Evaluation Practices
Nationwide Survey: Results and Implications

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TOPICS

• Background for the ACEEE national survey
• Highlight results from the survey
• Some practical observations and recommendations regarding key evaluation issues observed in the survey
BACKGROUND FOR ACEEE NATIONAL SURVEY

THE CONCERN

• Each state is its own “kingdom” when it comes to regulating utilities and utility (ratepayer funded) energy efficiency programs

• Evaluation requirements, methodologies and assumptions vary considerably from state to state

• Difficult to make comparisons across states in terms of energy efficiency program results….. and state “performance”

• Some have called for the establishment of a “national standard” for energy efficiency program evaluation
THE ACEEE STUDY

• ACEEE completed a national survey to identify and document state approaches to energy efficiency program evaluation

• Surveyed appropriate persons (typically regulatory staff) in each of the 50 states plus D.C.*

• Detailed results available in the full report:


  http://www.aceee.org/research-report/u122

* 6 states were found to not have formally approved utility energy efficiency programs, resulting in a final population of 44 states
ONE BROAD CONCLUSION

There is indeed a great deal of variation across the states in terms of how they approach the issue of evaluating ratepayer-funded energy efficiency programs.
Evaluation Administration

- Utilities 36%
- Commission 18%
- Other government agency or collaborative 9%
- Utilities and other government agency and commission 5%
- Non-utility program administrator 5%
- Other government agency and commission 5%

(n=44)
Combined/Statewide or Separate Evaluation

Combined/Statewide or Separate Evaluation
(n=44)

- Separately by utility: 47%
- Combined or statewide: 30%
- Both: 23%
Who Conducts Actual Evaluation Studies

Consultant/contractor: 79%
Utility staff and consultant/contractors: 9%
Utility staff: 7%
Government agency: 5%
Consultant/contractor: 79%
(n=43)
Commission Roles with respect to Evaluation Process

- Formally approves evaluation plans/products managed by utilities or other parties: 47%
- Directly manages the evaluations: 28%
- Provides general oversight but doesn’t require specific approval: 16%
- No role: 9%

(n=43)
Statutory and Regulatory Requirements for Evaluation

Legislation-mandated evaluation: 45%
Regulatory order only: 45%
No formal state policy requirement: 10%

(n=44)
Uses of Evaluation Results

- General oversight: 98%
- Shareholder incentives eligibility and/or amount: 41%
- Lost revenue recovery eligibility and/or amount: 23%
- Program cost recovery amount: 7%

(n=44)
Savings Reported as Net or Gross

- Net: 52% (n=42)
- Gross: 26%
- Both: 22%
Adjustments of Energy Savings Attributable to Programs for Free Riders

n=39

- Yes: 67%
- No: 25%
- Partial/some-times: 8%
Adjustments of Energy Savings Attributable to Programs for Free Drivers/Spillover

- Yes: 44%
- No: 51%
- Partial/ sometimes: 5%

n=39
Percent of States Using Each Benefit-Cost Test

- Total Resource Cost Test (TRC): 84%
- Utility/Program Administrator Test (UCT/PACT): 65%
- Participant Cost Test (PT): 53%
- Ratepayer Impact Measure (RIM): 51%
- Societal Cost Test (SCT): 40%

(n=43)
Primary Benefit-Cost Test

- TRC: 71%
- Societal: 15%
- UCT/PACT: 12%
- RIM: 2%

(n=41)
Costs Included in Primary Benefit-Cost Test

- Energy efficiency program costs: 100%
- Customer costs for the EE measures: 88%
- Other*: 10%

(n=41)
Benefits Quantified in Primary Benefit-Cost Test (or the TRC, if no primary)

(n=41)

- Utility system avoided costs: 98%
- Environmental externality benefits: 34%
- Customer ‘non-energy’ benefits: 29%
- Other ‘societal’ benefits (not including ‘environmental’ benefits): 12%

American Council for an Energy-Efficient Economy
Percent of States Including Customer Non-Energy Benefits

- None: 71%
- Water and other fuel savings: 17%
- Reduced maintenance: 5%
- General adder: 2%
- Other: 2%
- Health: 0%
- Comfort: 0%
- Improved productivity: 0%
- Did not specify: 12%

(n=41)
Benefit-Cost Screening Level

- Overall portfolio of programs: 70%
- Total program: 70%
- Customer project: 40%
- Individual measure: 30%

(n=43)
States Using Deemed Values to Calculate Savings

- Yes: 86% (n=42)
- No: 14%
Prevalence of Key Variables
“Deemed” (% of States Responding)

- Savings amount to claim for particular measures (n=36): 97%
- “Lifetime” over which to claim savings by measure (n=36): 89%
- “Free-ridership” levels (n=31): 65%
- “Net-to-gross” values for computing net savings (n=31): 61%
Application of Evaluation Results to Program-related Input Variables

- Prospective only: 81%
- Retrospective: 16%
- Retrospective for some purposes, prospective for others: 3%
SOME PRACTICAL OBSERVATIONS/RECOMMENDATIONS REGARDING EVALUATION OF RATEPAYER-FUNDED ENERGY EFFICIENCY PROGRAMS
ADMINISTRATION AND LEGAL FRAMEWORK

• No basis for recommending any particular legal or administrative structure
• Is helpful to have some statutory authority for regulators to require program evaluations
• Leave *details* of evaluation rules and procedures to the regulatory setting
  ➢ More expertise and experience with utility matters
  ➢ Ability to more thoroughly examine the issue
ROLE OF OUTSIDE PARTIES

• Can be beneficial to have a structure to involve outside parties in the evaluation process
  ➢ Secure “buy-in” on the front end, help reduce objections and legal challenges on the back end
  ➢ But try to ensure that such processes don’t result in unnecessary delay or obstruction
  ➢ Some good state examples exist
USE OF EVALUATION RESULTS

• Use for “general oversight” is ubiquitous
• Less need for statistical precision and methodological rigor when used for purposes of oversight and prudency
• Need for methodological rigor and precision increases when discretionary monetary allocations are at stake (e.g., performance incentives, “lost revenue” recovery, etc.)
• Don’t forget process evaluation
COST-EFFECTIVENESS TESTS

• A major issue of discussion these days
• Concerns about “imbalance” of the currently dominant test (TRC)
• Apply B/C screen at the program and portfolio level
• Don’t use RIM test as a screen
USE OF ‘DEEMED SAVINGS’

• Very widespread practice
• Some legitimate rationale for this, for EM&V time and cost savings
• Needs to be accompanied by, and updated by, periodic rigorous, full-scale program evaluations
RETROSPECTIVE VS. PROSPECTIVE APPLICATION OF EVALUATION RESULTS

• Some variability across states, with ‘prospective’ being the predominant approach
• Application should be tailored to fit the intended use

Examples:
  ➢ ‘prospective’ for purposes related to judging ‘performance’ of program implementer
  ➢ ‘retrospective’ for purposes related to system planning
NET VS. GROSS

• Substantial variation across states in treatment of this issue (including definition of “net”)
• Increasingly difficult to parse out attribution in a complex world with multiple entities promoting energy efficiency
• If using net, be balanced (both freeriders & freedrivers/spillover)
• Merit in tailoring the approach to the intended use of the data
  ➢ ‘net’ for purposes of program improvement
  ➢ ‘net’ for purposes of calculating lost revenues (decoupling avoids the problem)
  ➢ ‘net-gross’ hybrid for determining performance incentives
  ➢ perhaps ‘gross’ for purposes of gauging state progress toward overall efficiency and environmental goals
THOUGHTS ON A NATIONAL EVALUATION STANDARD

- Would certainly help with cross-state comparisons
- Would help “raise the floor” on evaluation quality in some states
- May help improve the perception of energy efficiency as a reliable resource
  - Runs counter to the tradition of state sovereignty on utility regulation
  - May be contentious/difficult to get consensus
  - May inhibit certain types of programs
  - May be difficult to implement and enforce
CONCLUSIONS

• Clearly much variability across states in approaches to evaluation
• Certainly desirable to improve transparency and consistency in reporting of results
• Desirable to ‘raise the floor’ of evaluation practice in lagging states
• But some parties are using the lack of consistent standards to discount or impugn the validity of energy efficiency as a resource.

  We reject that notion

  ✔ Much excellent evaluation work has been done, and results robustly demonstrate that EE is a very cost-effective resource
  ✔ Regulators routinely deal with much uncertainty in decision-making on supply-side utility system resources

  ➢ A national evaluation standard may be helpful, but there is no crisis. No need to delay use of EE as a resource.