



# The ECMB Program Evaluation Plan, 2010

Docket No. 08-10-02 and Docket No. 09-10-03

September

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The ECMB Evaluation Committee is pleased to present its first Evaluation Plan for the Department's consideration in Docket No. 08-10-02 and Docket No. 09-10-03. Also contained within its pages is the Evaluation Roadmap as ordered in the Department's decision for Docket 08-10-03.

The Evaluation Plan is designed to provide cost effective studies of all the CL&M programs. Programs offering the most savings are expected to be evaluated most frequently. The Plan integrates gas and electric programs and takes advantage of opportunities to cooperate with others in the Northeast that offer the same types of measures as does CT.

Most importantly, the Plan provides for an independent evaluation process. It is critical that the programs be evaluated, measured, and verified in a way that provides confidence to the public at large that the savings are real and in a way that enables the Companies to use those savings estimates and other results with full confidence. There is a need to ensure both the reality and the perception of the independence and objectivity of EM&V activities.

Offered by the ECMB Evaluation Committee;

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# Table of Contents

## **Contents**

Introduction.....	1
Guiding Principles .....	2
The ECMB Evaluation Committee.....	2
Regional Studies .....	4
The Companies' Roles in Program Evaluation.....	4
Contractor Selection Process .....	5
Evaluation Studies 2009 .....	6
Evaluation Studies 2010 .....	7
EM&V Forum Evaluation 2010.....	8
Conclusion .....	9

# The ECMB Program Evaluation Plan, 2010

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## Introduction

The Companies have a long history of providing efficiency programs to Connecticut energy consumers. An integral part of creating, delivering and maintaining quality programs is performing independent evaluations of programs and the markets they serve.

In 1998 the Energy Conservation Management Board (ECMB) was formed and charged with is to advise and assist the utility distribution companies in the development and implementation of comprehensive and cost-effective energy conservation and market transformation plans. Since that time, the ECMB has worked closely with the Companies to ensure all evaluations are relevant, independent, cost-effective and meet the needs of program administrators and planners. In 2005, The ECMB formed an Evaluation Committee to work directly with an ECMB Evaluation Consultant in overseeing evaluation planning and completion. In 2009, the Department's decision in Docket No. 08-10-03 ordered the ECMB's Evaluation Committee and their consultant must be independent from and totally responsible for all aspects of the evaluation process.

The ECMB and the Electric and Natural Gas Companies recognize the importance of conducting thorough, timely, and independent evaluations. The various types of evaluation studies exist to support continuous improvement in program offerings and to measure the results of those programs. The audiences for evaluation are many - regulatory bodies, the regional electric system operator (ISO-New England), utility management, and program planners and administrators all need the information gained through evaluation in order to make decisions about program efficacy. Evaluations can be used to increase participation and savings, reduce costs, and fine-tune procedures. Appropriate evaluation can provide the information that program administrators need to enhance existing cost-effective programs or to take a non-cost-effective program and reconstitute it as a successful one.

Early in the program planning process and periodically thereafter, market assessments assess pre-existing market conditions and ascertain the extent to which efficiency programs are likely to influence customer adoption of measures and practices. Careful market assessments are conducted to identify effective ways to influence key market players to take efficiency actions and to increase the breadth and depth of the actions taken. Baseline studies and market assessments examine overall market conditions related to energy efficiency products and services, including current standard practices, average efficiency of equipment, consumer purchasing practices, and identification of market barriers.

After the program is fielded, process evaluations are used to determine the efficacy of program procedures and measures. Process evaluations assess the interactions between program services

and procedures and the customers, contractors, and businesses that participate in them. Process evaluation is essential to provide for improved program delivery, increased cost effectiveness and customer satisfaction.

Impact evaluations verify the magnitude of energy savings and sources for differences between projected and realized savings; reporting the results and value of energy efficiency programs to regulatory bodies, the regional electric system operator (ISO-New England), utility management, and program planners and administrators. Cost effectiveness assessment is part of impact evaluation, pointing the way to improve, expand, or reassess program offerings. These evaluations are conducted under the supervision of the ECMB to provide credible, unbiased and transparent results.

The evaluation process is a critical tool to measure energy savings, as well as other key attributes of each program, to allow optimum program design and careful management of consumer conservation funds.

## **Guiding Principles**

All members of the ECMB recognize the importance of evaluation. Program evaluation provides a vital function in assessing program results and supporting continuous improvement in program performance. Evaluation should not be used to “prove” non-performance, but rather to point to areas where improvement would strengthen an otherwise viable program. It is critical that the programs be evaluated, measured, and verified in a way that satisfies regional jurisdictional requirements, provides confidence to the public at large that the savings are real, and enables the Companies<sup>1</sup> to use those savings estimates and other results with full confidence. There is a need to ensure both the reality and the perception of the independence and objectivity of Evaluation, Measurement and Verification (EM&V) activities.

Program evaluations, market assessments and other studies should be performed on a statewide basis to the maximum extent possible, while enabling, to the extent necessary, results at the Company level. It is recognized that circumstances could occur where a service territory specific or non-statewide evaluation or study would be appropriate. Electric and natural gas program evaluation efforts should be fully integrated to the maximum extent possible. Because of the statewide focus of program evaluation in Connecticut, it is important to continue to coordinate program procedures, measures and data collection processes.

## **The ECMB Evaluation Committee**

The ECMB Evaluation Committee represents the ECMB in the program evaluation process. The ECMB Evaluation Committee consists of three non-utility ECMB members. As directed in the Department’s decision in Docket No. 08-10-03, the ECMB Evaluation Committee and its consultant are independent from the ECMB program planning consultants and the Companies, and are totally responsible for all aspects of the evaluation process. The Evaluation Committee

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<sup>1</sup> Whenever the terms “Company” or “Companies” are used, they should be understood to include only those Electric and Natural Gas Companies that offer the program being evaluated.

presents the Proposed Evaluation plan to the Department. Evaluation reports, including drafts prepared by the ECMB Evaluation Consultants, shall be submitted to the ECMB Evaluation Committee. The Committee shall then issue them to the Companies, ECMB members and the planning consultants for written comment that then become part of ECMB's public record. The Committee is then free to accept, modify or reject any recommendations.

The Evaluation Committee may add to, reduce or alter the roles of the Evaluation Consultant and/or the Companies with respect to program evaluation at its sole discretion at any time.

The ECMB Evaluation Consultant reports directly to the ECMB Evaluation Committee. Absent payment for the evaluation through the CEEF, the Department requires that the ECMB Evaluation Consultant have no financial or business ties to the electric and natural gas companies, ECMB members, or other ECMB consultants who plan the efficiency programs. In response to that Order, the ECMB Evaluation Committee has developed the following Roadmap to guide the program evaluation process.

The ECMB Evaluation Committee, and specifically the ECMB evaluation consultant, will provide leadership and execute the following responsibilities:

- Evaluation planning: determine which evaluations might be done, set priorities, and establish the evaluation budget in line with those priorities. Revise the plan periodically to reflect changes in opportunity, circumstances, remaining budget or other considerations.
- Study Development: develop the scope and focus of each evaluation and finalize the RFP. The RFP will explicitly identify the ECMB as the entity requesting proposals and the ECMB evaluation consultant, who works on behalf of the ECMB, as the contact for additional information.
- Contractor Selection: Issuance of the RFP and collection of proposals from bidders. Review and score proposals and provide recommendations to the ECMB Evaluation Committee on selection of the Evaluation Contractors.
- Project Initiation:
  - Kick-off meeting: organize date, time, location and needed personnel for the meeting; apprise Companies of the kickoff schedule; chair kick-off meeting; supply Companies with notes summarizing the meeting as provided by the Evaluation Contractor. Kick-off meeting will be held either in the physical presence of the ECMB Evaluation Consultant or by phone.
  - Development of the final work plan: identify necessary scope changes that may impact the budget at the work plan stage, and review and finalize the work plan with the selected evaluation Contractor. Provide the final work plan to the Companies for incorporation into the project Purchase Orders.
- Project Management and Completion: Manage Contractor performance. Work with the Contractor to resolve issues and expedite solutions. Review and approve all deliverables and milestones. Review all interim work products and any issues of importance that may impact the

results or cost of the evaluation. Provide initial draft report to the Companies for comment. Collect all communications from the Contractor and Company representatives and route between them, if needed. Review and Approve invoices for payment by the Companies from the CEEF.

- Finalizing evaluation report: review and finalize the draft report of the evaluation. Summarize the final report and submit summary to the ECMB Board.

The final evaluation reports shall be submitted to the ECMB Evaluation Committee. The Committee may then issue them to the Companies, ECMB members and the planning consultants for written comment that shall become part of ECMB's public record. ECMB is responsible for all evaluation products, both interim and final. Neither the third party contractor nor the Companies may release preliminary data without prior approval from the ECMB Evaluation Consultant.

## **Regional Studies**

The ECMB evaluation consultant shall represent the Connecticut ECMB in all regional evaluation studies, either with the EM&V Forum or with individual states and groups of states. To the extent applicable, the ECMB Consultant and the Companies shall exercise responsibilities in an equivalent fashion as those identified in this document. For evaluations where Connecticut is the minority participant in the study, the ECMB Evaluation Consultant will represent the ECMB's interests and contribute to all processes (including scoring and selection) as appropriate based on the level of participation and any processes governing the study outlined by the participating parties. The ECMB Evaluation Consultant will assume the leadership role for the ECMB in all discussions and negotiations involving the regional parties and bring any substantial issues before the Evaluation Committee.

## **The Companies' Roles in Program Evaluation**

While the Companies no longer hold a primary role in evaluation, none-the-less their role is vital to the success of the efficiency programs. Program administrators are in a strong position to identify aspects of their programs (savings, market, process) that would benefit from evaluation activities. The Program administrators have intimate knowledge of program procedures and program data collection that are necessary to evaluation. Moreover, the Program Administrators have a strong interest in ensuring program improvements.

The Companies, separately and together, hold the following responsibilities:

- Evaluation Planning: provide the ECMB Evaluation Consultant with a list of studies that the Company would like to be included in the evaluation plan; suggest priorities; provide for budgets sufficient to support the final plan as determined by the ECMB Evaluation Committee
- Study Development: Provide the ECMB Evaluation Consultant with suggested issues to be included in the scope and focus of the RFP

- **Contractor Selection:** on request by the ECMB Evaluation Consultant, review proposals received in response to the RFP and provide written analysis and recommendations. Issue Contract and Purchase Orders to Contractor when notified by the Evaluation Consultant.
- **Project Initiation:** Representatives of the Companies may attend Kick-off meetings, typically by phone. The Companies may raise issues relative to the scope of work and will describe data availability and format to the Contractor.
- **Project Management and Completion:** The Companies act as CEEF contract administrators, including issuing payments to the independent evaluation contractors and taking other administrative actions necessary to support contract maintenance and payment. The Companies will provide these services on behalf of the ECMB and in a timely manner.

During the evaluation project, the companies provide required program, billing, customer data and any other program and utility information or materials needed for the completion of the study.

- **Finalizing Evaluation Report:** The Companies review the initial draft report and the penultimate draft. All reviews and comments by the Companies will be provided in writing, as ordered in Docket No. 08-10-03. The ECMB Evaluation Committee shall hold all comments as public record and may accept or reject any recommendations for changes.

## **Contractor Selection Process**

It is especially important the selection of 3<sup>rd</sup> party contractors be transparent. The ECMB process for selection of an evaluation contractor is:

- The ECMB Evaluation Consultant develops the scope of work with input and assistance from appropriate Company staff and ECMB Planning Consultants. The ECMB Evaluation Consultant develops the RFP and includes information for and instructions to contractors on procedures for conducting the evaluation. The Companies incorporate the Terms and Conditions into the RFP.
- The ECMB Evaluation Committee releases the RFP. Contractor proposals are submitted directly to the ECMB Evaluation Consultant.
- The ECMB Evaluation Consultant, appropriate ECMB planning consultants and appropriate Company personnel review the proposals. Any reviews by Company personnel or ECMB planning consultants will be provided to the ECMB Evaluation Consultant in writing. The ECMB Evaluation Consultant then scores the proposals using a proposal-scoring matrix to rank the proposals based primarily on the proposed work plan and approach, the Contractors' experience and qualifications, and the proposed price. The top 2 or 3 finalist proposals are identified.
- The ECMB Evaluation Consultant sends a summary of the finalist proposals, the proposal rankings, and the ECMB Consultant recommendations to the ECMB Evaluation Committee members.

- The ECMB Evaluation Committee reviews the summary of the finalist proposals, the proposal rankings, and the ECMB Consultant recommendations, focusing on the top 2 or 3 finalist proposals, and selects the evaluation contractor.
- A public summary of the basis for selecting the winning contractor is drafted by the ECMB Evaluation consultant and approved by the ECMB Evaluation Committee. Each Company retains this summary as the basis for the bid award in conjunction with the final contractor RFP scoring matrix.
- The ECMB Evaluation Committee notifies the winning contractor and the other proposers.
- The Companies then issue the contract and execute Purchase Orders.

ECMB Evaluation Committee reports to ECMB at the regularly scheduled ECMB meetings. The report shall include information on the evaluation contractors selected since the prior ECMB meeting.

### Evaluation Studies 2009

In planning which and how many evaluations to conduct each year, the ECMB Evaluation Committee considers many factors, including but not limited to: the magnitude of cost and energy savings associated with the program, how recently comparable studies were done, needs expressed by program administrators, requirements of outside organizations, market conditions, recent or planned program changes, and any gaps identified. The ECMB also works in a broad regional manner when planning evaluation activities for the up-coming program years. Through collaboration with regional agencies and utilities with similar interests, the ECMB takes full advantage of opportunities to gather information in the most cost-effective manner.

Occasionally, opportunities to participate in evaluation studies are unforeseen and, therefore, are not included in the planning process. If an unplanned opportunity proves to be in the best interest of Connecticut customers, the ECMB Evaluation Committee will commit resources to those efforts as well. There are also occasions when a planned evaluation study no longer offers the value expected. The ECMB Evaluation Committee assesses those conditions with the assistance of the Evaluation Consultant and determines whether changes should be made to the Program Evaluation Plan.

Table 1 indicates evaluation studies either completed or underway in 2009.

**Table 1: Evaluation Studies During 2009**

<b>Project Name</b>	<b>Project Type</b>
Residential Lighting - Markdown	Impact
Ductless Heat Pumps	Market and Impact
Residential Central A/C	Impact
Home Energy Solutions	Impact
Small Business Energy Advantage	Impact

Low-Income (WRAP / Helps)	Impact
Energy Opportunities	Impact
CFL Saturation Study	Impact (Net-to-Gross), Market Assessment
CT Maximum Potential	Potential
Survey of Studies on C&I Load Shapes *	Impact
C&I Load Shape Studies*	Impact
Common Savings Methods for Assumptions & Algorithms*	Planning
M&V Protocol Modification for ISOs*	Planning
M&V Terms & Definitions*	Planning

\* EM&V Forum

A New England Regional Avoided Cost study was conducted in 2009 to update the avoided costs used for program planning, cost-effectiveness analysis, and reporting. The regional avoided cost study is conducted jointly every two years. While the avoided cost study is not an evaluation project, the Connecticut share of the cost for this important regional study is included in the evaluation budget.

### Evaluation Studies 2010

Table 2 indicates evaluation studies being considered for 2010. For 2010, the ECMB Evaluation Plans increase evaluation activities and budgets. Many of the proposed studies are needed to provide statistically accurate demand and energy savings to support the Companies' bids in ISO-NE's Forward Capacity Market. Some will support development of programs that extend the depth and breadth of savings. As is true every year, the 2010 evaluation budget is targeted to the highest-priority studies, in order to maximize value per evaluation dollar spent.

**Table 2: ECMB-Proposed Evaluations for 2010**

Project Name	Project Type	Electric	Gas
<b>Residential Programs</b>			
Central Air Conditioning follow-up QIV	Technical Assessment and Program Approaches	✓	
Residential Measure Free Rider / Spillover	Impact	✓	

Pilot Behavioral Program Study	Pilot Impact	✓	✓
Residential Lighting - Specialty CFLs	Impact (Net to Gross), Market Assessment	✓	
Residential Lighting Net to Gross Follow on Common CFLs	Net to Gross	✓	
Maximum Potential Follow-up  HP H2O, HP Dryers Variable Speed Pool Pumps	Market Assessment, Best Practices and Technical Implementation	✓	
Residential New Construction	Baseline Study, Market Assessment	✓	✓
Residential Measure Lives	Measure Life	✓	
<b>Commercial and Industrial Programs</b>			
Energy Conscious Blueprint	Impact	✓	✓
O&M	Impact	✓	
C&I Maximum Potential Follow-up	Market Assessment, Best Practices and Technical Implementation	✓	
SBEA Measure Persistence	Impact/Persistence	✓	
Retro-Commissioning	Process, Market Follow-up	✓	
Air Compressor Baseline	Impact	✓	
C&I Lighting Retrofits	Market Assessment	✓	
Rooftop HVAC in Existing Buildings	Market Assessment	✓	

Note: Projects listed below the double lines are of lower priority.

### EM&V Forum Evaluation 2010

Projects initiated within the Regional EM&V Forum also affect evaluation activities in 2010 and beyond. The Forum allocates costs and determines what projects to conduct in consultation with its membership. Ten states and the District of Columbia participate in the Forum, but not all subscribe to every study commissioned by the Forum.

Table 8-3 indicates projects under way or being developed for the EM&V Forum, in which Connecticut participates. The list of Projects in Table 3 has not yet been finalized. Some studies will be completed in Connecticut, if the EM&V Forum decides not to undertake them.

**Table 3: EM&V Evaluation Studies for 2010 – Not Yet Finalized**

<b>Project Name</b>	<b>Project Type</b>	<b>Electric</b>	<b>Gas</b>
<b>Residential Projects</b>			
Load Shape Studies 1. Lighting 2. HVAC 3. Appliances 4. Plug Load	Impact	✓	
Domestic Hot Water	Market/Impact		✓
Early Furnace Replacement	Market/Impact		✓
<b>Both Residential and C&amp;I Projects</b>			
Development of Common Assumptions and Protocols	Evaluation Methods	✓	✓
Net to Gross Studies	Best Practices	✓	✓
<b>Commercial and Industrial Projects</b>			
C&I Load Shape Studies 1. Lighting 2. Refrigeration 3. Process 4. Data Centers	Impact	✓	
C&I Unitary HVAC & Chillers	Impact	✓	
C&I Measure Life Studies	Impact	✓	✓
Program Impact on Codes and Standards	Impact	✓	✓

## **Conclusion**

The ECMB Evaluation Committee takes its responsibility for program evaluation very seriously. It is critical that the programs be evaluated, measured, and verified in a way that provides confidence to the public at large that the savings are real and in a way that enables the Companies to use those savings estimates and other results with full confidence. There is a need

to ensure both the reality and the perception of the independence and objectivity of EM&V activities. We are convinced that the Plan outlined in this document will provide these critical studies with objectivity, with excellence, and with the best interests of Connecticut rate payers in the forefront.