

My name is Stephen Beard. I am a lighting professional employed with NorthEast Electrical Distributors. Thank you Mr. Chair and Committee members for inviting me here to speak today in support of H.410, the bill to expand appliance efficiency standards in Vermont, in particular the provision to close the loophole that allows inefficient high CRI T12 lightbulbs to be sold here.

I have been a lighting professional in Vermont for 20 years. I carry the National Council for Qualification of Lighting Professionals (NCQLP) "LC" Lighting Certification and I am a Member of the Illuminating Engineering Society (IES). I am a certified design partner of Efficiency Vermont in their Lighting Design Program. I entered the electrical industry during the rebuilding after the Great Ice Storm of 1998. At that time, the big push around saving energy through lighting was changing out inefficient T12 lightbulbs for more efficient T8 lightbulbs.

Back in 1998, we in the lighting industry assumed that T12 lightbulbs would eventually be phased out. They were expensive and inefficient. As lighting standards for fluorescent lamps were adopted Federally, the industry assumed that T12 bulbs would not be manufactured in the future. Twenty years later, I still see at least a few T12 lamps in almost every facility I perform a lighting audit on. This past year that included multiple office buildings and industrial facilities, and an aircraft hangar.

A major reason that I still see T12 lightbulbs is because of the continued sale of high CRI lightbulbs that are exempt from federal energy efficiency standards.

To define exactly what a T12 lamp is, and what high CRI means: The industry term for a lightbulb is a lamp. Today I'll use the two terms interchangeably. "T" stands for tubular, and the number after the T indicates the diameter of the tube in eighths of an inch. So T12 lamps are tubular lamps 1-1/2" in diameter, T8 lamps are 1" in diameter, and T5 lamps are 5/8" in diameter. CRI stands for Color Rendering Index, or the ability of a light source to accurately display the true color of the object it's shining on. High CRI lighting is typically used for retail displays or art installations – applications where the exact color is important. High CRI lamps were not originally intended to be used in normal household or general commercial applications. These applications don't require a high CRI light source. but the inefficient T12 light bulbs are still in use in these applications because of the high CRI loophole. The resulting energy use (and costs to these users) is significant – 30% to 60% higher as compared to current T8 or LED lamps that comply with the federal energy efficiency standards.

Over the past two decades the electrical industry and the State of Vermont have taken powerful steps to encourage customers to remove the grossly inefficient T12 fixtures from their buildings and replace them with better lighting options. There are several generations of improved technology that have emerged to fit the needs of consumers, including efficient T8 and LED lamps that meet the federal energy efficiency standards, while incidentally providing high CRI ratings.

H.410 would set the efficiency requirements for high CRI fluorescent lightbulbs at the same levels as the federal standard does for normal CRI fluorescent lightbulbs. This would close the loophole and finally do what should have been done twenty years ago to encourage the adoption of efficient lamps. For this reason, I urge you to pass H.410.