

1 General Requirements

1.1 General Definition

To prevent unnecessary repetition in this booklet, the *Power Company* used in the following pages shall refer to Umatilla Electric Cooperative (UEC) or Hermiston Energy Services (HES).

The *Customer* is the individual responsible for requesting electrical service from the Power Company. The Customer may be the electrical contractor or home owner installing the electrical service.

The term “*consult Power Company*” means the customer shall obtain Power Company approval prior to installation. This term applies to each and every installation involved. Failure to receive approval will result in denial of service until the installation meets the Power Company’s approval.

1.2 Booklet Purpose and Organization

This booklet was prepared to aid you in getting service from the Power Company. This booklet applies to relocated services, rewired services, house relocations, and new services. If additional information is required, please call the Power Company office.

1.3 Changes or Conflicts in Requirements

These requirements are issued with the intent of complying with all applicable codes, ordinances, and rates. However, in the case of conflict, the appropriate rate, code, or ordinance supersedes the interpretation offered in this booklet. In addition, these requirements may change if governing codes, ordinances, or rates change. The Power Company does not assume responsibility for keeping this book current and should be consulted when questions arise on the applicability of any item.

1.4 Maximum Available Fault Current

The maximum available fault current will depend on the type of service being provided. It is the Customer’s responsibility to furnish equipment to withstand bolted fault currents. Upon request, the Power Company will supply information on maximum available fault current at the Customer’s service entrance.

1.4.1 Single Family Residential (200 Amperes)

For single family residences with services that are 200 amperes, the Customer is responsible for furnishing equipment that will withstand the maximum fault current available from the Power Company. The Power Company will provide the maximum available fault current to the Customer upon request.

1.4.2 Single Family Residential (Larger than 200 Amperes)

For single family residences with services that are larger than 200 amperes, the Customer is responsible for furnishing equipment that will withstand the maximum fault current available from the Power Company. The Power Company will provide the maximum available fault current to the Customer upon request.

1.4.3 Commercial, Industrial, Agricultural, and Multi-Family Services

The Customer is responsible for furnishing equipment that will withstand the maximum fault current available from the Power Company. The Power Company will provide the maximum available fault current to the Customer upon request.

1.5 Customer's Responsibility for Safety

The Customer shall comply with federal, state, and local laws and regulations concerning activities in the vicinity of the Power Company's electrical lines and equipment. The Customer shall comply with all laws and regulations to protect themselves, their family, their employees, the Power Company and its employees, contractors and all third parties from injury, loss, or damage.

If the Power Company serves the Customer by means of primary voltage or transmission voltage circuits on the Customer's premises, or if the Customer resells power and energy furnished by the Power Company, the Power Company may require the Customer to obtain and maintain insurance coverage which the Power Company deems adequate to satisfy the duty of indemnification. The Power Company may also require a separate indemnification, hold harmless, and/or additional named insured agreement.

1.6 Work Activity near High-Voltage Overhead Power Lines (Over 600 Volts)

State statute and Federal OSHA laws require that no work take place within 10 feet of a high-voltage overhead power line (some lines require even greater clearance). The following are two requirements:

The responsible party must notify the Power Company of the intended work activity a minimum of *three* working days prior to construction work. More lead time may be required depending on the work to be done.

The responsible party and the Power Company must agree to a mutually satisfactory method to accomplish the activity safely.

1.7 Temporary Shutdown

It may be necessary to require a temporary shutdown of a Customer's service in order to safely maintain or upgrade Power Company facilities. These shutdowns will normally be scheduled at a mutually convenient time determined by both the Power Company and the Customer.

1.8 Grounding and Bonding

Grounding and bonding is critical for safety and electrical reliability. The Customer is responsible to ensure that the electrical wiring and service equipment is grounded and bonded in accordance with applicable NEC requirements.

1.9 Protection of Power Company Equipment (Barrier Post)

The Customer is responsible for providing barrier posts for protection of electrical equipment. When vehicles or other equipment can be near or around Power Company equipment, barrier post(s) constructed with six inch diameter steel, concrete filled, will be required. Consult the Power Company for barrier post requirements for areas subject to vehicles or other equipment access. (See Figure 6-3 for more detail).

1.10 Trees and Shrubs

The Customer shall prepare the premises so that trees, shrubs, and other vegetation will not interfere with the proper operation and maintenance of the Power Company facilities, see Section 5 (*Clearances*). Consult the Power Company for clearance requirements of your specific installation. For easements and rights-of-way refer to section 2.2.

1.11 Power Factor

The Power Company's current rate specifies a charge for low power factor for certain commercial and industrial Customers. Low power factor may cause inferior performance of the Customer's electrical system. The Power Company recommends that the Customer install corrective devices to make the most effective use of the electrical system. The Power Company can provide a copy of the rate if the Customer would like to determine potential savings during design. A second meter socket is not required.

1.12 Time-of-Use Metering

The rate may require time-of-use metering for certain commercial and industrial loads. Contact the Power Company for special requirements.

1.13 Call Before You Dig

State law requires the Customer/Excavator to call for underground utility cable locations at least two full working days (48 hours) prior to excavation. The excavation must not be started until locations have been marked or the utilities have informed the excavator that they have no facilities in the area. ***Call 1-800-332-2344 before you dig.***

1.14 Power Quality

The characteristics of the Customer's electrical equipment and devices must allow the Power Company distribution system to operate efficiently without undue interference to Power Company service or to other Customers. Whenever a Customer's equipment has characteristics which cause undue interference with Power Company service to other Customers, the Customer must make changes in such equipment or provide, at Customer expense, additional equipment to eliminate the interference. Where practical, the Power Company will furnish additional equipment in accordance with the present rate.

The Power Company reserves the right to inspect and test any equipment connected to its lines and to obtain any information necessary to determine the operational characteristics of the equipment. Prior to purchase, the Customer shall submit information to the Power Company regarding any equipment which might cause interference with service to other Customers and/or require additional Power Company facilities for its satisfactory operation.

Electric service supplied by the Power Company may be subjected to voltage disturbances which will not normally affect the performance of typical electrical equipment. These disturbances may result in the improper operation of voltage-sensitive equipment such as computers or microprocessors. The Customer must provide any power conditioning devices needed to obtain the “quality” of power necessary for optimum performance of voltage-sensitive equipment. Devices between the meter and the socket may be allowed at the sole discretion of the Power Company. Consult the Power Company for specific policies.

The Customer may use additional facilities (such as separate Power Company transformers and a separate service) to minimize voltage fluctuations on secondary voltage circuits for devices such as welders, induction heating equipment, and X-ray machines. Where the operation of these types of equipment causes undue voltage fluctuations on Power Company primary voltage lines, the additional equipment required may include a separate primary voltage line. Where practical, the Power Company will furnish additional equipment in accordance with the present rate.

The effects of the design and operation of high-frequency equipment (such as electronic heating systems, spark discharge devices, radio transmitting equipment, etc., and equipment that generates harmonics, such as an induction furnace) must not create disturbances on the Power Company electrical system which interferes with any other Customer’s proper operation of communication, radio, television, remote control, or other equipment.

Devices which can produce harmonic distortion (such as adjustable speed drives, electronic ballasts for fluorescent lighting, and switching power supplies for computers and electric vehicles) shall be filtered such that the harmonic distortion resulting from these devices is kept within the limits specified in IEEE 519-1992, Section 10 or the latest version thereof. Compliance with this requirement is by Power Company measurement at the point of change of ownership between the Power Company and the Customer, otherwise known as “the point of common coupling”.

The customer can more easily stay within these harmonic distortion limits by requiring their supplier to provide “low harmonic current distortion” equipment. Suggested individual equipment current distortion limits are available from the Power Company.

1.15 Motors

1.15.1 Protection

To assure adequate safety to personnel and equipment, the Customer is responsible for providing and maintaining code-approved protective devices to protect all motors against overloading, short circuits, ground faults, low voltage, and for protecting all three phase motors against single phase conditions.

1.15.2 Starting

Motors rated in excess of 35 horsepower and frequently-started motors (rated in excess of 10 horsepower that normally start more than four times per hour) may require reduced-voltage starters. Reduced-voltage starters will not be required in group motor installations for motors rated at 2/3 less than the rating of the largest

motor requiring a reduced voltage starter unless a motor is normally started more than four times per hour.

The Power Company will furnish information regarding permitted starting currents. The starting currents permitted depend upon the frequency of motor starting, the size and character of the Customer's load, and the design of the Power Company's distribution system in the area. Permitted starting currents will generally be equivalent to the maximum starting current which, in the Power Company's opinion, can be supplied without undue interference with service to other Customers.

The Power Company will not install additional facilities to reduce voltage fluctuations on an individual Customer's service caused by the starting of that Customer's motors until after the Customer completes installation of all approved reduced-voltage starters. If the Customer still requires additional Power Company facilities, such facilities will be installed at the Customer's expense.

1.16 Customer Generation

1.16.1 Emergency or Standby Generators

Permanently-installed emergency or standby generators must be connected to the Customer's wiring system by a permanently-installed, break before make, transfer switch intended for that purpose. Use the transfer switch to disconnect all ungrounded conductors connected to the Power Company system prior to connecting the generator to the conductors supplying the load. Design and install the transfer switch to prevent connection of the generator to the Power Company system during any mode of operation. The Customer **MUST** comply with these provisions to prevent accidents:

NEVER connect portable generators to a permanent wiring system unless the interconnection uses a permanently-installed transfer switch. This can produce a hazardous situation for the Power Company or other service personnel.

Governmental electrical inspectors must approve all transfer switches and/or transfer operating schemes.

1.16.2 Parallel Generation

Parallel generation is defined as the production of electric energy where sources of generation outside of the Power Company connect with the Power Company's system for distribution. Such sources, when Customer owned, may provide all or a part of a Customer's requirements or the Customer may sell directly to the Power Company all or part of the output. (Customer's sources may include wind turbines, waterwheels, steam turbines, solar conversion, and geothermal devices.) The Power Company will handle each proposal for parallel generation on an individual basis and will require a special contract between the Customer and the Power Company.

The Customer must provide a sealable disconnect switch with a visible air gap to isolate this generation from the Power Company's system. Power Company access to this disconnect switch must exist at all times with the ability to lock the switch open when needed to maintain safe electrical operating conditions.

The Power Company must approve operation of the Customer's parallel generation system. The Power Company will also designate metering type and location, and the method of interconnection between the Customer system and the Power Company's system.

1.16.3 Cogeneration

Cogeneration is defined as the joint production of electric energy and useful thermal energy in a combined process. It may include gas turbines or diesel-driven generators with waste heat recovery and steam or back pressure turbines. The Power Company will handle each proposal for cogeneration on an individual basis by means of a special contract between the Customer and the Power Company.

The Power Company must approve the operation of the Customer's cogeneration system. The Power Company will also designate the metering location, type of metering, and the method of interconnection between the Customer system and the Power Company's system.