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## **OLR Bill Analysis**

### **sHB 6544**

#### ***AN ACT CONCERNING ENERGY EFFICIENCY.***

#### **SUMMARY:**

By law, the electric companies and the Energy Conservation Management Board (ECMB) must develop a comprehensive energy efficiency plan. This bill requires the plan to set a goal of weatherizing 80% of the state's residential units by 2030.

The bill expands cost-effectiveness evaluation requirements for the programs the electric companies propose in the plan. Among other things, the bill (1) specifies the purposes of the evaluation, (2) prescribes the evaluation process, and (3) requires ECMB to retain one or more consultants to administer the evaluation process.

The bill allows any state agency or municipality to enter into an energy performance contract with a qualified energy services provider to produce utility or operation and maintenance cost savings. Any energy-savings measure implemented under the contract must comply with state or local building codes (Connecticut does not have local building codes).

The bill requires ECMB, by January 1, 2012, to establish a standardized energy performance contract process for state agencies and municipalities. Agencies must use this process and municipalities may do so.

By law, the Department of Public Utility Control (DPUC) appoints the ECMB, which includes representatives of electric and gas utilities, customers, and state agencies. The bill expands the board to include representatives of municipal government and a municipal clean energy task force. It requires ECMB to periodically review contractors to determine whether they are qualified to conduct work under the

programs contained in the comprehensive plan.

The law requires the Connecticut Health and Educational Facilities Authority (CHEFA) to establish the Green Connecticut Loan Guaranty Fund to help finance energy efficiency and renewable energy projects for individuals, nonprofit organizations, and small businesses. The bill (1) imposes various requirements on CHEFA in administering this program and (2) specifies the terms CHEFA's financial assistance must meet.

The bill requires electric and gas companies, starting January 1, 2012, to maintain the energy consumption data of all nonresidential buildings they serve. They must make the data available to the public free of charge. They must maintain the data in a format that (1) is compatible for uploading to the United States Environmental Protection Agency's Energy Star portfolio manager (which allows consumers to compare their building's energy use to that of similar buildings) or similar system, for at least the most recent 36 months, and (2) preserves the customer's confidentiality.

Also starting January 1, 2012, the companies must provide aggregate town customer usage information that preserves the confidentiality of individual customers to any municipal legislative body that requests this information.

EFFECTIVE DATE: July 1, 2011 for the conservation program evaluation provisions and performance contracting provisions, upon passage for the remaining provisions.

## **COST EFFECTIVENESS OF ENERGY EFFICIENCY PROGRAMS**

### ***Purpose of Evaluation Process***

The law requires electric companies and ECMB to develop an energy efficiency plan that is subject to DPUC review and approval. The programs in the plan must be screened on their cost-effectiveness.

The bill requires DPUC to oversee an independent, comprehensive evaluation, measuring, and verification process to ensure that:

1. the energy efficiency programs are administered appropriately and efficiently and comply with statutory requirements,
2. programs and measures are cost effective,
3. evaluation reports are accurate and issued in a timely manner,
4. evaluation results are appropriately and accurately considered account in program development and implementation, and
5. information needed to meet any third-party evaluation requirements is provided.

***Evaluation Schedule and Budget***

The bill requires ECMB to include an annual schedule and budget for evaluations, as determined by the board, in the plan filed with DPUC. It precludes the ECMB members who represent the electric and gas companies and the municipal electric energy cooperative from voting on board plans, budgets, recommendations, actions or decisions regarding the evaluation process or its program evaluations and their implementation.

***Evaluation Process and Scope***

Under the bill, the evaluations of efficiency programs and individual measures, measurement, and verification must be conducted on an ongoing basis. The emphasis must be on those impact and process evaluations, programs, or measures that (1) have not been studied, and (2) account for a relatively high percentage of program spending. Evaluations must use statistically valid monitoring and data collection techniques appropriate for the programs or measures being evaluated.

Under current law, cost-effectiveness testing must use available information obtained from real-time monitoring systems. The bill instead requires that impact evaluations use information obtained from a sampling of program participants using either such systems or billing analyses, whichever is most appropriate for the measure or program being studied. By law, the testing is done to ensure accurate

validation and verification of energy use and the effects on the state's load factor.

Under the bill, all evaluations must describe any problems encountered in the evaluation process, including data collection issues, and recommendations on how to address these problems in future evaluations.

***Evaluation Administrator***

The bill requires ECMB to contract with one or more consultants not affiliated with ECMB board members to act as an evaluation administrator. The administrator must advise ECMB on the development of a schedule and plans for evaluations and oversee the program evaluation, measurement, and verification process on behalf of the board.

Consistent with ECMB processes and approvals and DPUC decisions regarding evaluation, the administrator must implement the evaluation process by (1) preparing requests for proposals and selecting evaluation contractors to perform program and measure evaluations and (2) facilitating communications between evaluation contractors and program administrators to ensure accurate and independent evaluations. In the evaluation administrator's discretion, the electric and gas companies must communicate with him or her for data collection, vendor contract administration, and providing necessary factual information during the evaluations.

The administrator must bring unresolved administrative issues or problems that arise during an evaluation to ECMB for resolution, but the administrator has sole authority regarding substantive and implementation decisions regarding any evaluation. Board members, including those representing the electric and gas companies, may not communicate with an evaluation contractor about an ongoing evaluation except with the express permission of the evaluation administrator. The administrator can only grant this permission if he or she believes the communication will not compromise the independence of the evaluation.

The administrator must file evaluation reports with ECMB and DPUC in its most recent plan approval proceeding, and ECMB must post a copy of each report on its website. ECMB and its members, including the electric and gas company representatives, may file written comments regarding an evaluation with DPUC or for posting on the board's website.

### ***DPUC Technical Meeting on Evaluations***

Within ten days of the filing of any evaluation report, DPUC must notify (1) the ECMB members and (2) the parties and participants in the most recent plan approval proceeding that the board members have 10 days from the notice to ask DPUC, in writing, to conduct a transcribed technical meeting to review the methodology, results, and recommendations in any evaluation. (The meetings are an informal process for addressing questions in DPUC proceedings.)

The technical meeting must be scheduled to immediately follow a public presentation by the evaluation administrator of the evaluation report. This must take place on a date arranged between the administrator and DPUC. At the request of DPUC or any board member, the evaluation administrator and the evaluation contractor must be available at the technical meeting. Examination of the administrator and contractor must be limited to a proceeding running for no more than six hours. The Office of Consumer Counsel must participate in the proceeding. The cost of the evaluation administrator and evaluation contractors must be paid by the fund (presumably the Energy Conservation and Load Management Fund).

The bill requires that the results of the evaluation process be incorporated in the plan. By law, DPUC reviews the plan for cost-effectiveness before approving it. The bill requires that this review include the results of the evaluation process described above.

### **ENERGY PERFORMANCE CONTRACTING**

The bill allows any state agency or municipality to enter into an energy performance contract with a qualified energy services provider to produce utility or operation and maintenance cost savings. A state

agency or municipality may implement other capital improvements in conjunction with the contracts so long as (1) they are being implemented to achieve the required cost savings and (2) the other capital improvements are in the aggregate cost-effective over the contract's term.

**Definitions**

Under the bill, an energy performance contract is one between a state agency or municipality and a qualified energy service provider to evaluate, recommend, and implement one or more cost savings measures. A performance contract must include (1) the design and installation of equipment and, if applicable, operation and maintenance of any of the measures implemented; and (2) guaranteed annual savings that meet or exceed the total annual contract payments the agency or municipality makes for the contract, including financing charges incurred over the contract's life.

To be qualified, the provider must be a corporation approved by the Department of Administrative Services (DAS) with a record of successful energy performance contract projects that (1) is experienced in designing, implementing, and installing energy efficiency and facility improvement measures; (2) has the technical capabilities to ensure the measures generate energy and operational cost savings; and (3) can secure the financing needed to support energy savings guarantees.

The contract must produce utility cost savings or operation and maintenance cost savings. Utility cost savings are utility expenses eliminated or avoided on a long-term basis as a result of equipment installed or modified or services performed by a qualified energy service provider. They do not include merely shifting personnel costs or similar short-term cost savings. Operation and maintenance cost savings means a measurable decrease in these costs and future replacement expenditures that result directly from implementing one or more utility cost savings measures. These savings must be calculated in comparison with an established baseline of operation and maintenance costs.

Under the bill a measure, piece of equipment, activity, or facility is considered cost-effective if a state agency or municipality reasonably expects that the present value of the energy it will save or produce over its useful life, including any compensation received from a utility, is more than the net present value of the costs of implementing, maintaining, and operating it over the same period, discounted at the cost of public borrowing.

The bill defines “energy-savings measure” to include a wide variety of efficiency and renewable energy measures. These include, among others:

1. replacing or modifying lighting and electrical components, fixtures, or systems, improvements in street lighting efficiency, or computer power management software;
2. Class I renewable energy such as photovoltaic and wind systems or solar thermal systems;
3. cogeneration systems that produce steam or forms of energy, such as heat or electricity, for use primarily within a building or complex of buildings;
4. automated or computerized energy control systems; and
5. heating, ventilation, or air conditioning system modifications or replacements.

However, the bill generally uses other terms to describe the types of measures it authorizes under energy performance contracts.

### ***Standardized Procedures***

The bill requires ECMB, by January 1, 2012, to establish a standardized energy performance contract process for state agencies and municipalities. A municipality may use the standardized process or establish its own.

The standardized process must include processes, documents, and procedures established by ECMB, the Office of Policy and

Management (OPM), and DAS (the bill also requires that the Department of Public Works be consulted in developing the documents). The process must include standard procedures for entering into a performance contract and standard energy performance contract documents. The documents must include (1) a guaranteed energy savings performance contract covering the design and installation of equipment and, if applicable, operation and maintenance of any of the implemented measures and (2) guaranteed annual savings that meet or exceed the total annual payments made by the agency or municipality makes for the contract, including financing charges it incurs over the contract's life.

The process must include standard contract documents, including requests for qualifications (RFQs); requests for proposals (RFPs); investment-grade audit contracts; energy services agreements, including the form of the project savings guarantee; and project financing agreements. An investment-grade audit is a study by the provider selected for a particular project. It must include detailed descriptions of the recommended improvements for the project, their estimated costs, and the utility and operations and maintenance cost savings projected to result from them. A municipality may use the established state contract or its own contract.

### ***Program Funding***

The initial funding to establish the energy performance contracting process must come from the ECMB. OPM must develop a pool of public and private capital that state agencies and municipalities can use to help finance energy savings measures.

### ***Prequalification of Energy Performance Contractors***

DAS must issue an RFQ from companies that can offer energy performance contract services to create a prequalified list of companies. State agencies must use the list; municipalities can use the list or establish their own qualification process. If a municipality uses the list, it must follow the standardized energy performance contract process.

When reviewing RFQs (apparently responses to the RFQ), DAS must consider a company's experience with:

1. design, engineering, installation, maintenance, and repairs associated with performance contracts;
2. conversions to a different energy or fuel source associated with a comprehensive energy efficiency retrofit;
3. post-installation project monitoring, data collection, and reporting of savings;
4. overall project management and qualifications;
5. accessing long-term financing;
6. financial stability;
7. projects of similar size and scope;
8. in-state projects and Connecticut-based subcontractors;
9. United States Department of Energy programs;
10. professional certifications; and
11. other factors DAS determines to be relevant and appropriate.

***Selection of Contractors***

Before entering an energy performance contract, a state agency or municipality that uses the standardized procedures must issue an RFP to up to three qualified providers. The agency or municipality may award the performance contract to the provider that best meets its needs, which need not be the lowest cost provider.

A feasibility analysis must be included in the responses to the RFP. The agency or municipality must use the analysis to select a qualified provider to engage in final contract negotiations. In making its final selection, the agency or municipality must consider:

1. contract terms,
2. the proposal's comprehensiveness,
3. the provider's financial stability,
4. comprehensiveness of cost savings measures,
5. experience and quality of technical approach, and
6. overall benefits to the agency or municipality.

***Energy Audit***

The provider selected as a result of the RFQ process (apparently the RFP process) must prepare an investment-grade energy audit. Upon acceptance, the audit becomes part of the final energy performance contract or energy services agreement. The audit must include estimates of how much utility and operation and maintenance cost savings would increase and estimates of all costs of the utility cost savings measures or energy-savings measures. These include:

1. itemized costs of design,
2. engineering,
3. equipment and materials,
4. installation,
5. maintenance and repairs, and
6. debt service.

If the state or municipality decides not to execute an energy services agreement after the audit is prepared and the costs and benefits described in it are not materially different from those described in the feasibility study submitted in response to the RFP, the agency or municipality must pay the costs of preparing the audit. Otherwise, the audit costs are included in the costs of the energy performance contract or energy services agreement.

### ***Independent Review of Projected Costs Savings***

The above “guidelines” must require that a licensed professional engineer review the cost savings projected by the qualified provider. The engineer must have at least three years experience in energy calculation and review. He or she may not (1) be an officer or employee of a provider for the contract under review, and (2) be otherwise associated with the contract. In conducting the review, the engineer must focus primarily on the proposed improvements from an engineering perspective, the methodology and calculations related to cost savings, increases in revenue, and, if applicable, efficiency or accuracy of metering equipment. The engineer must maintain the confidentiality of any proprietary information he or she acquires while reviewing the contract.

### ***Project Financing***

A guaranteed energy performance savings contract may provide for financing by a third party, including tax exempt financing. The financing provision may be separate from the contract. An agency or municipality may use designated funds, bonds, or master lease for any energy performance contracts or lease purchase agreements, so long as their use is consistent with the purpose of the appropriation.

Energy performance contracts must provide that (1) all payments between parties, except obligations on termination of the contract before its expiration, will be made over time and (2) the objective of the contracts is implementation of cost savings measures and energy and operational cost savings.

An energy performance contract, and payments under it, may extend beyond the fiscal year in which the contract became effective, subject to appropriations, if required by law, for costs incurred in future fiscal years. The contract may run for up to 20 years. The allowable length of the contract may reflect the useful life of the cost savings measures. A contract may provide for payments over a period not to exceed deadlines specified in it from the date of the final installation of the cost savings measures.

Each state agency or participating municipality must allocate enough money for each fiscal year to make payment of any amounts payable under energy performance contracts during that fiscal year.

***Reconciliation and Annual Reports***

The contract may provide that reconciliation of the amounts owed under it will occur in a period beyond one year, with final reconciliation occurring within the term of the contract. A contract must include contingency provisions if the actual savings do not meet predicted savings.

The contract must require the provider to give the agency or municipality an annual reconciliation of the guaranteed energy cost savings. If the reconciliation reveals a shortfall in annual savings, the provider is liable for the shortfall. If the reconciliation reveals an excess in annual energy cost savings, that excess may not be used to cover potential energy cost savings shortages in subsequent contract years.

During the term of each contract, the provider must monitor the reductions in energy consumption and cost savings attributable to the cost savings measures installed under the contract. The provider must, at least annually, report to the agency or municipality documenting the performance of the cost savings measures. The report must comply with International Performance Measurement and Verification Protocols.

***Modifications of Energy Savings Calculations***

The service provider and agency or municipality may agree to modify savings calculations based on any of the following:

1. subsequent material change to the baseline energy consumption identified at the beginning of the performance contract;
2. changes in the number of days in the utility billing cycle, the total square footage of the building, the facility's operational schedule, or the facility's temperature;
3. material change in the weather or in the amount of equipment or

lighting used at the facility; or

4. any other change that reasonably would be expected to modify energy use or energy costs.

### ***Reporting Requirement and Use of Savings***

Any agency or municipality participating in the standardized energy performance contract process that enters into an energy performance contract must report the project's name and host, the investment on the project, and the expected energy savings to OPM. It must direct the savings realized under the performance contract to contract payment and other required expenses and, when practicable, it must reinvest savings beyond that required for contract payment and other required expenses into additional energy saving measures.

### ***ECMB and OPM Roles in Performance Contracting***

ECMB, in consultation with OPM, must help state agencies and municipalities identify, evaluate, and implement cost-effective conservation projects at their facilities and create promotional materials to explain the energy performance contract program. ECMB, in consultation with OPM and DPUC, must inform agencies and municipalities of opportunities to develop and finance energy performance contracting projects. It must provide technical and analytical support, including (1) procurement of energy performance contracting services, (2) reviewing verification procedures for energy savings, and (3) assisting in structuring and arranging financing for energy performance contracting projects.

OPM may charge fees to cover costs incurred for its administrative support and resources or services provided to the state agencies and municipalities that use its technical support services. State agencies may add the costs of these fees to the total cost of the energy performance contract.

## **GREEN CONNECTICUT LOAN GUARANTY PROGRAM**

### ***Program Requirements***

The law requires CHEFA to establish the Green Connecticut Loan

Guaranty Fund to help finance energy efficiency and renewable energy projects for individuals, non-profit organizations, and small businesses. The bill requires CHEFA, in consultation with ECMB and the Clean Energy Fund board to:

1. ensure that this program integrates with existing state energy efficiency and renewable energy programs;
2. establish program performance targets to ensure sufficient participation in the secondary financial markets and to operate in coordination with existing financing programs to enable efficiency improvements for at least 15% of single-family homes in the state by 2020;
3. enter into contracts with one or more entities to perform the functions CHEFA considers appropriate;
4. enter into financial partnership agreements with banks and other financial institutions to provide loan origination services; and
5. exercise other powers needed to properly administer the program.

***Terms of Financial Assistance***

The bill requires CHEFA's financial assistance meet the following terms:

1. eligible energy conservation projects must meet cost-effectiveness standards adopted by CHEFA in consultation with ECMB and the Clean Energy Fund board;
2. loans must be at interest rates determined by CHEFA to be no higher than needed to make eligible energy conservation projects feasible;
3. when deciding on a loan, CHEFA may consider whether the applicant or borrower has received, or is eligible to receive, financial assistance and other incentives from any other source for the qualified energy efficiency services that would be the

subject of the loan;

4. CHEFA must review and evaluate applications for financial assistance under eligibility and qualification requirements and criteria it establishes in consultation with the boards; and
5. the fee paid for an energy audit provided under the program may be added to the amount of the resulting loan and then reimbursed from the fund to the borrower.

## **BACKGROUND**

### ***Related Bill***

SB 1, an Act Concerning Connecticut's Energy Future, specifically authorizes municipalities to enter into performance contracts.

## **COMMITTEE ACTION**

Energy and Technology Committee

Joint Favorable Substitute

Yea 19    Nay 0    (03/17/2011)