW that meet the following criteria are considered certified as required by ORS 479.610.

(2) Certification under this rule only applies to small wind turbines where:

(a) The product design is reviewed for compliance with appropriate product safety and functionality standards and stamped by an Oregon-licensed professional electrical engineer; and

(b) The inverter is listed or labeled by a Nationally Recognized Testing Laboratory.

(3)(a) To ensure the safety of the components under this rule:

(i) The manufacturer must submit one of each model of the product to an approved field evaluation firm for evaluation and approval as meeting electrical product safety standards;

(ii) The manufacturer must certify that each additional turbine of the same model meets the approved electrical product safety standards of the evaluated model; and

(iii) The field evaluation firm will provide for random evaluation of additional units as necessary, in accordance with the recommended practices required by OAR 918-306-0010(2)(c).

(b) If the approved model is changed it must be re-evaluated.

(4) Documentation demonstrating compliance with section (3) of this rule must be provided to the inspecting jurisdiction.

(5) Installations performed under this rule are required to comply with all appropriate permit, inspection, and licensing requirements.

(6) The provisions of this rule expire on January 1, 2011.

Stat. Auth.: ORS 479.760

Stat. Implemented: ORS 479.760

Hist.: BCD 5-2009(Temp), f. & cert. ef. 7-27-09; BCD 6-2009, f. 9-30-09, cert. ef. 10-1-09