



*Independent Statistics & Analysis*  
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Administration

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# State Energy Efficiency Program Evaluation Inventory

July 2013



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## Contact and acknowledgement

This report and associated data file were prepared by the U.S. Energy Information Administration (EIA), under the direction of James T. Turnure ([James.Turnure@eia.gov](mailto:James.Turnure@eia.gov), 202/586-1762), Director, Office of Energy Consumption and Efficiency Analysis.

EIA would like to acknowledge Science Applications International Corporation (SAIC), U.S. Department of Energy, Lawrence Berkeley National Laboratory (LBNL), Consortium for Energy Efficiency, and others referenced for their related research efforts, especially all of those who assisted with SAIC's inquiries in this aggregation of evaluation information.

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## Introduction

The focus of this inventory, some of which has been placed into a searchable spreadsheet, is to support the National Energy Modeling System (NEMS) and to research cost information in state-mandated energy efficiency program evaluations – e.g., for use in updating analytic and modeling assumptions used by the U.S. Energy Information Administration (EIA). At EIA, NEMS is used in developing the *Annual Energy Outlook* (AEO) projections. NEMS is also used to prepare analytical studies for the U.S. Congress, the Executive Office of the President, other offices within the U.S. Department of Energy, and other Federal agencies. Outside EIA, NEMS is used by other nongovernment groups, such as the Electric Power Research Institute, Duke University, and Georgia Institute of Technology. In addition, the AEO projections are used by analysts and planners in other government agencies and nongovernment organizations.

These data, which have been used as a sampling source for EIA's purposes, support the EIA goal of quality improvement to maintain relevancy and consistency with changing energy markets and represent a limited sample of recent utility energy efficiency program evaluation, measurement and verification (EM&V) reports pertaining to residential, commercial, and industrial energy efficiency programs and measures. The intent of making this information available is to facilitate further research by enabling the rapid location and comparison of EM&V reports in terms of geography, scope, and other relevant characteristics. This inventory is national in scope with the exception of California, for which the CALMAC system provides a ready source for EM&V information. EIA does not plan to maintain this spreadsheet over time, so interested parties will need to verify any changes to EM&V documents or records status made after the spring of 2013.

## Summary details

EIA reviewed and catalogued 329 data sources containing program evaluation results. These primarily were presented in 108 "Annual Reports" to commissions. An additional 115 reports were designated as "Impact" and/or "Process Evaluation" Reports. Thirteen documents reviewed were either applications for bill riders containing past evaluation results to support a utility's petition for billing rates, or program filings containing evaluation results to support the next program cycle. Two program websites are included (Louisiana Department of Natural Resources and Alabama Power) because they contained program results. The remainder of the documents is more generally designated as evaluation reports, EM&V reports, program results, or savings reports.

There is substantial research interest among the government and trade organization communities in state energy efficiency initiatives. The American Council for an Energy-Efficient Economy, the Consortium for Energy Efficiency, the Northeast Energy Efficiency Partnerships, and the Database of State Incentives for Renewables & Efficiency (DSIRE) website are just a few that monitor and actively contribute to the energy efficiency program arena.

## Data collection approach

Electric and natural gas utilities, or sometimes government agencies or third-party entities, offer incentives and assistance through energy programs to eligible customers or constituents considering equipment installations or activities to reduce consumption of energy resources in their homes, buildings, and other facilities. These programs may be required by state regulation and enforced by a

public commission, or they may be voluntary. EIA, through a contract with Science Applications International Corporation (SAIC), aggregated this EM&V information from primarily public sources.

To research U.S. efficiency program evaluation reports and related documents, this effort relied primarily on state regulatory authority websites and professional contacts with utilities around the country. In addition, EIA checked some utility websites for evaluation reports. Many public service commission websites also store all public records in docket databases.

## Recorded and associated State-level data

EIA's data file contains recorded data fields most relevant to analyses on program information:

1. **Program Agency:** Utility, government or third party agency undertaking the program and/or evaluation. Note that the agency delivering the efficiency program is not always the agency undertaking the evaluation.
2. **Report Title:** Title of document. Note that some sources of evaluation results are in spreadsheet format.
3. **State:** 2-digit or listing for state(s), if applicable.
4. **Effective Year(s):** Year that legislation took effect, if applicable.
5. **Program Date Description:** Year(s) program was in effect. Note that some documents did not specify program coverage date.
6. **Report Date:** Year of report issue.
7. **Report Contractor:** Firm/agency contracted to deliver report. Note that not all reports could be linked to a contractor -- e.g., annual reports to commissions in PA are compiled from the EM&V contractor by the utility.
8. **Report Type:** General type of document, e.g., Annual Report, EM&V Report, Impact Evaluation, Process Evaluation, Evaluation Results. Note that document types and purpose may overlap.
9. **Sector Description:** Customer or program participant type -- Residential, Commercial or Commercial & Industrial (C&I), with the following indicators:
  - a. **Residential (All)**
    - i. **Residential (Low Income)**
    - ii. **Residential (Multi-Family)**
  - b. **Commercial (All)**
    - i. **Commercial (Large)**
    - ii. **Commercial (Small)**
  - c. **Industrial (All), excluding Agriculture**
    - i. **Industrial (Large), excluding Agriculture**
  - d. **Agriculture**
  - e. **Government**
10. **Description of Targeted Energy Sources:** Energy resource being saved or reduced via program offerings, e.g., electricity, natural gas, fuel, or a combination.
11. **Description of Program/Measures Included in Report:** Offerings covered in the inventoried document. Note that some offerings are simplified in this breakdown, e.g., a residential audit offering may also have a kit or direct installation component associated with delivery. Indicators include:

- a. **Residential Prescriptive Equipment (Downstream)**
  - b. **Residential Prescriptive Equipment (Upstream)**
  - c. **Residential Custom Equipment**
  - d. **Residential Direct Installation/Kit**
  - e. **Residential Audits**
  - f. **Residential New Construction**
  - g. **Residential Benchmark Improvement**
  - h. **Residential Bill Analysis—Behavior**
  - i. **Residential Other**
  - j. **C&I Prescriptive Equipment (Downstream)**
  - k. **C&I Prescriptive Equipment (Upstream)**
  - l. **C&I Custom Equipment**
  - m. **C&I Direct Installation/Kit**
  - n. **C&I Audits**
  - o. **C&I New Construction**
  - p. **C&I Whole Building Retrofit**
  - q. **C&I Other**
12. **Measure/End Use Savings -- e.g., kW, kWh, therm, other**
- a. **Measure/End Use Number of Participants**
  - b. **Measure/End Use Administrative Budget**
  - c. **Measure/End Use Participant Cost**
  - d. **Other Measure/End Use Data**
13. **Description of Program Data Included:** Types of program data/performance metrics summarized in the inventoried document. Note that some data are simplified in this breakdown, e.g., savings may be reported as gross, ex ante, verified, and/or net savings, and may vary per evaluated program.
- a. **Program Energy Savings (kW, kWh, therm, other)**
  - b. **Program Number of Participants**
  - c. **Program Administrative Budget**
  - d. **Program Participant Costs**
  - e. **Other Program Data**
14. **Source URL Link for Report (as of December 2012):** Website URL link where document was found, as of December 2012.
15. **Summary Notes:** Additional comments, observations. Note that comments may not have been used or entered consistently.
16. **2010 State Electric Energy Efficiency Program Spending (\$ Million, nominal):** As reported by U.S. Department of Energy, Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, DE-AC02-05CH11231, *The Future of Utility Customer-Funded Energy Efficiency Programs in the United States: Projected Spending and Savings to 2025*, January 2013, at website: [emp.lbl.gov/sites/all/files/lbnl-5803e.pdf](http://emp.lbl.gov/sites/all/files/lbnl-5803e.pdf), accessed May 21, 2013.
17. **2010 State Natural Gas Efficiency Program Spending (\$ Million, nominal):** As reported by U.S. Department of Energy, Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, DE-AC02-05CH11231, *The Future of Utility Customer-Funded Energy*

*Efficiency Programs in the United States: Projected Spending and Savings to 2025*, January 2013, at website: [emp.lbl.gov/sites/all/files/lbnl-5803e.pdf](http://emp.lbl.gov/sites/all/files/lbnl-5803e.pdf), accessed May 21, 2013.

18. **2010 Total State Efficiency Program Spending (\$ Million, nominal)**: As reported by U.S. Department of Energy, Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, DE-AC02-05CH11231, *The Future of Utility Customer-Funded Energy Efficiency Programs in the United States: Projected Spending and Savings to 2025*, January 2013, at website: [emp.lbl.gov/sites/all/files/lbnl-5803e.pdf](http://emp.lbl.gov/sites/all/files/lbnl-5803e.pdf), accessed May 21, 2013.
19. **2010 State Electric Energy Efficiency Program Spending Projections per First-Year Savings (\$, nominal/MWh)**: As reported by U.S. Department of Energy, Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division, DE-AC02-05CH11231, *The Future of Utility Customer-Funded Energy Efficiency Programs in the United States: Projected Spending and Savings to 2025*, January 2013, at website: [emp.lbl.gov/sites/all/files/lbnl-5803e.pdf](http://emp.lbl.gov/sites/all/files/lbnl-5803e.pdf), accessed May 21, 2013.
20. **2011 State Residential Revenue from Electric Retail Sales (\$ Million, nominal)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
21. **2011 State Commercial Revenue from Electric Retail Sales (\$ Million, nominal)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
22. **2011 State Industrial Revenue from Electric Retail Sales (\$ Million, nominal)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
23. **2011 State Total Revenue from Electric Retail Sales (\$ Million, nominal)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
24. **Number of State Public Benefits Fund(s)**: As reported by Database of State Incentives for Renewables & Efficiency, Rules, Regulations & Policies for Energy Efficiency at website: [www.dsireusa.org/summarytables/rrpee\\_printable.cfm](http://www.dsireusa.org/summarytables/rrpee_printable.cfm), accessed on May 21, 2013.
25. **2011 State Residential Customers for Electric Retail Sales (Million)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
26. **2011 State Commercial Customers for Electric Retail Sales (Million)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
27. **2011 State Industrial Customers for Electric Retail Sales (Million)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
28. **2011 State Total Customers for Electric Retail Sales (Million)**: As reported by U.S. Energy Information Administration, Form EIA-861, *Annual Electric Power Industry Report*.
29. **Legislation**: Cited name of enacted legislation, if applicable. Note that not all reports cited legislation.
30. **UTILITY\_ID\_XXX**: 2011 Utility identification number (indexed by XXX) as used by EIA's Form EIA-861, *Annual Electric Power Industry Report*. Note that not all reports were conclusive on all eligible identification numbers.



## Disclaimer

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