

CHAPTER IV. ELECTRIC

SECTION I. CONNECTIONS TO SERVICE

4-1-1 DEVELOPMENT/REDEVELOPMENT CHARGES

1. General

A. Definition

Developer: Individual or entity responsible for electrical facilities for residential, commercial, or industrial developments or redevelopments.

B. Information to be Furnished by Developer

A developer shall furnish complete plot plans for the project area being developed or redeveloped; including grade information, streets and sidewalk areas, sewer, landscaping, any locations of other utility services, easements, and an estimate of electrical load and service requirements.

C. Plans, Specifications and Cost Estimates

Plans, specifications and cost estimates by SUB shall be based on the assumption that all electrical facilities will be installed as a unit and the developer does not create obstacles to a reasonably clear installation unless otherwise agreed upon. Cost estimates for electrical facilities shall be provided by SUB based on the information provided by the developer. If the developer changes the plans and constructs the development in a manner other than originally stated, the developer may be billed for any additional cost incurred by SUB.

D. Design

Design for electrical distribution facilities shall be provided by SUB based on information provided by the developer. A non-refundable Advance Engineering Fee of five-hundred dollars (\$500) is required for preparing a detailed cost estimate. If payment is received and a construction agreement signed within 90-days of the estimate, then the Advance Engineering Fee will be applied as a credit. It is recommended that the developer confirm electric service requirements with SUB prior to ordering special electrical equipment. All

installations shall comply with the National Electric Code, National Electrical Safety Code, City or County Codes and SUB specifications.

**E. Easements and Restrictions**

- 1) The developer shall provide any easements required by SUB, at no cost to SUB. Such easements shall be included in the recorded plat. If not, a written agreement for securing easements will be required before SUB starts construction of the project. Unless otherwise agreed upon and specified in the easement, no buildings or structures of any kind may be constructed on such easements.
- 2) Any SUB facilities that have been in service for over ten years and were constructed outside a written easement shall be considered to be in an easement acquired by prescription and designated on the plat(s).
- 3) Any SUB facilities within a prescriptive or written easement may be relocated or altered if practical, in the discretion of SUB's engineering division, upon written request of the owner/developer/customer. The owner/developer/customer shall pay at SUB's discretion either the estimated or actual cost to perform the relocation or alteration(s).

**F. Grade and Staking**

The developer shall be responsible for all grading and staking of property lines and lot corners. Grade stakes indicating final grade shall be placed so that electrical facilities installed by SUB can be at proper depth after the development is completed. Any relocation in depth or routing of the installed systems made necessary by action of the developer shall be done at the expense of the developer. Any rough grading or clearing required shall be completed before installation of electrical facilities is started.

**G. Joint Trench with Communication Systems**

The developer shall contact the communication companies regarding the installation of those communication systems and any associated development charges. SUB will make poles or trenches available for joint use with communication utilities in accordance with the existing joint agreements and/or practices.

H. Relocation of SUB Facilities

Facilities owned by SUB may be relocated or altered if practical and upon written request of a developer. The developer shall pay at SUB's discretion either the estimated or actual cost to perform the relocation or alteration(s). Persons requesting such changes shall make satisfactory arrangements for the transfer or relocation of equipment owned by any other utility and/or third party which may be involved.

I. Contracts and Payments

Upon acceptance of the plan for an electrical development by SUB and the developer, a contract for service shall be executed. This contract shall stipulate each party's responsibilities, easements, charges and any arrangements agreed to by each party. Development charges due SUB shall be received by SUB prior to construction of any electrical facilities or disbursement of materials, unless otherwise agreed to by SUB. Billing information for monthly energy use must be received prior to final energization of the permanent customer.

J. Meter Information

All residential electricity meters shall be installed on the street side of the exterior of the structure or within 24 inches of the front corner of the building, unless otherwise agreed to by SUB electric engineering, and shall be accessible to SUB's meter readers at all times. Meters shall be set at a height of no less than 5 feet and no more than 6 feet from final grade. For commercial/industrial or detailed meter information, contact SUB's Electric Service Center.

2. Installation Responsibilities

A. SUB's Responsibilities

SUB shall provide all trenches, vaults, conduits, primary cables, secondary cables, padmount transformers, secondary junction boxes or pedestals, and all other necessary materials to support the distribution system.

Standard installations are based on native backfill, reasonable soil or terrain conditions and uncomplicated access. Cost for rock backfill,

disposal of excess spoils and/or additional grading shall be at the expense of the developer.

B. Developer's Responsibilities

Developer shall provide all street crossing conduits per SUB's specifications within the development. The builder/owner or owner/occupant shall provide and install all service laterals which include trenching and backfill, conduit, conductors, and meter bases to SUB's specifications. SUB will inspect the installations before backfilling the trench is started. Upon completion of the service installation and SUB approval, SUB will assume ownership and maintain the service to the utility point of demarcation.

The developer shall call SUB to coordinate the duct or cable entrance into a transformer vault. SUB will make the final connection of the service at the secondary junction box or transformer vault.

For an overhead to underground service, the builder or owner shall provide and install the service lateral as above and enough conductor to reach the secondary point of service on the pole (SUB will provide materials for and construct the riser).

C. Developer Provided Trench, Conduit and Vault Installation Option

The developer may provide SUB with all trenching, backfilling, and the installation of all conduits, junction boxes and vaults per SUB specifications (SUB will provide conduits, vaults and junction boxes). The developer shall coordinate with SUB to inspect the installation before backfilling. All conduits installed by the developer shall have 1250# pulling tape installed.

If the developer installs the conduits, junction boxes and vaults per SUB's specifications, then the developer's development/ redevelopment charges will be reduced by SUB's estimate (without administrative overheads) to perform this work by a contractor.

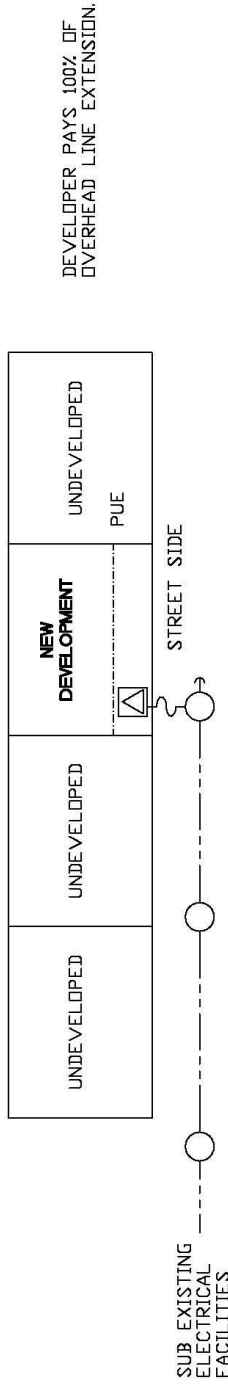
3. Development and Redevelopment Charges Administration

A. Guiding Principle

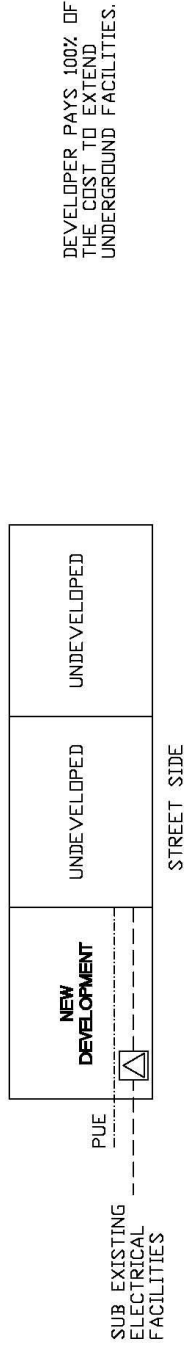
In principle, the developer pays all cost of the development, including the distribution secondary service installation and extensions to the property. Exhibit A contains generic examples for illustration purposes only.

# EXHIBIT A

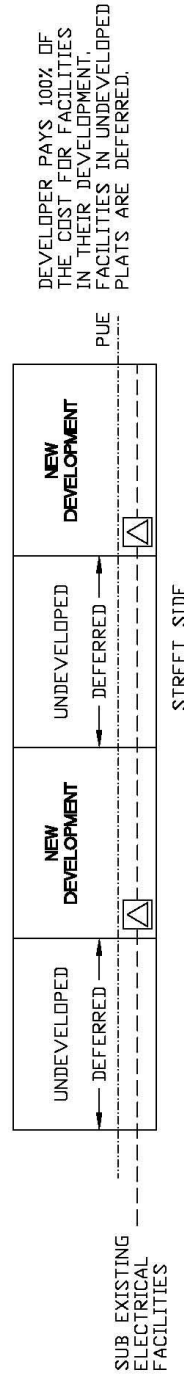
EXAMPLE #1



EXAMPLE #2



EXAMPLE #3



NOTE: EXAMPLES ARE GENERIC AND FOR ILLUSTRATION PURPOSES ONLY.

B. Simple Service (Residential, Commercial, Industrial)

For single phase service where there are already facilities to the edge of the lot, but the land has not been previously developed, the charge is \$1335.

C. Standard Service Extension (Residential, Commercial, Industrial)

For installations not covered by the simple service, including but not limited to, all 3-phase installations, locations that do not have existing secondary available, and/or extension of primary distribution facilities: The developer pays all costs associated with extending service to the property, including that portion which is necessary for an open loop feed system.

D. Redundant Service

Sites requiring back-up capability from another source. Capacity charges may apply. Construction costs will be based on work to be performed.

E. Open Loop Feed

SUB's underground distribution system design is an open loop feed system. In an open loop feed system distribution transformers have the capability of being fed from two different cables. In the loop there is a single open point, typically at one of the distribution transformers, forming two radial systems.

F. Cost for Facilities Outside the Development

Cost for the installation or rearrangement of electrical facilities outside the development (properties not in possession of developer) for the sole purpose of supplying electric service to properties in possession of the developer requesting service shall be borne by the developer requesting the service.

Cost for the installation or rearrangement of electrical facilities outside the development (properties not in the possession of the developer) that will service future developments shall be deferred to the adjoining property at the time of development.

Cost for the installation or rearrangement of electrical facilities outside the development that go beyond the requirements of the

developer requesting service or the developer of the adjoining property and that are required by SUB shall be borne by SUB.

4. Temporary Service Charges

Temporary service refers to utility service for short-term or transient-type installations. Mobile homes that do not have a permanent structure for the point of attachment, short-term commercial activities, and on-site service to construction operations are in this category.

Temporary service is limited to twelve (12) months' use from the date of connection and will be disconnected after twelve (12) months unless agreed upon with SUB in advance of connection.

A customer's terminal and intermediate support installations for receiving temporary services must maintain National Electric Safety Code (NESC) and appropriate governmental agency clearances, be structurally safe, and provide an adequate support for the point of attachment.

A. Temporary Service for Construction Operations/Short-term Commercial Activity

The developer shall pay a \$225 fee for each 200A single phase temporary service. The developer shall provide and install an approved meter loop, meter base and necessary support structure for the temporary service.

Overhead temporary service must be within 150 feet of a secondary voltage source.

Underground temporary service must be within 5 feet of a secondary voltage source and the developer is responsible for trench and conduit installation to SUB's specifications.

All services that do not fall under the above parameters shall require the developer to pay SUB the estimated cost for the installation and removal of any facilities required in order to provide the temporary service.

B. Temporary Service for Mobile Homes

All the parameters and charges described above apply, but the following scenarios describe when service to a mobile home may become permanent rather than temporary.

- 1) A customer who owns the real property upon which the mobile home is located may qualify for permanent service by fulfilling certain requirements, such as providing a carport, utility room, pump house, garage or shop (in addition to requirements of whatever governmental agency has jurisdiction).
- 2) Permanent service to a customer-owned pole is not recommended. However, if the customer wants the point of attachment to be on a permanently installed pole, it shall be of sufficient structural strength as determined by SUB, and must be furnished and installed by the customer and maintained in a manner approved by SUB or service will be removed.
- 3) Mobile homes located on a planned long-term basis adjacent to permanent residences to provide occupant care or supervision may be considered as permanent, at SUB's discretion.

C. Energy Cost

Energy cost is not included in the temporary service charge fee. Temporary services will be metered and billed on the appropriate schedule.

5. Effective Date of Policy

This policy shall be effective August 31, 2014.

**SECTION II. COGENERATION AND SMALL POWER PRODUCTION**

4-2-1 COGENERATION AND SMALL POWER PRODUCTION. SUB is required to comply with the Public Utility Regulatory Policies Act (PURPA) of 1978. Section 210 of PURPA requires SUB to purchase and sell power to qualifying cogeneration and small power projection facilities within limits established by the Act.

SUB encourages development of viable power resources and, therefore, complies with the RULES OF COMPLIANCE WITH FEDERAL ENERGY REGULATORY COMMISSION ORDER NUMBER 69, COGENERATION AND SMALL POWER PRODUCTION document reproduced as an exhibit at the end of this policy and procedure manual.



4-2-2 NET METERING. The objective of this net metering policy is to establish Springfield Utility Board (SUB) policy for substantial compliance with ORS 757.300, as amended by Senate Bill 84, dated June 7, 2005. Senate Bill 84 amended the state law regarding net metering that was originally enacted with the passing of House Bill 3219, dated July 8, 1999.

1. Availability

Net metering service is available to SUB customers who own and operate a net metering facility subject to the following conditions:

- A. Uses resources identified in ORS 757.300(1)(d)(A) to generate electrical power. At the time this SUB policy was adopted, these resources included solar power; wind power; fuel cells; hydroelectric power; landfill gas; digester gas; waste; dedicated energy crops available on a renewable basis or low-emission, nontoxic biomass based on solid organic fuels from wood, forest or field residues.
- B. Nameplate generating capacity of not more than two hundred fifty (250) kilowatts.
- C. Located on the customer's premises.
- D. Interconnects and operates in parallel with SUB's existing transmission and distribution system.
- E. Intended primarily to offset part or all of the customer's own electrical requirements.

2. Definitions

- A. Avoided Cost Rate: Because of the environmental and other public policy benefits of net metering, SUB's Board deems that the Avoided Cost Rate for purposes of net metering shall equal the energy charge for energy charged by SUB to its retail customers. The Avoided Cost Rate shall not include any customer charges, demand charges, or other fixed charges and shall only reflect the energy charges assessed by SUB for energy consumed by the customer.
- B. Bi-directional Metering: Specialized metering that can measure and record the flow of electrical power in two directions is termed "bi-directional" metering.
- C. Customer: For the purposes of this policy, a customer includes a customer-generator that participates in SUB's Net Metering Program.

- D. Energy: Energy is measured in kilowatt-hours (kWh) and may be valued differently for various time periods and seasons.
- E. Energy Charge: Energy charge means the energy charge applied to the customer's billing statements for service under SUB's R-1, GS-1, GS-2, GS-3 or other rate schedule, as determined by SUB.
- F. Excess Energy: Any electrical energy generated by the customer's net metering facility that is surplus to the simultaneous electrical usage of the customer is termed "excess energy."
- G. Net Metering: Net metering is the measurement of the difference between the electricity supplied to an eligible customer by SUB and the electricity generated by an eligible customer's net metering facility and fed back to SUB over the applicable billing period.
- H. Net Metering Facility: A net metering facility is a customer-generating facility meeting the requirements as outlined in Senate Bill 84, or its successor. (See also Board Policy 4-2-2(1) Availability.)

3. General Provisions for Net Metering Service

A. Start Date

This service shall be available to customers upon the date SUB's Board of Directors adopts this policy.

B. Interconnection and Net Metering Service

SUB shall allow interconnection of a qualifying net metering facility to its system. Customers shall be subject to fees and charges provided in SUB's Interconnection Policy for customer-owned, grid-connected electric generating systems (Board Policy 4-2-3).

C. Interconnection Requirements

Net Metering Facilities shall comply with requirements specified in SUB's Interconnection Policy (Board Policy 4-2-3).

D. Level of Net Metering Generation

The aggregated level of net metering generation for SUB shall be limited to 0.5% of the single-hour coincident peak load for the previous

year. SUB will honor these requests on a "first come, first serve" basis as net metering capacity becomes available under the limit.

E. Monthly Fees

Customers requesting net metering service will not be charged an additional monthly administrative charge associated with a net metering facility connected to SUB's system. In the future, the Board may reconsider establishing a monthly administrative charge to cover Net Metering Program expenses. The customer will be charged for any required expenses if SUB's system will be modified to interconnect with the net metering facility.

F. Value of Generated Energy from a Net Metering Facility

Any excess energy generated by the customer and supplied to SUB's system shall be valued based upon the Avoided Cost Rate. The energy delivered from the customer (excess energy) shall be credited as if the amount delivered from the customer was billed under the energy charge for the rate schedule, as determined by SUB, that the customer would be billed under if the net metering facility did not exist. For example, under SUB's GS-2 rate schedule, the customer would be billed for energy delivered under SUB's GS-2 rate schedule (including the customer charge and demand charge), and credited for any excess energy under the energy charge for the GS-2 rate schedule.

G. Disbursement of Unused Credit

All customer net metering accounts shall be evaluated once for each year during the March billing cycle. Because SUB often bills customers for a variety of services, it is in the public interest to ensure that a customer has paid in full for any services or charges assessed by SUB. Every March billing period, any remaining credit in the customer's account shall be used to pay for any outstanding electric, water, sewer, or other charges billed by SUB in March to the respective customer. Any outstanding credit after accounting for any such outstanding charges shall be applied to customer's bill for the following billing period. If SUB disconnects any utility account for a net metering customer, SUB will automatically disconnect the customer's net metering account.

4. Monthly Billing for Net Metering Service

The electric service charges for each customer shall be computed in accordance with the monthly billing in the applicable standard rate schedule, as determined by SUB.

5. Special Conditions

A. A bi-directional metering system will measure any energy.

- 1) If during a billing cycle a customer has provided no excess energy, the prices specified in the energy charges section of the applicable standard rate schedule, as determined by SUB, shall be applied to the positive balance owed to SUB by the customer.
- 2) If during a billing cycle a customer has provided excess energy, the customer shall be billed for appropriate monthly charges, as determined by SUB, and shall receive a credit on their billing statement for such excess energy at the applicable Avoided Cost Rate.

B. The customer is responsible for all costs associated with its net metering facility and is also responsible for costs related to any modifications to the net metering facility that may be required by SUB for purposes of safety and reliability.

C. SUB shall not be liable directly or indirectly for permitting or continuing to allow an attachment of net metering facility, or for the acts or omissions of the customer that cause loss or injury, including death, to any third party.

D. Net metering facility customers are required to sign a Net Metering Agreement before receiving net metering service.

E. Net metering facility customers are unable to participate in SUB's Average Payment Plan.

F. Net metering facility customers are unable to participate in SUB's net metering activities if the seasonal meter lockout is used.

G. In the event that metering of a customer's generation is tampered with, as determined by SUB, the customer shall be liable for all historic net metering credits and shall no longer be eligible to participate in SUB's Net Metering Program.

6. Continuing Service

This schedule is based on continuing service at each service location. Disconnect and reconnect transactions shall not relieve a customer from monthly minimum charges.

7. Rules and Regulations

Service under this schedule is subject to the general rules, policies and regulations of SUB.

4-2-3 INTERCONNECTION POLICY. This “Interconnection Policy for Customer-Owned, Grid-Connected Electric Generating Systems” (Interconnection Policy) sets forth the requirements and conditions for interconnected non-utility-owned electric generation where such generation may be connected for parallel operation with the electrical system of Springfield Utility Board (SUB). Generating systems will be permitted to interconnect to SUB’s electric distribution system only after a determination by SUB that such interconnection will not interfere with the operation of the distribution circuit.

1. Application of this Policy

This policy is intended to apply to facilities with an installed generating capability of 250kW or less. Requests to interconnect facilities greater than 250kW will be reviewed on a case-by-case basis and fees and charges assessed by SUB may be different than those identified in this policy. SUB staff is responsible for obtaining written agreement with customer in accordance with this policy prior to interconnection.

2. Interconnection Application Fee

- A. Facilities with an installed capability of 25kW or less: \$0.00
- B. Facilities with an installed capability of greater than 25kW: \$500.00

The above application fee is intended to recover SUB’s labor costs associated with review of an application.

In addition to the above application fee, the applicant is required to reimburse SUB for any costs associated with requirements made by third parties to interconnect generation, such as the Bonneville Power Administration.

3. Meter Charge

A. SUB shall install all meters required for interconnection.

B. Facilities with an installed capability of 25kW or less:

Net metered customers will have no additional charge. Customers that are not net metered are responsible for reimbursing SUB at the estimated cost of the meter and installation. (Refer to Board Policy 4-2-2, Net Metering.)

C. Facilities with an installed capability of greater than 25kW:

Customer is responsible for reimbursing SUB at the estimated cost of the meter and installation.

4. Facilities Charge

At its discretion, SUB may require additional facilities to integrate generation. In the event SUB requires additional facilities, such as a dedicated transformer to mitigate reliability impacts to other SUB services, the customer shall be responsible for the estimated cost of these facilities and installation.

5. Cost of Studies

At its discretion, SUB may require studies to assess reliability impacts related to generation interconnection. These studies shall be conducted by the customer at the customer's expense.

6. Interconnection Requirements

A. Customer shall comply with all the latest applicable National Electrical Code (NEC) requirements, building codes, and shall obtain electrical permit(s) for the equipment installation.

B. Customer shall provide space for metering equipment and meter base as per SUB requirements. Customer shall provide for a manual disconnect switch that is clearly visible from the meter and SUB shall have access to the manual disconnect switch. The manual disconnect switch shall provide a visible open-connection between customer's generation and SUB's source. The manual disconnect switch shall be lockable only in the open position.

- C. Customer's over-current device at the service panel shall be marked to indicate power source and connection to SUB's distribution system.
- D. The customer shall assume the full responsibility for all maintenance of the generator and protective equipment and keeping of records for such maintenance. These records shall be available to SUB for inspection upon request and reasonable notice.
- E. Customer's power production control system shall comply with all applicable regulations and standards for parallel operation with SUB; in particular the:
  - 1) Power output control system shall automatically disconnect from SUB power source upon loss of SUB voltage and not reconnect until SUB's voltage has been restored for at least five (5) minutes continuously.
  - 2) Power output control system shall:
    - a. Automatically initiate a disconnect from SUB source within six (6) cycles if customer's voltage falls below 60 Volts rms to ground (nominal 120 Volts rms base) on any phase; and
    - b. Automatically initiate a disconnect from SUB's system within two (2) seconds if the customer's voltage rises above 132 Volts rms phase to ground or falls below 104 Volts rms phase to ground (nominal 120 V rms base) on any phase; and
    - c. In the event that either of the above events (a or b) occur, the customer will not restore generation for at least five (5) minutes after normal voltage is maintained.
  - 3) At SUB's option, SUB may either manually disconnect the power generation, manually restore the power generator, or both.
- F. Customer shall pay all costs associated with the design, installation, operation, and maintenance of the generation equipment on the customer's side of the meter.
- G. Customer shall pay for any non-standard meter electrical hook-up requested by the customer.
- H. Customer shall provide an application for interconnection that will include one-line diagram. Customer must receive SUB approval of the

design prior to system installation. Customer shall not commence parallel operation of the generation equipment until inspection and written approval of the interconnection facilities has been provided by SUB. SUB shall have the right to have representatives present at the initial testing of the customer's protective apparatus, and shall retain the right to periodically inspect the facility to ensure that appropriate safety standards continue to be met.

- I. Once in operation, customer shall make no changes or modifications in the equipment, wiring, or the mode of operation without the prior written approval of SUB.
- J. Adoption by Reference.

In this chapter, SUB adopts by reference all or portions of the most current regulations and standards identified below:

- 1) The National Electrical Code (NEC) is published by the National Fire Protection Association (NFPA).
- 2) National Electrical Safety Code (NESC).
- 3) Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems.
- 4) American National Standards Institute (ANSI) Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
- 5) Institute of Electrical and Electronics Engineers (IEEE) Standard 519, Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.
- 6) Underwriters Laboratories (UL), including UL Standard 1741 (Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Systems), Inverters, Converters, and Controllers for Use in Independent Power Systems.
- 7) Underwriters Laboratories (UL) 1703 Standard for Safety: Flat-Plate Photovoltaic Modules and Panels;
- 8) Institute of Electrical and Electronics Engineers (IEEE) Standard 1262, Recommended Practice for Qualification of Photovoltaic (PV) Modules.



7. Safety, Reliability, and System Performance

- A. All Safety and operating procedures for joint use equipment shall be in compliance with federal, state, local, and manufacturers' requirements, including the Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.269, the National Electrical Code (NEC), Oregon Administrative Rules (OAR), SUB standards, and equipment manufacturers' safety and operating manuals.
- B. SUB shall have the right to disable the ability of the generating facility to deliver power to SUB's system at any time.

8. Special Conditions

- A. SUB shall not be liable directly or indirectly for permitting or continuing to allow an attachment of a generation facility, or for the acts or omissions of the customer that cause damage, loss or injury, including death, to any third party. The customer shall indemnify and hold SUB harmless from any claims arising from any such acts or omissions.
- B. In the event that a facility is in violation of this policy, as determined by SUB, SUB shall have the right to disconnect the facility from SUB's system.
- C. Once a facility is operational, lockout and tagout procedures approved by SUB must be followed.

**SECTION III. RESOURCE AND CONSERVATION PLANNING**

4-3-1 INTEGRATED RESOURCE PLANNING. Cost-effective energy efficiency is a priority resource. Springfield Utility Board shall continue to incorporate energy efficiency in its resource planning processes.

4-3-2 RATE DESIGN MODIFICATIONS TO PROMOTE ENERGY EFFICIENCY INVESTMENT. Energy efficiency is one of the goals of retail rate design while recognizing that energy efficiency must be balanced with other objectives.

The Board shall continue to allow for timely recovery of energy efficiency-related costs.

The Board encourages staff to pursue actions that encourage energy efficiency where practicable—including, but not limited to, offering home energy audits, publicizing the financial and environmental benefits associated with making home energy efficiency improvements, and educating homeowners about all existing federal and state incentives, including the availability of low-cost loans, that make energy efficiency improvements more affordable.

**SECTION IV. SMART GRID INVESTMENTS**

- 4-4-1 SMART GRID INVESTMENTS. The Board encourages staff to consider investments and policies to support Smart Grid within SUB's system while recognizing that Smart Grid must be balanced with other objectives.

**SECTION V. UNAUTHORIZED ATTACHMENTS**

- 4-5-1 UNAUTHORIZED ATTACHMENTS. Written consent shall be obtained from SUB before any equipment or material of any description may be attached to any facility or property owned by SUB. SUB shall not be responsible for loss or damage to life or property resulting from customer-owned, installed, and maintained facilities on, adjacent to, or connected to SUB's facilities, and the customer shall assume all liability therefore.