

# GEW134-14

## 610.1, 610.1.1, 610.1.2, 610.4

**Proponent:** Charles Foster, Steffes Corporation, representing self (cfoster20187@yahoo.com)

### Revise as follows:

**610.1 Renewable energy systems requirements.** Buildings that consume energy shall comply with this section. Each building or surrounding lot or building site where there are multiple buildings on the building site shall be equipped with one or more renewable energy systems in accordance with this section.

Renewable energy systems shall comply with the requirements of Section 610.2 for solar photovoltaic systems, Section 610.3 for wind systems, or Section 610.4 for solar water heating systems, and Section 610.5 for performance monitoring and metering of these systems as approved by the code official. These systems shall be commissioned in accordance with the requirements of Section 611.

**Exception:** Renewable energy systems are not required for the following:

1. Buildings or building sites where there are multiple buildings on the building site providing not less than ~~2~~ 3 percent of the total estimated annual energy use of the building, or collective buildings on the site, with onsite renewable energy using a combination of renewable energy generation systems complying with the requirements of Section 610.2, 610.3, or 610.4.
2. Where not less than ~~4~~ 5 percent of the total annual building energy consumption from renewable generation takes the form of a 10-year commitment to renewable energy credit ownership, confirmed by the code official.
3. Where the combined application of onsite generated renewable energy and a commitment to renewable energy credit ownership as confirmed by the code official, totals not less than ~~4~~ 5 percent of the total annual building energy consumption from renewable generation.

**610.1.1 Building performance-based compliance.** Buildings and surrounding property or building sites where there are multiple buildings on the building site, that are designed and constructed in accordance with Section 601.3.1, performance-based compliance, shall be equipped with one or more renewable energy systems that have the capacity to provide not less than ~~23~~ percent of the total ~~estimated calculated~~ annual energy use of the building, or collective buildings on the site.

**610.1.2 Building prescriptive compliance.** Buildings and surrounding property or building sites where there are multiple buildings on the building site, that are designed and constructed in accordance with Section 601.3.2, prescriptive compliance, shall be equipped with one or more renewable energy systems that have the capacity to provide not less than ~~2~~ 3 percent of the total estimated annual energy use of the building, or collective buildings on the building site, ~~with onsite renewable energy by calculation demonstrating that onsite renewable energy production has a rating of not less than 1.75 Btu/h (0.5 W) or not less than 0.50 watts per square foot of conditioned floor area, and using any single or combination of renewable energy generation systems meeting the requirements of Sections 610.2, 610.3, or 610.4.~~

**610.4 Solar water heating equipment.** Not less than ~~40~~ 20 percent of the building's annual estimated hot water energy usage shall be supplied by onsite solar water heating equipment.

**Reason:** This proposal does five primary things:

1. increases the onsite renewable requirement from 2% to 3%,
2. increases the REC purchase requirement from 4% to 5%,

3. reduces the RC commitment time from 10 to 5 years,
4. cleans up unintelligible language in Section 610.1.2., and
5. increases the solar water heating requirement from 10% to 20%.

The price of onsite solar is decreasing as the cost to produce solar photovoltaic panels falls. Moreover, the IgCC should aggressively promote renewable energy. Moving from a 2% to 3% requirement is not unreasonable given the market and the goals of the IgCC.

The same argument holds for increasing REC purchase requirements from 4% to 5%. The 10 year REC purchase requirement that currently exists in the IgCC is too long as serves as a barrier to the efficient development of grid-scale renewable energy projects. This proposal suggests 5 years as an alternative.

Next, some of the existing language in Section 610.1.2 is, at best, confusing. This proposal removes the confusing language.

Finally, the solar water heating requirement in Section 610.4 is very low. Solar thermal is a proven technology that can easily economically provide virtually all the domestic hot water for most commercial office buildings, much less a green building. The IgCC should increase the percentage from 10% to 20%.

**Cost Impact:** Will not increase the cost of construction.

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