

Executive Summary

Connecticut's Energy Efficiency and Conservation Programs

Purpose of Study

The committee undertook this study in May 2008 to assess what progress Connecticut has made in achieving two of the eight broad goals of the state's energy policy, which was established in statute in 1978. The two broad goals under review are to:

- *assist citizens and businesses in implementing measures to reduce energy consumption and costs; and*
- *ensure that low-income households can meet essential energy needs.*

General Findings

The committee concluded that it is difficult to measure Connecticut's progress in reducing energy consumption for a number of reasons. First, the state has no overarching goal to reduce overall energy use from any baseline measure. Connecticut has never been a high energy-consuming state, ranking 44 in per capita consumption in 2005. However, Connecticut's energy prices are high, behind only Hawaii and the District of Columbia. But because consumption is low, Connecticut's 2005 per capita expenditures on energy was only 1.2 percent above the national average.

Over the past 35 years, about 75 percent of the nation's increased energy demand has been met through greater efficiency, while supply expansion has met the remaining 25 percent. Energy efficiency is much less costly than creating new generation. In New England, efficiency measures generally cost two-thirds less than the expenditures required to increase capacity through power plants, transmission lines, or natural gas pipelines. Energy efficiency reduces reliance on foreign oil and lowers harmful emissions, known as "greenhouse gases," into the air.

Even with higher prices for energy and the demonstrated benefits of increased efficiency, there has been no actual reduction in energy use nationally or here in Connecticut. However, the study finds that among the New England states, Connecticut's total increase in electric consumption from 1997 to 2007 is lower than all but Vermont's. Also, Connecticut has been nationally recognized as a leader in energy efficiency programs. The American Council for an Energy-Efficiency Economy, a nonprofit policy and research organization that evaluates and ranks state energy efficiency programs, ranked Connecticut among the top three states in its 2006 and 2008 scorecards.

Connecticut has established an energy goal known as a renewable portfolio standard, where a percentage of electricity procured by the utilities must come from

certain renewable energy resources each year until the goal of 20 percent of electricity generation from renewable resources by 2020 is reached. The goal includes energy efficiency as part of the portfolio standard, but is aimed at increasing the portion of electricity obtained from renewable resources, not at reducing overall energy, or even electricity, use. To achieve meaningful decreases in energy use, there first must be a state goal to reduce overall energy consumption.

The study found that while Connecticut has several energy efficiency and conservation programs and funding for the programs is generous compared to most other states, the programs are not focused on overall energy conservation and efficiency use. Instead, programs are targeted to particular energy types, usually linked to the funding source, which means most address electricity use.

The study also found that efficiency and renewable energy program planning is fragmented and, because plans and budgets are required annually, is also labor-intensive. Further, the short-term process does not offer the programmatic and funding stability vendors and consumers need to make important decisions.

The study found that deficiencies exist in the current residential program, with different measures taken depending on which utility is offering the program, and low turn-in rates on rebates, indicating that residential customers are not implementing significant efficiency measures after their audit. The study found that the current residential loan program is not as widely used as some programs in other states. Further, Connecticut does not utilize performance contracting to any great extent at the local level, and has not done so at the state level, despite a 2003 statutory requirement to implement an energy reduction performance contract in a state agency as a pilot program.

Further, none of the energy efficiency or alternative energy programs offer technical assistance to municipalities that would provide objective guidance on all efficiency and conservation measures a town might take and how best to finance them. Also, the current programs focus little on low-income rental and multi-family residences, landlords, and other hard-to-serve customers.

The program review committee found that even though the current Connecticut Energy Efficiency Fund (CEEF) programs are designed to be uniform, differences exist in program implementation between the two ratepayer-funded residential and low-income energy efficiency programs. The study analyzed the performance incentives structure in place that partially pays the two utilities for administering and implementing the energy efficiency programs in Connecticut and found that there seems to be little connection between amounts spent on programs and annual electricity savings. In addition, the process is complicated and not transparent. Further, the goals -- which are set primarily by the companies, and on which the incentives are based -- are almost always achieved or exceeded.

Saving energy is the primary goal of any energy efficiency program and, therefore, evaluating saving results is crucial. The report finds the current measurement and evaluation process has many deficiencies. There is no formal, established schedule

for evaluating efficiency and renewable energy programs. Many of these programs -- including many of the Clean Energy Fund and the 2005 Energy Independence Act initiatives, and the DSS weatherization program -- have not been evaluated recently, if ever. Further, among states with robust energy efficiency programs, Connecticut ranks 15 out of 19 in percentage of program dollars spent on evaluation.¹

When efficiency programs have been evaluated, the program administrators or implementers have typically been involved in selecting the evaluators and paying for the evaluation. Further, the evaluations that have been done place more emphasis on process or program incentive levels rather than on saving energy and costs.

The report also examined the state's progress in meeting the goal of assisting low-income residents with their energy needs and finds that until recently rapidly escalating energy prices coupled with little growth in federal funding made energy increasingly unaffordable for low-income households in Connecticut. The "energy affordability gap" in Connecticut was ranked third-greatest among all the states in 2007. The report indicated that for 2009, Connecticut's federal energy assistance funds will almost double to \$125 million. While the legislature supplemented that with a \$35 million General Fund allocation in August 2008, the deficit mitigation measures proposed by the governor and approved by the legislature in January 2009 rescind the \$35 million state allocation. While it is difficult to determine the degree to which the recent funding will affect affordability, the increased federal allocations coupled with a continued drop in oil prices, should help ease what could have been a severe problem for lower-income residents.

The committee found the annual application process for the Connecticut Energy Assistance Program is cumbersome and proposes a three-year application renewal process. Finally, the study reviewed the various weatherization programs serving low-income residents and found: conflicting goals and objectives in the utility-run programs; differences in the services provided to customers served by the two utility weatherization programs; and a lack of comprehensive impact evaluations of programs to determine energy savings or cost effectiveness.

Recommendations

In response to study findings, the program review committee adopted nine recommendations, set out below. Included among them: establishing a goal of a 10 percent reduction in per capita energy consumption by 2015, using 2006 consumption as the baseline; moving responsibility and resources for the evaluation function for all energy efficiency and renewable energy programs to the Office of Consumer Counsel, ensuring an adequate number of staff to manage and oversee evaluations; and directing the Department of Public Utility Control to explore the feasibility of a discounted utility rate for low-income gas and electric customers.

¹ According to 2007 expenditure analysis conducted by the Consortium for Energy Efficiency, a non-profit corporation whose mission is to accelerate development and availability to the public of energy-efficient technologies and to improve communications and commonality of programs in the efficiency field.

In addition to the nine adopted recommendations, the committee considered but did not adopt a set of staff-proposed recommendation to consolidate all energy efficiency and alternative programs into one energy authority in the form of a quasi-public agency, with one board of directors, one pooled funding stream, and one three-year plan and budget. The intent of the proposals was to address the recognition of program fragmentation and the lack of a fuel-blind approach, which make overall energy reduction hard to achieve.

Ultimately, a majority of the committee membership did not support the proposal (which is required by committee statute for approval). A variety of reasons were cited, including: opposition to the creation of a new quasi-public agency; support for how the programs were currently operating in terms of serving consumers; and a concern that the proposed authority would decrease policymakers' ability to oversee the programs.

- 1. In addition to its renewable portfolio goal, Connecticut shall have an overarching state goal of reducing energy consumption through efficiency and conservation measures first. The state shall adopt a target of 10 percent reduction in per capita energy consumption off the 2006 baseline measure by 2015.**
- 2. The gas utility contribution to the energy efficiency and conservation programs shall be one percent of the utilities' previous year's revenues.**
- 3. The legislature shall maintain the established funding stream from the gross receipts tax on petroleum products for funding of energy conservation programs at \$10 million in 2009, and annually thereafter.**
- 4. The legislature and the governor should establish a joint effort to require reduced energy use in state facilities by at least 10 percent by January 1, 2010. The joint effort should be through both executive order and legislative budgetary oversight. The legislature's Appropriations Committee should require agencies to demonstrate energy cost reductions in their budgets.**
- 5. Both the statutory requirement that the Governor's budget include a line-item breakdown of each agency's energy expenditures and the requirement that the Office of Policy and Management implement a pilot program using performance contracting be fulfilled.**
- 6. A new division within the Office of Consumer Counsel (OCC) shall be dedicated to evaluating all energy efficiency, conservation, and renewable energy programs. The division shall develop a detailed plan with evaluations prioritized based on articulated criteria (e.g., programs and projects that are largest or with the most uncertainty in**

- **work will include ongoing evaluations of energy efficiency and renewable energy programming and an annual verification of energy savings;**
 - **annual evaluations should be conducted to verify yearly energy and capacity savings and total resource benefits and progress towards goals; and**
 - **half the evaluation budget shall focus on impact evaluations, with the remainder for process and market effects evaluations.**
 - **Cost: The OCC will probably require 3 full-time employees to manage the evaluation work and the annual verification process. Therefore, approximately \$400,000 will need to be directed to the OCC for personnel expenses (includes fringe benefits), with the remainder of the allotted budget for hiring third-party evaluators. Funding for all the evaluation work including the addition of OCC staff should come from two and a half percent of current programming budgets.**
- 7. The annual application process for energy cash assistance should be replaced with a three-year application renewal process. Once a client is determined to be eligible, the eligibility would be for a three-year period. The application would require the client to notify the CAP agency during the three-year period if income or circumstances change that would make the client no longer eligible. The CAP agencies, working with DSS and accessing relevant databases, would be required to verify the continued eligibility through a sample of at least 20 percent of the applications each year.**
 - 8. The Department of Public Utility shall open a proceeding to investigate the feasibility, structure, and costs of implementing a discounted rate system to make gas and electric rates more affordable for low-income people in Connecticut. The feasibility study should be completed by January 1, 2010.**
 - 9. The weatherization programs should be designed to offer uniform, comprehensive, and “fuel-blind” measures to eligible low-income households throughout the state. The program should set a goal of weatherizing at least 30 percent of eligible low-income households**

within five years, and reducing energy consumption in each household by at least 20 percent.

Impact of weatherization programs should be evaluated similarly to other energy efficiency and conservation programs and payment structure should be based on performance.

To maximize funding for weatherization, the state should explore all opportunities for using the LIHEAP program to fund weatherization including allocating the full 15 percent allowed under the program currently and, depending on cost-effectiveness and evaluation results, seek a waiver for 25 percent.