



**Code Issue:**

Under what circumstances will projects in buildings need to comply with Chapter 12 of the Seattle Energy Code (Energy Metering and Energy Consumption Management)?

**Interim Policy:**

Until further notice, DPD will enforce Chapter 12 requirements for energy metering and energy consumption management for the nonresidential spaces in projects where:

1. A new development (construction) project exceeds 20,000 square feet of nonresidential conditioned floor area. All energy source systems identified in Figure 12A shall be metered separately for each of the end-use categories listed in Section 1202, and an energy display shall be installed in accordance with Section 1204. For mixed-use buildings, only the nonresidential spaces are required to comply with the provisions of Chapter 12.
  
2. There is an addition exceeding 20,000 square feet of nonresidential conditioned floor area, and one of the following two conditions are proposed:
  - a. One or more energy source systems as listed in Figure 12A for the entire building (existing plus addition) are new.
    - i. For this condition, only the new energy source systems are required to be submetered.
    - ii. For the purposes of this condition, "electrical system" includes the main panel and any subpanels, and all feeder and branch circuits.
    - iii. An energy display shall be installed in accordance with Section 1204 for the new energy source system(s).

OR

- b. There are one or more standalone energy source systems as listed in Figure 12A for the floor area being added to the existing structure.
  - i. For this case, only the standalone energy source systems serving the addition will be required to be submetered.
  - ii. For the purposes of this code solution, "standalone" means there is a single source of energy to the addition for the particular system listed in Figure 12A. For example, a standalone electrical system is one where electrical power to the addition is a subpanel served by a single feeder from the existing main panel, or a service supplied directly from the City Light grid.
  - iii. Any applicable equipment fed from the electrical system serving the addition is required to be submetered, regardless of the actual location of the equipment.
  - iv. An energy display shall be installed in accordance with Section 1204 for the standalone energy source system(s).

**Rationale and Commentary:**

**1202 Whole Building Energy Supply Metering.** For buildings with a gross conditioned floor area of 20,000 ft<sup>2</sup> and larger, measurement devices with remote communication capability shall be provided to collect energy use data for each energy supply source to the building including gas, electricity and district steam.

**1202.1 HVAC System Total Energy Use.** This category shall include all energy used to provide space heating, space cooling, and ventilation to the building including boilers, chillers, pumps, fans for supply, return, relief, exhaust, and parking garages, etc.

**1202.2 Lighting System Total Energy Use.** This category shall include all energy used by interior and exterior lighting, but not including plug-in task lighting.

**1202.3 Plug Load System Total Energy Use.** This category shall include all energy used by plugged-in task lighting, appliances, and other equipment and devices.

**1202.4 Process Load System Total Energy Use.** This category shall include all energy used by any non-building operation load (e.g. nonresidential refrigeration and cooking) that accounts for over 2% of the total building connected load. If the total process energy use is less than 2% of the total building connected load, the process energy use is allowed to be included in miscellaneous process energy use.

**1202.5 Miscellaneous Total Energy Use.** This category shall include energy use other than those specified in Sections 1202.1 through 1202.4 including domestic hot water, elevators and escalators, and swimming pools.

From the DPD energy code web page:

"On July 12, 2011, the Washington State Building Code Council (WSBCC) voted to "suspend the energy metering requirements in Chapter 12 of the Washington State Energy Code while reviewing the requirements and looking at the economic aspects of metering."

For projects within the City of Seattle:

- DPD suspended enforcement of Chapter 12 for residential spaces effective July 12, 2011.
- After a briefing and discussion with DPD staff, Mayor Mike McGinn directed DPD to continue enforcement of Chapter 12 of the Seattle Energy Code for new nonresidential construction projects, and to suspend enforcement of its provisions for construction projects in existing buildings until further notice."

In the discussions with the Mayor, DPD did not think about and therefore, did not raise the issue of gut rehabs or standalone additions. After we published the decision, designers in the private sector asked us to give them direction on what was considered to be "new construction". For the purposes of submetering, DPD is considering "new construction" to be where an entire energy source as listed in Figure 12A (such as the entire electrical system) is new, or if an addition substantially has its own entire energy source as listed in Figure 12A (e.g. its own electrical system). Our reasoning is that these types of projects have the opportunity to design the energy source system (e.g. the electrical system) such that the submeters can be installed on the five systems required by the code, without necessitating a redesign or rewiring of the electrical system in the existing portion of the building.

The 20,000 square foot threshold is based on the code text that only required submetering in buildings greater than 20,000 square feet. Since only the addition is "new construction", DPD chose to use 20,000 square feet as the threshold for triggering the submetering requirement, to align with what DPD believes was the Mayor's intent in making his decision. DPD is using this same rationale to set the threshold at 20,000 square feet on nonresidential conditioned floor area in mixed-use buildings.