



Testimony of Northeast Energy Efficiency Council – CT Chapter and Celtic Energy

In Support of HB 6542, AN ACT ESTABLISHING A PILOT PROGRAM FOR THE DEVELOPMENT OF AN ENERGY EFFICIENT ECONOMY

Before the Energy and Technology Committee

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Submitted by Christopher F. Halpin, PE, CEM, CEP, LEED AP

Dear Senator Fonfara, Representative Nardello, and members of the Energy and Technology Committee,

I submit this testimony in general support of House Bill 6542, An Act Establishing a Pilot Program for the Development of an Energy Efficient Economy, with some modifications, on behalf of Celtic Energy. We are a Glastonbury, Connecticut based energy efficiency consulting engineering company offering services that include conducting energy audits, energy savings performance contract management for Federal, State, and Local Governments and other services locally, nationally, and internationally. We also have offices in NC, MA, NV, and will be opening one in China later this year. We have doubled in size over the last 18 months, and expect to double again in the next 12-18 months. We primarily hire graduate engineers and other support people, have kept several college graduates from leaving the State, and invested over \$30,000 in training and as Certified Energy Managers (CEM), Leadership in Energy and Environmental Design (LEED) Accredited Professionals and other certifications for our staff. We have been investing in internationally recognized energy engineering certifications similar to those described in this bill. We hold energy consulting contracts with the US Department of Energy, States of Connecticut, Massachusetts, Rhode Island, North Carolina, and Nevada, as well as dozens of municipalities and school districts in Connecticut and other States. As part of these contracts, and others, I have held in my 26 years in the energy efficiency business I have conducted hundreds of energy audits on government, commercial, and industrial buildings. I only inform the Committee of these facts to help you understand my extensive experience in the industry that this bill has a direct effect upon.

First of all, I commend this committee and the legislature for recognizing the importance of making our state buildings more energy-efficient. We are part of the global economy with increasing foreign competition for the finite energy resources remaining. Current geopolitical events highlight the increasing uncertainty regarding the reliability of particularly those foreign fossil fuel sources on which our economy depends. Energy conservation is the least cost energy resource available to us all and it is appropriate for the state of Connecticut to prioritize the capture of the full benefit of this resource.

In general, I agree with and support the intent of the bill, to design an energy efficiency program that can achieve significant energy savings in State and Municipal buildings. It has been my direct experience that the State's attempts to date at energy efficiency its own buildings has been woefully inadequate. Most of the work done over the past 20 years has focused on low payback lighting upgrades, leaving the more energy intensive technologies such as air conditioning, heating, and building envelope systems to become antiquated and increasingly inefficient. As an example, my firm, as well as three others, held On-Call



Energy Services Contract with the Department of Public Works from 2002-2008. In that time we were only asked to perform audits on seven buildings, of which the recommendations were implemented in only three of them. The State owns over 3,000 buildings, so even with the other firms' contributions, less than 1% of the State's buildings were addressed.

Also, I believe that this bill's intent of developing an energy audit and implementation program will distract from the Energy Savings Contracting Program prescribed in Sections 6 and 7 of HB 6544. Through an ESPC program, the State will not have to pay for audits that show unfavorable economics, saving the State money. The projects will be fixed price, with no change orders, and savings will be guaranteed, all on a design/build basis, greatly reducing the State's risk of non-performance. As currently written, this bill does not provide that level of risk mitigation to the State.

Some more specific comments are below:

1. Section 1, (a), (1) – Recommend a more precise definition of 'cost-effective', such as Life Cycle Cost Assessment (LCCA) based, or net positive cash flow over the term of the 20 year bond described in later sections.
2. Section 1, (a), (2-7) – These sections direct the Program Administrator to develop Certification Programs for energy auditors, and contractors. We believe that development of a State specific certification system would be unnecessary, and expensive, since there are several sources for already accepted, widely known energy engineering certifications that would save the State from reinventing the wheel on this issue.

The most well known across the globe is the Association of Energy Engineers' Certified Energy Manager (CEM) <http://www.aeecenter.org/i4a/pages/index.cfm?pageID=3351>

This designation, started in 1981, is required by the Federal Government and many State Governments for the same services CT is looking for in HB 6542.

AEE's Certified Energy Auditor (CEA)

<http://www.aeecenter.org/i4a/pages/index.cfm?pageID=3365>

is a much newer and similar designation started in 2006, but is not widely used, nor recognized.

The last most common designation is AEE's Certified Measurement & Verification Professional (CMVP) <http://www.aeecenter.org/i4a/pages/index.cfm?pageID=3356> It is a more specialized designation aimed at increasing the knowledge of professionals who typically measure energy savings.

Therefore, I don't believe the State needs to develop new certifications, but should assemble a group of firms who already have employees with these well known credentials, which the Department of Public Works has been doing since 2002. Other States such as Massachusetts, North Carolina, and Nevada where we do a lot of work have similar stables of AEE credentialed "On-Call Energy Consultants" to provide these services.

3. Section 1, (b) - I don't believe a 'pilot' program is necessary. There are many firms in the State who routinely conduct energy audits, and contractors who install energy conservation measures, so if anything a permanent program should be put in place.



4. Section 1, (c)- Recommend using USEPA Energy Star Portfolio Manager as an aid in identifying buildings to target. The Institute of Sustainable Energy at ECSU has already conducted benchmarking studies at dozens of State and municipal buildings across the State. These studies should be used immediately to target buildings. Additionally, the University of Connecticut should be included in any energy efficiency program that goes forward.
5. Section 1, (f)- Unless a very thorough contract is written, with robust measurement & verification protocols in place it will be very difficult for the State to measure actual savings. Also, the firms that typically conduct energy audits, such as Celtic Energy, do not guarantee the energy savings of our recommendations as we have little or no control over the implementation of our ideas, or the operation and maintenance of the equipment that is installed in the buildings. However, Energy Service Companies (ESCOs) routinely conduct energy audits, and then implement the recommended energy conservation measures, with guaranteed savings. I recommend following a traditional ESPC format as described in HB6544. The Program Administrator could issue RFQs for Third Party Owner's Representatives, such as my firm, who provide technical assistance and quality control services to the user agency, ensuring they get a good deal, and RFQs for ESCOs who would implement the program. This methodology is followed successfully in more than 30 States.
6. Section 2, - I believe issuing State bonds to provide the financing of the recommended projects is an excellent idea. The Program Administrator could set up a revolving loan similar to the Clean Water Program run by the DEP. This would take the burden of privately financing these programs off the municipalities. It would also solve the chronic lack of funding associated with the current State Energy Program.

This bill will create business opportunities and secure jobs in the growing energy efficiency field, help meet the state's carbon reduction obligations, and help Connecticut taxpayers in all income strata save money. I urge you to modify certain sections and support HB 6542, AA Establishing a Pilot Program for the Development of an Energy Efficiency Economy.

Thank you for your consideration.

Sincerely,

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