

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Process Energy Exemption

Code: 2012 NC Energy Conservation Code
Section: 202

Date: May 28, 2014

Question:

Are buildings or portions thereof intended primarily for manufacturing or commercial or industrial processing exempt from the 2012 NCECC requirements?

Answer:

Yes, conditionally. Building or portions thereof intended primarily for manufacturing or commercial or industrial processing can be exempt from the 2012 NCECC requirements as explained below.

The requirements contained in the 2012 NCECC were developed with consideration of economic alternatives for defining requirements for building thermal envelopes, and mechanical, electrical, and service water systems for commercial buildings associated primarily with human occupancy and maintaining those spaces for the comfort of the occupants.

Specific consideration of energy use associated with process needs related to commercial or industrial process or manufacturing were not evaluated or included within the defined scope of the 2012 NCECC. The 2012 NCECC contains a specific NC amendment to include a definition of “process energy” with the intent that energy associated with industrial or commercial process and manufacturing needs would not trigger specific NC requirements unless specifically addressed within the code.

The 2012 NCECC, Chapter 2 defines process energy as follows:

PROCESS ENERGY. Energy consumed in support of manufacturing, industrial, or commercial process other than conditioning spaces and maintaining comfort and amenities for the occupants of a building.

With respect to these considerations, we consider that mechanical systems designed solely to provide for safety for maintaining the environmental requirements of manufacturing, and commercial or industrial process needs are exempt from energy conservation code requirements. And that energy consumed from such systems will not count towards invoking the building

thermal envelope requirements. Additionally, dedicated service water systems and electrical systems for manufacturing, and commercial and industrial process are exempt except where specifically addressed within the energy code related to these uses (For example, requirements for general lighting of manufacturing areas is defined in the energy code.) With respect to the HVAC exemption, the key is that the system is designed solely to support the environmental requirements of the manufacturing or commercial or industrial process needs. HVAC systems designed to provide for the comfort and amenities of the occupants would not be exempt and may also then trigger the building thermal envelope requirements. The designer of record will need to document where appropriate exceptions apply. This does provide the owner with increased flexibility to design spaces and systems associated primarily with manufacturing and commercial and industrial processing on an economic scale that best meets the owner's needs.

One example of a process related building use would be an unmanned data center containing heat sensitive equipment that requires space cooling for maintaining space temperature within the boundary of the environmental temperature limits of the equipment.

Keywords: