

# Building Near Overhead Power Lines

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Contact Idaho Power (208) 388-2323

## NESC and Other Regulations

There are several requirements used to determine overhead power line clearances. The National Electric Safety Code (NESC), adopted by the State of Idaho, provides the minimum requirements for the safe practice of public and private utilities in the United States. Other standards that must also be met in Idaho and Oregon include Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.333, National Fire Protection Association (NFPA) standard 70E Article 130, Idaho Code (I.C.) § 55-2401 et seq., and Oregon Revised Statute (ORS) 757.805.

Although the above regulations provide minimum clearance standards, there are additional variables to consider in determining acceptable line clearances. The NESC standards for overhead power line clearances require the user to determine values for voltage, conductor size, high temperature sag, line creep sag, wind movement in the region in question, elevation adders, the medium over (or beside) which the line passes (building, fence, flag, window, pedestrian area, road, alley, water with sailboats, water without sailboats, pools, driveways, etc.), and any exceptions for these areas. Even if all of these things are known, the NESC may not adequately provide clearances to protect against violation of OSHA regulations, the NFPA 70E standard, and Idaho, and Oregon statutes.

Due to the complexity of the above requirements, and the number of variables which must be considered, Idaho Power does not publish its design clearances. Instead, Idaho Power recommends and requests builders, planners, architects, and anyone else involved with the construction process, call Idaho Power at (208) 388-2323 to obtain clearance information prior to commencement of activities in the vicinity of power lines.

**Below are generally acceptable guidelines for planning purposes.**

**NOTE:** It is not sufficient to rely solely on one federal or state clearance requirement when constructing or working around overhead power lines. By properly using Idaho Power design clearances, all requirements will be met.

## Building Planners and Architects

If you are planning a new or upgraded building and you are certain the voltage is not greater than 22kV line to ground, then you can use the following rules:

### Guidelines

1. 10 Foot Rule – Human Clearance (OSHA, NFPA, ID, and ORS)

No unqualified worker (as defined by OSHA regulations) shall be closer than 10 ft to high power (600 V or more) overhead power lines. This includes any tool or material that the worker is holding. Please see OSHA 1910.333, I.C. § 55-2401 et seq., and ORS 757.805, and understand them in their entirety if you are planning construction in the vicinity of power lines.

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No part of a building shall be constructed in such a way that any person will be in violation of the 10 ft rule, during or after construction, by walking on, or conducting maintenance activities on or around the building. When standing on or near any part of the building, a human must not be able to extend any extremities into the 10 ft clearance zone.

## 2. Horizontal Clearance to a Building for 750 V to 22 kV Line to Ground

For spans of 200 ft or less, a **horizontal clearance of 13 ft** is required from a building to the wire. It is critical that the measurement is planned from the building to the wire. Do not use the centerline of an easement (without knowledge of where the lines are in the easement) to complete your measurements. The closest wire to the building will not typically be in the center of Idaho Power's easement; it is therefore imperative to learn where the lines run on that easement by: 1) calling Idaho Power, or 2) visiting the site.

Caution: Do not apply the 13 ft rule to all lines without appropriate line voltage information, which Idaho Power will provide at your request.

NOTE: It is critical that any activities near power lines are conducted with the utmost care in accordance with applicable laws and standards. It is the responsibility of the person conducting such activities to know and understand all such applicable laws and standards and exercise appropriate precautions.

## Other Clearances

There are many other clearances to be aware of when designing a building around power lines, including, but not limited to, clearances to parking lot lights, swimming pools, trees, decks,, etc. Given the numerous variables and regulations that impact required utility clearances, please contact Idaho Power at (208) 388-2323 to obtain clearance information and discuss clearance questions.