

Chapter 13.41

ELECTRIC NET METERING

Sections:

- 13.41.010 Purpose and scope.**
- 13.41.020 Definitions.**
- 13.41.030 Required filings.**
- 13.41.040 Technical requirements and standards for interconnection.**
- 13.41.050 Application for interconnection.**
- 13.41.060 Interconnection agreement.**
- 13.41.070 Certificate of completion.**
- 13.41.080 General terms and conditions of interconnection.**
- 13.41.090 Payment for net energy**
- 13.41.100 Adoption by reference.**

13.41.010 Purpose and scope. The purpose of this chapter is to establish rules and procedures for determining the terms and conditions governing the interconnection of electric generating facilities with a maximum generating capacity of not more than 100 kilowatts to the Town of Steilacoom electric distribution system. (Ord. 1455 §1(part), 2009).

13.41.020 Definitions.

“Applicant” means any person, corporation, partnership, government agency, or other entity applying to interconnect an electric generating facility to the Town of Steilacoom’s electric distribution system pursuant to this chapter.

“Application” means the written notice provided by the applicant to the Town of Steilacoom that initiates the interconnection process.

“Electric System” means all electrical wires, equipment, and other facilities owned or provided by the Steilacoom electric utility to transmit electricity to customers.

“Electric Utility” means the Town of Steilacoom who owns and operates the electrical distribution system, or the electrical distribution system itself, onto which the applicant seeks to interconnect a generating facility.

“Generating Facility” means a source of electricity owned by the applicant or generator that is located on the applicant’s side of the point of common coupling, and all facilities ancillary and appurtenant thereto, including interconnection facilities, which the applicant requests to interconnect to the Town of Steilacoom’s electric system.

“Generator” means the entity that owns and/or operates the generating facility interconnected to the Town of Steilacoom’s electric system.

“Interconnection” means the physical connection of a generating facility to the electric system so that parallel operation may occur.

“Interconnection Agreement” means the written, executed agreement between the Town of Steilacoom and the applicant consistent with the purpose, scope and provisions of this chapter, including but not limited to the provisions of SMC 13.41.080.

“Interconnection Facilities” means the electrical wires, switches, and other equipment used to interconnect a generating facility to the electric system.

“Net Metering” means measuring the difference between the electricity supplied by the Town of Steilacoom and the electricity generated by a generating facility that is fed back to the Town of Steilacoom electric system over the applicable billing period.

“Point of Common Coupling (PCC)” means the point where the generating facility’s local electric power system connects to the Town of Steilacoom electric system, such as the electric

power meter or at the location of the equipment designed to interrupt, separate, or disconnect the connection between the generating facility and the Town of Steilacoom electric system.

“Electric Utility” means the Town of Steilacoom who owns and operates the electrical distribution system, or the electrical distribution system itself, onto which the applicant seeks to interconnect a generating facility. (Ord. 1455 §1(part), 2009).

13.41.030 Required filings. Applicants shall be required to submit the following forms and receive approval of each form and the generating facility by the Town of Steilacoom prior to approval and/or interconnection to the electric system.

- (a) Application
- (b) Certification of Completion
- (c) Interconnection Agreement. (Ord. 1455 §1(part), 2009).

13.41.040 Technical requirements and standards for interconnection.

(1) General Interconnection Requirements

(a) Any generating facility desiring to interconnect with the Town of Steilacoom electric system or modify an existing interconnection must meet all minimum technical specifications applicable, in their most current approved version, as set forth in this chapter.

(b) The specifications and requirements in this section are intended to mitigate possible adverse impacts caused by the generating facility on the Town of Steilacoom electric system, equipment and personnel and on other customers of the Town of Steilacoom electric system. They are not intended to address protection of the generating facility itself, generating facility personnel, or its internal load. It is the responsibility of the generating facility to comply with the requirements of all appropriate standards, codes, statutes and authorities to protect its own facilities, personnel and loads. The Town of Steilacoom accepts no responsibility or liability for any failure of the generating facility or related equipment located anywhere beyond the point of common coupling (PCC) with the Town of Steilacoom electric system.

(c) The specifications and requirements in this section shall apply generally to the non-utility owned electric generation equipment (or any other facilities or equipment not owned by the Town of Steilacoom electric system) to which this standard and agreement(s) apply throughout the period encompassing the generator’s installation, testing, commissioning, operation, maintenance, decommissioning and removal of said equipment. The Town of Steilacoom may verify compliance at any time, with reasonable notice.

(d) The Generator shall comply with the requirements in subsections (d)(i), (d)(ii) and (d)(iii) below. However, at its sole discretion, the Town of Steilacoom may approve alternatives that satisfy the intent and/or purpose of these requirements, except local, state and federal building codes.

- (i) Codes and standards: Applicant shall conform to all applicable codes and standards for safe and reliable operation of the generator facility, including but not limited to the National Electric Code (NEC), National Electric Safety Code (NESC), the Institute of Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI), and Underwriters Laboratories (UL) standards, and local, state and federal building codes. The generator is responsible to obtain all applicable permit(s) for the equipment installations on its property.
- (ii) Safety: All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standards, the NEC, Washington Administrative Code (WAC), the Washington Industrial Safety and Health Administration (WISHA) and equipment manufacturer’s safety and operating manuals.
- (iii) Power Quality: Installations shall be in compliance with all applicable standards including IEEE Standard 519-1992, Harmonic Limits.

(2) Specific Interconnection Requirements

(a) Applicant shall furnish and install on applicant's side of the meter, a UL-approved safety disconnect switch which shall be capable of fully disconnecting the applicant's generating facility from the Town of Steilacoom electric system. The disconnect switch shall be located adjacent to the Town of Steilacoom electric meter and shall be of the visible break type in a metal enclosure which can be secured by a Town of Steilacoom padlock. The disconnect switch shall be accessible to Town of Steilacoom personnel at all times.

(b) The requirement in subsection (2)(a) above may be waived by the Town of Steilacoom if: (i) Applicant provides interconnection equipment that applicant can demonstrate, to the satisfaction of the Town of Steilacoom, performs physical disconnection of the generating equipment supply internally; and (ii) applicant agrees that its service may be disconnected entirely if generating equipment must be physically disconnected for any reason.

(c) The Town of Steilacoom shall have the right to disconnect the generating facility at the disconnect switch under the following circumstances: when necessary to maintain safe electrical operating conditions; if the generating facility does not meet required standards or rules; if the generating facility at any time adversely affects or endangers any person, property of any person, Town of Steilacoom's operation of its electric system or the quality of the Town of Steilacoom's service to other customers; or failure of the owner of record to notify the Town of Steilacoom of a sale or transfer of the generator, interconnecting facilities or the premises where the generator is located.

(d) Nominal voltage and phase configuration of applicant's generating facility must be compatible to the Town of Steilacoom electric system at the point of common coupling.

(e) Applicant must provide evidence that its generation will never result in reverse current flow through the Town of Steilacoom's network protectors. All instances of interconnection to secondary spot distribution networks shall require review and written pre-approval by the Town of Steilacoom. Interconnection to distribution secondary grid networks is not allowed. Closed transition transfer switches are not allowed in secondary network distribution systems.

(3) Specifications Applicable to all Inverter-based Interconnections

Any inverter-based generating facility desiring to interconnect to the Town of Steilacoom's electric system or modify an existing interconnection must meet the technical specifications, in their most current approved version, as set forth below. The version of the technical specifications approved by the Town of Steilacoom is specified in SMC 13.41.080 and SMC 13.41.100. A more recent approved version may supersede specifications on the list below.

(a) IEEE Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power systems, for Systems 10MVA or less.

(b) UL Standard 1741, Inverters, Converters, and Controllers for Use in Independent Power Systems. Equipment must be UL listed.

(c) IEEE Standard 9929, IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems.

(4) Requirements Applicable to all Non Inverter-based Interconnections.

Non-inverter based interconnection requests may require more detailed review, testing, and approval by the Town of Steilacoom, at the expense of the applicant, of the equipment proposed to be installed to ensure compliance with applicable technical specifications, in their most current approved version, including but not limited to:

(a) IEEE standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, for systems 10MVA or less.

(b) ANSI Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.

Applicants proposing such interconnection may also be required to submit a power factor mitigation plan and/or other studies or plans as appropriate for Town of Steilacoom review and approval. (Ord. 1455 §1(part), 2009).

13.41.050 Application for interconnection.

- (1) When an Applicant requests interconnection from the Town of Steilacoom, the applicant shall be responsible for conforming to the rules and regulation in effect. The applicant seeking to interconnect a generating facility under these rules must complete and submit a written application form. Information must be accurate, complete, and approved by the Town of Steilacoom prior to installation of the generating facility.
- (2) Application Fees. The Town of Steilacoom requires a non-refundable interconnection application fee of \$100.00. Actual expenses in excess of this fee shall be invoiced to the Applicant. All fees shall be paid prior to interconnection.
Application Evaluation. All generation interconnection requests pursuant to this chapter will be reviewed by the Town of Steilacoom for compliance with these rules. If the Town of Steilacoom in its sole discretion finds the application does not comply with these rules and standards, the Town of Steilacoom may reject the application. If the Town of Steilacoom rejects the application, it shall provide the applicant with written notification stating the reasons for rejecting the application. (Ord. 1455 §1(part), 2009).

13.41.060 Interconnection agreement.

- (1) Once an application is accepted by the Town of Steilacoom as complete, the Town of Steilacoom shall determine if any additional information or studies are required. If in the event additional information or studies are required, the applicant shall be responsible for providing the requested studies and/or information. All expenses related to providing this additional information and/or studies shall be borne by the applicant.
Upon approval of the application for interconnection, the Town will provide an interconnection agreement to the applicant. The interconnection agreement shall be completed and executed by the applicant within 30 days. (Ord. 1455 §1(part), 2009).

13.41.070 Certificate of completion.

All generating facilities must obtain an electrical permit and pass electrical inspection before they can be connected or operated in parallel with the Town of Steilacoom electric system. Generator shall provide written certification to the Town of Steilacoom that the generating facility has been installed and inspected in compliance with all local building and/or electrical codes. (Ord. 1455 §1(part), 2009).

13.41.080 General terms and conditions of interconnection.

- (1) The general terms and conditions listed in this section shall apply to all generating facilities interconnecting to the Town of Steilacoom electric system.
- (2) Any electrical generating facility with a maximum electrical generating capacity of 100 kW or less must comply with these rules to be eligible to interconnect and operate in parallel with the Town of Steilacoom's electric system. The rules under this chapter shall apply to all interconnecting generating facilities that are intended to operate in parallel with the Town of Steilacoom's electric system irrespective of whether the applicant intends to generate electricity to serve all or part of the applicants' load; or to sell the output.

- (3) In order to ensure system safety and reliability of interconnected operations, all interconnected generating facilities shall be constructed and operated by the generator in accordance with this chapter and all other applicable federal, state and local laws and regulations.
- (4) Prior to initial operation, all generators must submit a completed certificate of completion to the Town of Steilacoom; execute an interconnection agreement, and any other agreement(s) reasonably required by these rules for the disposition of the generating facility's electric power output. The interconnection agreement between the Town of Steilacoom and generator outlines the interconnection standards, cost allocation and billing agreements, and on-going maintenance and operation requirements.
- (5) Applicant or generator shall promptly furnish the Town of Steilacoom with copies of such plans, specifications, records and other information relating to the generating facility or the ownership, operation, use, or maintenance of the generating facility, as may be reasonably requested by the Town of Steilacoom from time to time.
- (6) For the purposes of public and personnel safety, any non-approved generation interconnection discovered will be immediately disconnected from the Town of Steilacoom electric system.
- (7) To ensure reliable service to all Town of Steilacoom customers and to minimize possible problems for other customers, the Town of Steilacoom will review the need for a dedicated-to-single-customer distribution transformer. If the Town of Steilacoom requires a dedicated distribution transformer, the applicant or generator shall pay for all costs of the new transformer and related facilities.
- (8) For all net metering for fuel cells, facilities that produce electricity and used and useful thermal energy from a common fuel source, or facilities that use water, wind, solar energy, or biogas from animal waste as a fuel as set forth in RCW 80.60: The Town of Steilacoom shall install, own and maintain a kilowatt-hour meter or meters capable of registering bi-directional flow of electricity at the point of common coupling (PCC) at a level of accuracy that meets all applicable standards, regulations and statutes. The meters may measure such parameters as time of delivery, power factor, voltage and such other parameters as the Town of Steilacoom shall specify. The applicant shall provide space for metering equipment. It will be the applicant's responsibility to provide the current transformer enclosure (if required), meter socket(s) and junction box after the applicant has submitted drawings and equipment specifications for Town of Steilacoom approval. The Town of Steilacoom may approve other generating sources for net metering but is not required to do so.
- (9) Common labeling furnished or approved by the Town of Steilacoom and in accordance with NEC requirements must be posted on meter base, disconnects, and transformers informing working personnel that generation is operating at or is located on the premises.
- (10) No additional insurance will be necessary for a net metered facility that is a qualifying generating facility under Chapter 80.60 RCW. A qualifying facility under RCW 80.60 is one that is 100 kW or less; and that uses water, wind, solar energy, or biogas from animal waste as a fuel, fuel cells, or that produces electricity and used and useful thermal energy from a common fuel source. For other generating facilities permitted under these standards but not a qualifying facility under Chapter 80.60 RCW, additional insurance, limitations or liability and indemnification may be required by the Town of Steilacoom.
- (11) Prior to any future modification or expansion of the generating facility, the generator will obtain Town of Steilacoom review and approval. The Town of Steilacoom reserves the right to require the generator, at the generator's expense, to provide corrections or additions to existing electrical devices in the event of modification of government or industry regulations and standards. For the overall safety and protection of the Town of Steilacoom electric system, RCW 80.60 currently limits interconnection of generation for net metering to 0.25% of The Town of Steilacoom's peak demand during 2006 and .50% in 2014. Additionally, interconnection of generating facilities to individual distribution feeders will be limited to 10% of the feeder's peak capacity.

- (12) It is the responsibility of the generator to protect its facilities, loads and equipment and comply with the requirements of all appropriate standards, codes, statutes and authorities.
- (13) Charges by the Town of Steilacoom to the applicant or generator in addition to the application fee, if any, will be cost-based and applied as appropriate. Such costs may include but not limited to, transformers, production meters, and Town of Steilacoom testing, qualification, and approval of non UL 1741 listed equipment. The Generator shall be responsible for any costs associated with any future upgrade or modification to its interconnected system required by modifications in the Town of Steilacoom's electric system.
- (1) This chapter governs the terms and conditions under which the applicant's generating facility will interconnect with, and operate in parallel with, the Town of Steilacoom's electric system. This chapter does not govern the settlement, purchase, or delivery of any power generated by the applicant's generating facility. The purchase or delivery of power, including net metering of electricity pursuant to Chapter 80.60 RCW, and other services that the applicant may require will be covered by separate agreement or pursuant to the terms, conditions and rates as may be from time to time approved by the Town of Steilacoom. Any such agreement shall be completed prior to the initial operation and filed with the Town of Steilacoom.
- (2) Generator may disconnect the generating facility at any time; provided the generator provides reasonable advance notice to the Town of Steilacoom. Generator shall notify the Town of Steilacoom prior to the sale or transfer of the generating facility, the interconnection facilities or the premises upon which the facilities are located. The applicant or generator shall not assign its rights or obligations under any agreement entered into pursuant to these rules without the prior written consent of the Town of Steilacoom, which consent shall not be unreasonably withheld. (Ord. 1455 §1(part), 2009).

13.41.090 Payment for net energy. The Town of Steilacoom shall measure the electricity produced and consumed by the generator during each billing period, in accordance with normal metering practices.

- (1) If the electricity supplied by the Town of Steilacoom exceeds the electricity generated by the generator during the billing period, or any portion thereof, then the generator shall be billed for the net electricity supplied by the Town of Steilacoom together with the appropriate base charge paid by other customers of the Town of Steilacoom in the same rate class.
- (2) If the electricity generated by the generator during the billing period, or any portion thereof, exceeds the generator's electricity usage, then the generator shall be billed for the appropriate base charge as other customers in the same rate class; and credited for the net excess kilowatt-hours generated during the billing period, with the kilowatt-hour credit appearing on the customer's bill for the following period.
- (3) On April 30th of each calendar year, any remaining unused kilowatt-hour credit accumulated by the generator during the previous year shall be granted to the Town of Steilacoom without any compensation to the customer.

Generator shall pay any amount owing for electric service provided by the Town of Steilacoom in accordance with applicable rates and policies. Nothing in this section shall limit the rights of the Town of Steilacoom under applicable rate schedules, Town ordinances, customer service policies and general provisions of the Steilacoom Municipal Code. (Ord. 1455 §1(part), 2009).

13.41.100 Adoption by reference. The Town of Steilacoom adopts by reference all and/or portions of regulations and standards identified below as they now exist or as they are modified in the future.

- (1) The National Electric Code (NEC), as published by the National Fire Protection Association (NFPA).

- (2) The National Electric Safety Code, (NESC).
- (3) The Institute of Electrical and Electronics Engineers (IEEE) Standard 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems.
- (4) Institute of Electrical and Electronics Engineers (IEEE) Standard 929, Recommended Practice for Utility Interface with Photovoltaic (PV) Systems.
- (5) American National Standards Institute (ANSI) Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
- (6) Institute of Electrical and Electronic Engineers (IEEE) Standard 519, Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems.
- (7) Underwriters Laboratories (UL), including UL Standard 1741, Inverters, Converters, and Controllers for Use in Independent Power Systems.
- (8) Occupational Safety and Health Administration (OSHA) Standard at 29 CFR 1910.269.
Washington Division of Occupational Safety and Health (DOSH) Standard, Chapter 296-155 WAC. (Ord. 1455 §1(part), 2009).