

**Testimony by Bruce Redman Becker, AIA, AICP  
before the Energy and Technology Committee on**

**Proposed H.B. No. 5587 - An Act Concerning Submetering at  
Apartment Buildings and Condominiums, and**

**H.B. 6360 - An Act Concerning Implementation of Connecticut's  
Comprehensive Energy Strategy**

**March 7, 2013**

Mr. Chairman, Madam Chairwoman and Members of the Committee. My name is Bruce Redman Becker and I am pleased to have the opportunity to submit this written testimony regarding the Legislature's efforts to address sub-metering. By way of introduction, I am a Connecticut architect and developer of market-rate, affordable, elderly and supportive housing, and have helped create over 3,000 units of multi-family housing in Connecticut and New York, working in collaboration with many Connecticut not-for-profit clients, municipalities and private investors to meet the state's diverse housing needs. During my 25 years of practice as a licensed Architect, a Certified Planner, and a LEED Accredited Professional, I have frequently confronted utility regulatory matters in trying to make housing projects more energy efficient, affordable, and economically and environmentally sustainable. My firm, Becker and Becker Associates, Inc., recently designed and developed the largest apartment building in the State of Connecticut known as 360 State Street in New Haven, which is a 500-unit, LEED Platinum certified project and is the first apartment building in the world to be heated and powered with a fuel cell. We also designed and helped develop four supportive housing projects in Fairfield County, The Marvin Congregate Elderly and Child Day Care project in Norwalk, and The Wauregan Apartments in Norwich. And we are currently planning the largest apartment building in Hartford - the conversion the vacant Bank of America tower, adjacent to the Old State House, into 285 units of market rate and affordable housing.

First, I'd like to applaud the Governor and DEEP for realizing how important it is to permit apartment submetering in implementing an effective energy strategy for Connecticut. For the past six years my efforts to make housing more environmentally and economically sustainable have been severely thwarted by Connecticut's outdated submetering rules. Many states around the country embrace submetering, including New York State, which has encouraged and subsidized apartment submetering since 1988. Connecticut needs to join states around the country in encouraging submetering to foster multifamily housing which encourages conservation, energy efficiency, distributed and renewable energy generation, and use of combined heat and power. Failing to allow submetering needlessly blocks critical progress in all of these areas.

Connecticut's existing submetering regulations were written before electric restructuring, distributed generation, net metering, and many of the cutting-edge metering technologies were developed. As currently interpreted by the Connecticut Public Utilities Regulatory Authority ("PURA"), submetering is permitted only in campgrounds and marinas. This interpretation results in wasteful consumption of energy in adaptive re-use buildings and significantly limits—and in many circumstances outright prohibits—the deployment of distributed power generation and combined heat and power systems the state so earnestly seeks to support.

Over 500,000 of Connecticut's 1,495,000 housing units are in multi-unit buildings. Until submetering is permitted, all 500,000 of these housing units will be unable to effectively utilize distributed generation, on-site renewable energy, combined heat and power, and many apartment buildings are left with no means to encourage electricity conservation. The prohibition of submetering in apartments is a destructive and antiquated regulation that impedes economic and environmental progress. Eliminating this prohibition will encourage significant investment, job creation and environmental and economic benefits, at NO cost to the State. The timing is critical, as thousands of new apartment units are in the planning stages right now. Developers continue to immediately rule out of the use of combined heat and power, distributed generation and on-site renewable energy in planning their projects, merely because of this antiquated regulation. My own firm is planning the redevelopment of 777 Main Street (the Former Bank of America tower) into 285 units of market rate and affordable housing in downtown Hartford, and is currently unable to contemplate use of a fuel cell or combined heat and power unless the legislature acts to correct this problem. However if this prohibition is lifted, the largest apartment building in Hartford has the potential to be the most energy-efficient and environmentally sustainable housing in the region.

## **Submetering Encourages Conservation and Reduces Waste**

Many of Connecticut's older apartment buildings and commercial complexes are master metered, meaning that individual tenants are not metered and billed separately for their utility use. The building receives one electric bill and the landlord includes the cost of electricity in the rent. Master metering however is inherently unfair because customers are not billed for their actual utility usage. This increases wasteful energy use, since tenants are not directly responsible for their bill. Because the electrical bill is averaged across all apartments in the building, tenants that actually make efforts to conserve energy subsidize those that waste energy.

The use of combined heat and power (also known as co-generation) captures the waste heat from power generation for use in space and water heating. This can increase the efficiency of energy use by up to 40% in residential buildings, and reduce

overall energy costs by up to 40%. However prohibiting submetering is the equivalent of prohibiting combined heat and power, since it is uneconomical for a building owner to supply electricity to tenants without the ability to recover costs through submetering. The result runs counter to the millions of dollars Connecticut spends annually on conservation programs, energy efficiency overhauls and other state supported measures to reduce energy consumption and lower Connecticut's historically high electric rates. It also prohibits thousands of building owners, including hundreds of non-profit affordable housing sponsors, from reducing their operating costs by utilizing the greater efficiency afforded by combined heat and power. Furthermore the prohibition marginalizes the use of fuel cells in apartment buildings, which would otherwise be the most effective, energy-efficient way to provide heat and power to residential buildings. This undermines the large commitment the State of Connecticut has made to fostering the fuel cell industry in the State, by eliminating one of the most valuable local markets for fuel cells.

Installing utility metering in existing housing or in an adaptive re-use conversion can add hundreds of thousands of dollars to an adaptive re-use project, and often space does not allow for locating standard utility meter rooms and meters. Without a progressive submetering policy, some adaptive re-use projects will not proceed. Many existing buildings will have to continue master metering (with electricity costs averaged and included in rent), which is proven to waste energy, is unfair to tenants who use energy wisely and fails to allocate costs fairly.

## **Submetering Makes Distributed Generation Possible for Apartments**

In 2010, construction was completed on 360 State Street in New Haven, the first residential building in Connecticut to gain Leadership in Energy and Environmental Design ("LEED") Platinum status. The building employs numerous energy efficiency measures and includes a 400 kW fuel cell on site that produces clean, renewable power for the building's residents. Because on site distributed generation like this fuel cell must be "behind the meter," it cannot effectively distribute power to the 500 residential apartments if there are 500 separate residential utility meters. To use distributed generation, the fuel cell needs to be behind one utility meter that serves the building. Then, electricity from the fuel cell or the grid is measured in each apartment by a submeter. Today, owing largely to our inflexible submetering rules, that fuel cell is operated at half its capacity; and no electricity from the fuel cell is permitted to be used by the residential apartments.

On-site generation, whether through combined heat and power, or on-site renewable energy, can allow housing and mixed-use projects incorporating critical facilities such as shelters and grocery stores, to operate independently of grid outages. Because of this, eliminating the prohibition on submetering will make Connecticut less vulnerable to power outages. During recent storms such as Sandy and Nemo, Elm City Market, the full-service cooperative grocery store on the ground floor of 360 State

Street remained open to meet critical city needs when other stores were unable to, due to storm related power outages and access problems. If submetering is permitted, we would hope to provide similar facilities offering essential services at 777 Main Street in downtown Hartford, with grid independent power.

This mismatch in regulatory policy—encouraging development of on-site generation and fuel cells, yet simultaneously narrowing the scope of eligible projects—needlessly stymies the development of distributed generation and renewable energy projects in Connecticut.

## **Submetering Includes Consumer Protections**

Consumer protections are easily incorporated into submetering policy. Meter accuracy, protection from shutoffs and the ability to challenge an inaccurate bill can all be part of proposed consumer protections, as they have been in New York State for decades. At the 500-unit Octagon Apartments project, which my firm developed on Roosevelt Island in Manhattan, there have been no consumer complaints in the 6 years since the property commenced operations. In contrast, both UI and CL&P have a long history of consumer complaints with metering.

## **Conclusion**

Despite the benefits submetering multi-family properties offer, PURA's current interpretation of Connecticut's submetering rules limits submetering to campground and marinas. Accordingly, *it is critical that HB 5587 and HB 6360 make it clear that submetering is permitted in revitalized and new multifamily apartment buildings.* The Comprehensive Energy Strategy concludes that permitting submetering in residential buildings advances the energy goals of this state. For this reason, any legislative change should enable these buildings to implement submetering as of right.

Thank you for your consideration.