

**(Effective until July 1, 2020)**

**WAC 51-11C-40804 Section C408.4—Service water heating systems commissioning.**

**C408.4 Service water heating systems commissioning.** Service water heating equipment and controls subject to Section C404 shall be included in the commissioning process required by Section C408.1. The commissioning process shall minimally include all energy code requirements for which the code states that equipment or controls shall "be capable of" or "configured to" perform specific functions.

EXCEPTION: Service water heating systems are exempt from the commissioning process in buildings where the largest service water heating system capacity is less than 200,000 Btu/h (58.6 W) and where there are no pools or permanent spas.

**C408.4.1 Functional performance testing.** Functional performance testing specified in Sections C408.4.1.1 through C408.4.1.3 shall be conducted. Written procedures which clearly describe the individual systematic test procedures, the expected systems' response or acceptance criteria for each procedure, the actual response or findings, and any pertinent discussion shall be followed. Testing shall affirm operation with the system under 50 percent water heating load.

**C408.4.1.1 Equipment.** Equipment functional performance testing shall demonstrate the installation and operation of components, systems, and system-to-system interfacing relationships in accordance with approved plans and specifications such that operation, function, and maintenance serviceability for each of the commissioned systems is confirmed. Testing shall include all modes and *sequence of operation*, including under full-load, part-load and the following emergency conditions:

1. Redundant or *automatic* back-up mode;
2. Performance of alarms; and
3. Mode of operation upon a loss of power and restoration of power.

**C408.4.1.2 Controls.** Service water heating controls shall be tested to document that control devices, components, equipment, and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to document they operate in accordance with *approved* plans and specifications.

**C408.4.1.3 Pools and spas.** Service water heating equipment, time switches, and heat recovery equipment which serve pools and permanent spas shall undergo a functional test to determine that they operate in accordance with manufacturer's specifications.

[Statutory Authority: RCW 19.27A.025, 19.27A.045, 19.27A.160, and 19.27.074. WSR 16-13-089, § 51-11C-40804, filed 6/15/16, effective 7/16/16. Statutory Authority: RCW 19.27A.025, 19.27A.160, and 19.27.074. WSR 16-03-072, § 51-11C-40804, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27A.020, 19.27A.025 and chapters 19.27 and 34.05 RCW. WSR 13-04-056, § 51-11C-40804, filed 2/1/13, effective 7/1/13.]

**(Effective July 1, 2020)**

**WAC 51-11C-40804 Section C408.4—Controlled receptacle and lighting control system commissioning.**

**C408.4 Controlled receptacle and lighting control system commissioning.** Controlled receptacles and lighting control systems subject to Section C405 shall be included in the commissioning process required by Section C408.1. The configuration and function of controlled receptacles and lighting control systems required by this code shall be tested and shall comply with Section C408.4.1.

EXCEPTION: Lighting control systems are exempt from the commissioning process in buildings where:  
1. The total installed lighting load is less than 20 kW; and  
2. The lighting load controlled by occupancy sensors or automatic daylighting controls is less than 10 kW.

**C408.4.1 System testing.** Functional performance testing shall demonstrate that occupant sensors, time switches, manual overrides, night sweep-off, daylight responsive control, and controlled receptacles are installed and operate in accordance with approved construction documents. Testing shall include the *sequence of operation* and be conducted under the following conditions:

1. Normal operation;
2. Redundant or automatic back-up mode;
3. Performance of alarms; and
4. Mode of operation upon a loss of power and restoration of power.

[Statutory Authority: RCW 19.27A.020, 19.27A.025, 19.27A.160 and chapter 19.27 RCW. WSR 19-24-040, § 51-11C-40804, filed 11/26/19, effective 7/1/20. Statutory Authority: RCW 19.27A.025, 19.27A.045, 19.27A.160, and 19.27.074. WSR 16-13-089, § 51-11C-40804, filed 6/15/16, effective 7/16/16. Statutory Authority: RCW 19.27A.025, 19.27A.160, and 19.27.074. WSR 16-03-072, § 51-11C-40804, filed 1/19/16, effective 7/1/16. Statutory Authority: RCW 19.27A.020, 19.27A.025 and chapters 19.27 and 34.05 RCW. WSR 13-04-056, § 51-11C-40804, filed 2/1/13, effective 7/1/13.]