



Evaluating Energy Efficiency Programs: Policies, Practices and New Tools

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Research objectives: for each state

- What is the administrative framework for evaluation?
 - Who administers?
 - What oversight?
 - What stakeholder/public involvement?
- What are the goals and requirements for program evaluation?
- What specific evaluation practices are in place?
 - Use of gross vs. net savings? Other savings metrics?
 - Free ridership and spillover?
 - Deemed and meter-based savings?
- How are evaluation results used for decisionmaking?
- What policy objectives are evaluated?

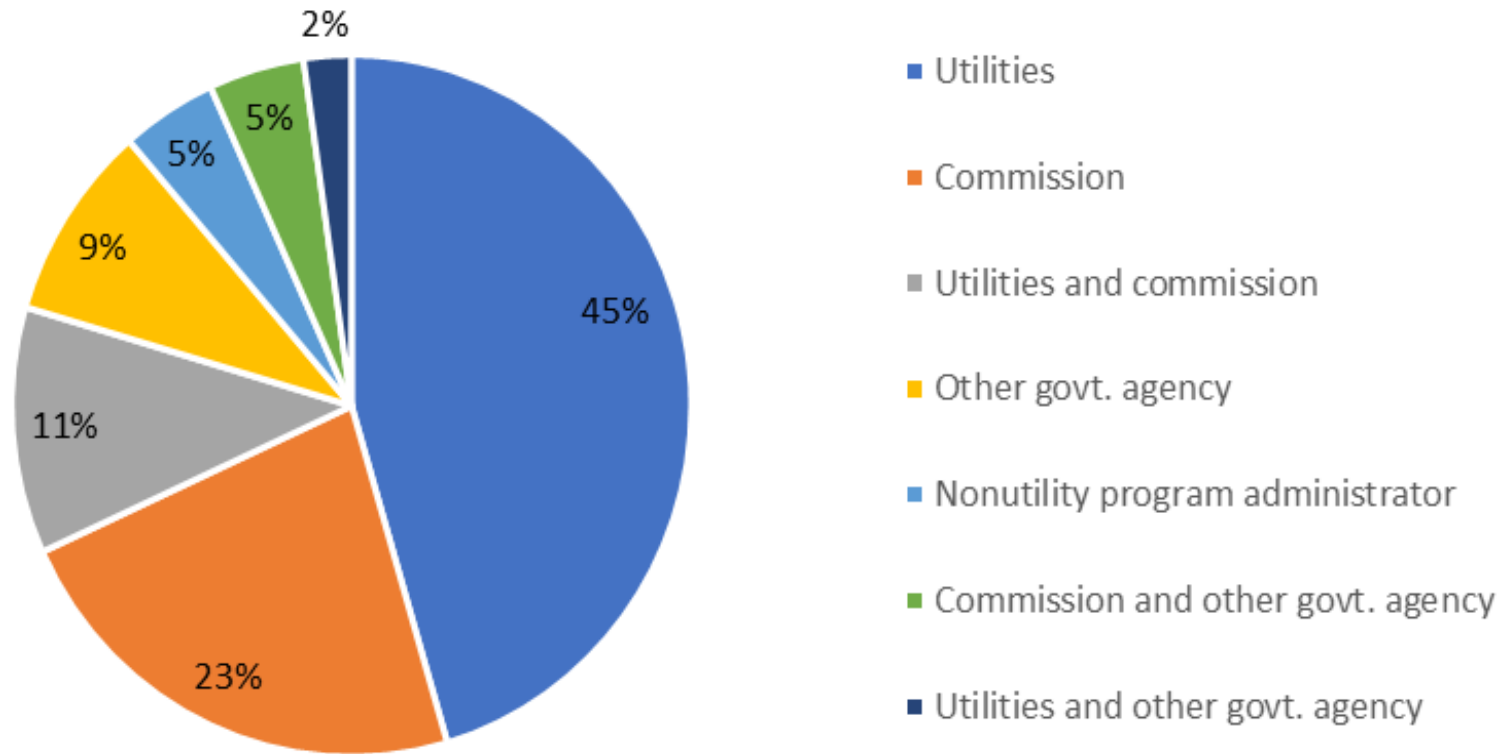
Updates 2012 national EM&V survey

- Surveyed all states with ratepayer funder EE programs (44 state completed the survey)
- Primary contacts were regulatory staff—2ndary were key stakeholders
- New resource available: Database of Screening Practices (DSP) from E4theFuture provides detailed data on cost-effectiveness testing

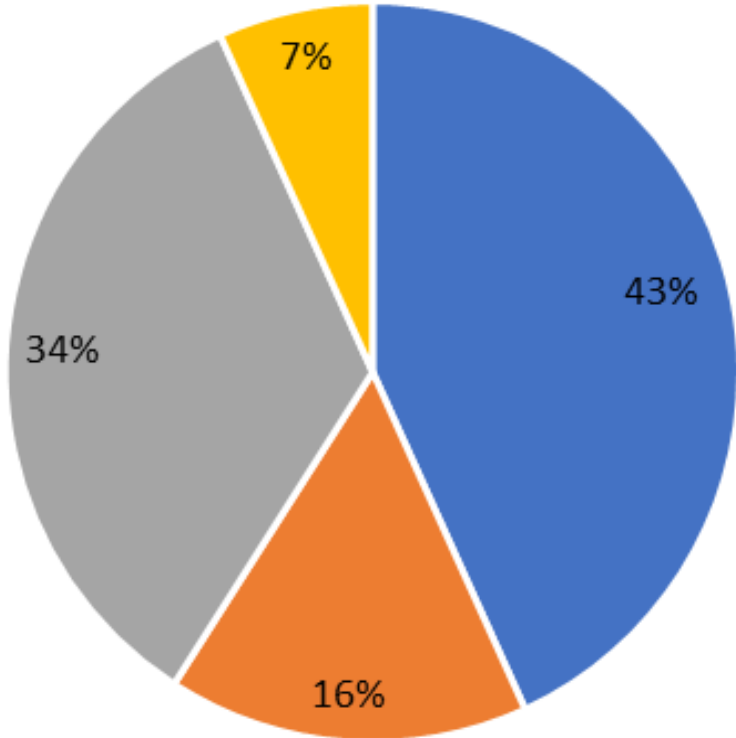
What is the administrative
framework for evaluation?

Selected results

Are evaluations overseen by utilities, state commissions, or a separate entity?

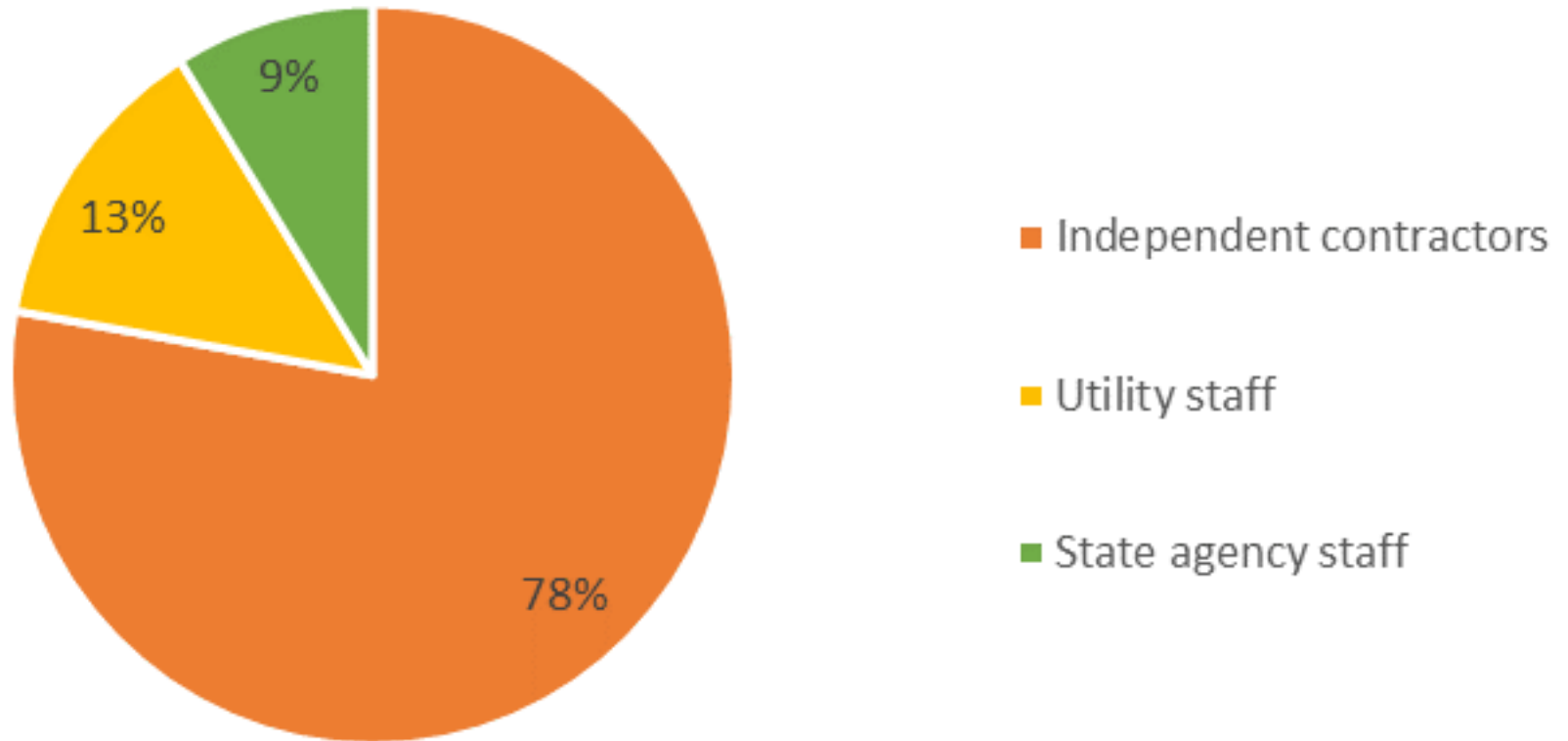


What is the role of the regulatory commission in program evaluation?

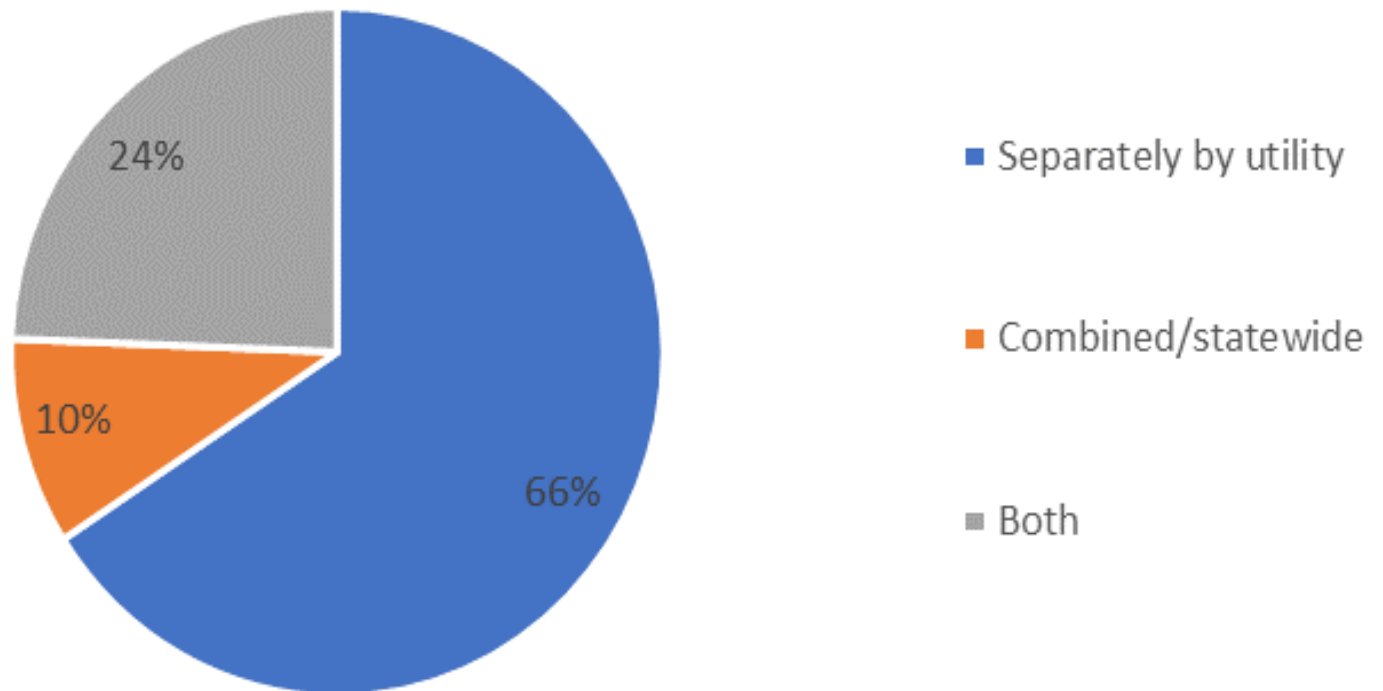


- Formally approves evaluation plans
- Directly manages the evaluations
- Provides general oversight
- No role

Who conducts the actual evaluation studies?



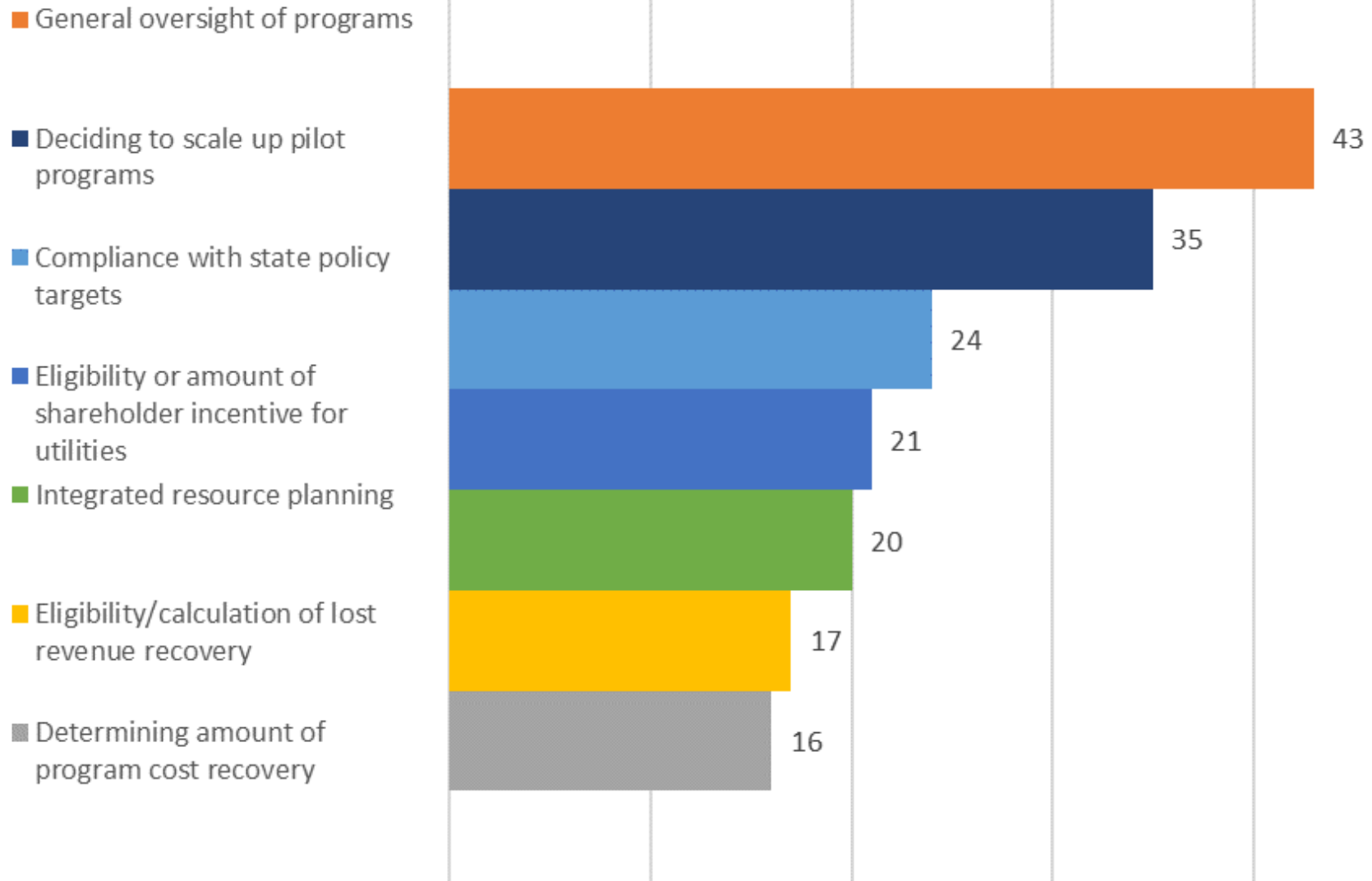
Are evaluations done separately for each utility, or on a combined/statewide basis?



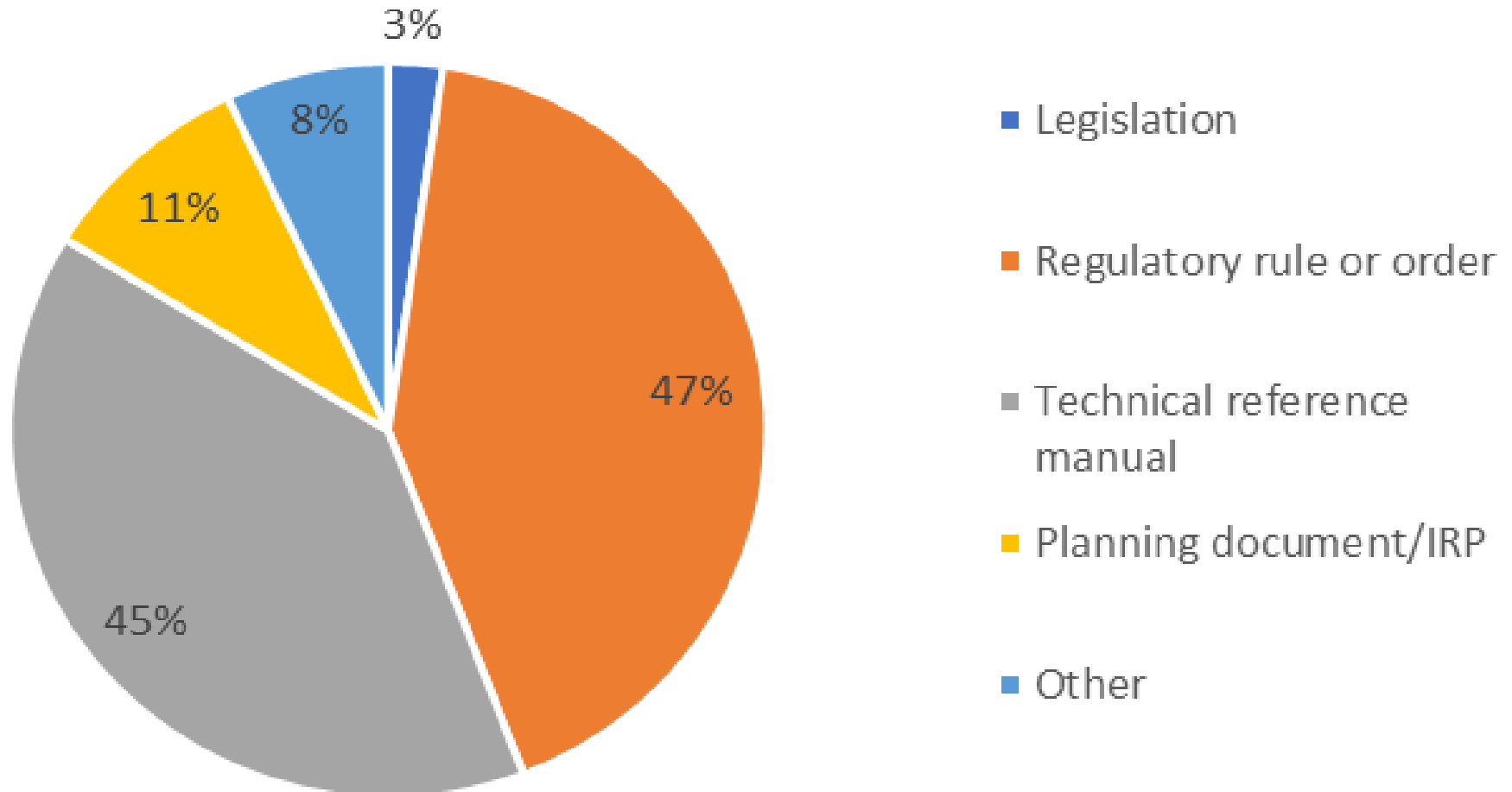
What are the goals and requirements for program evaluation?

How are evaluation results used for decision making? What policy objectives are evaluated?

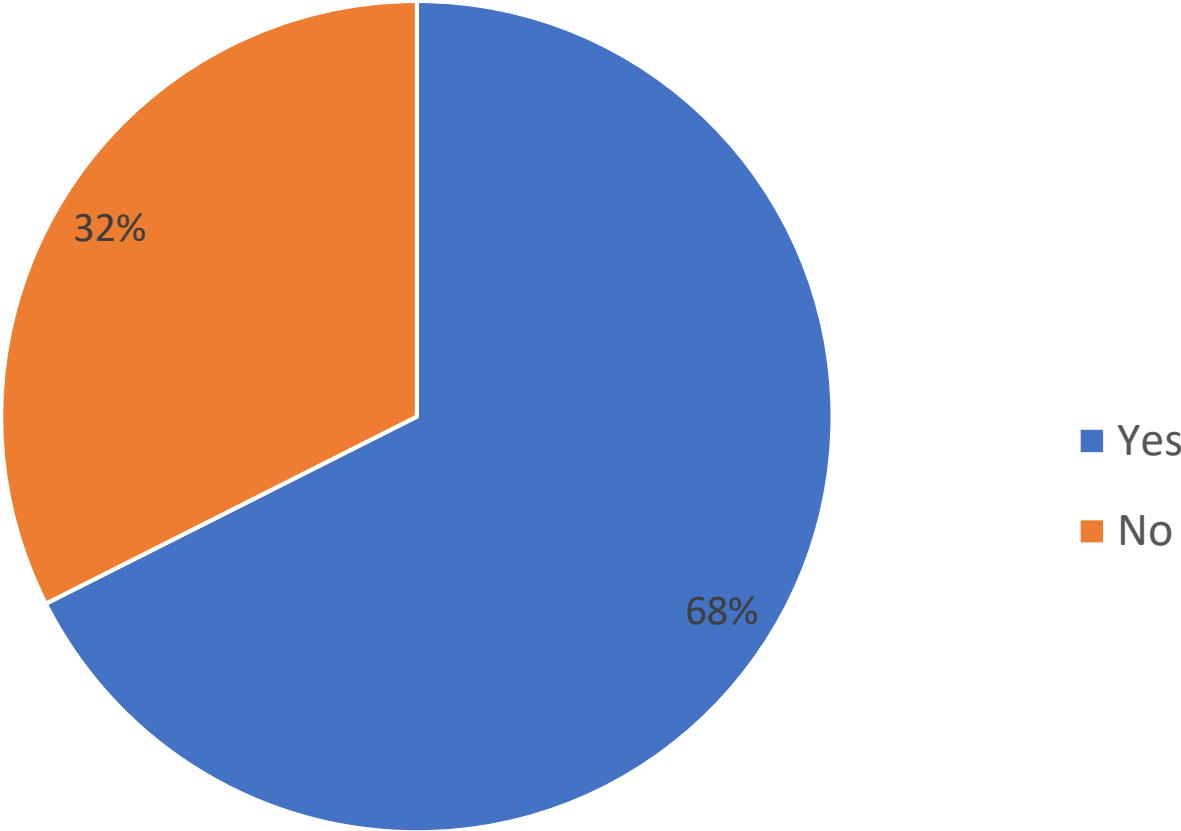
How are evaluation results used?



Where can evaluation protocols be found?

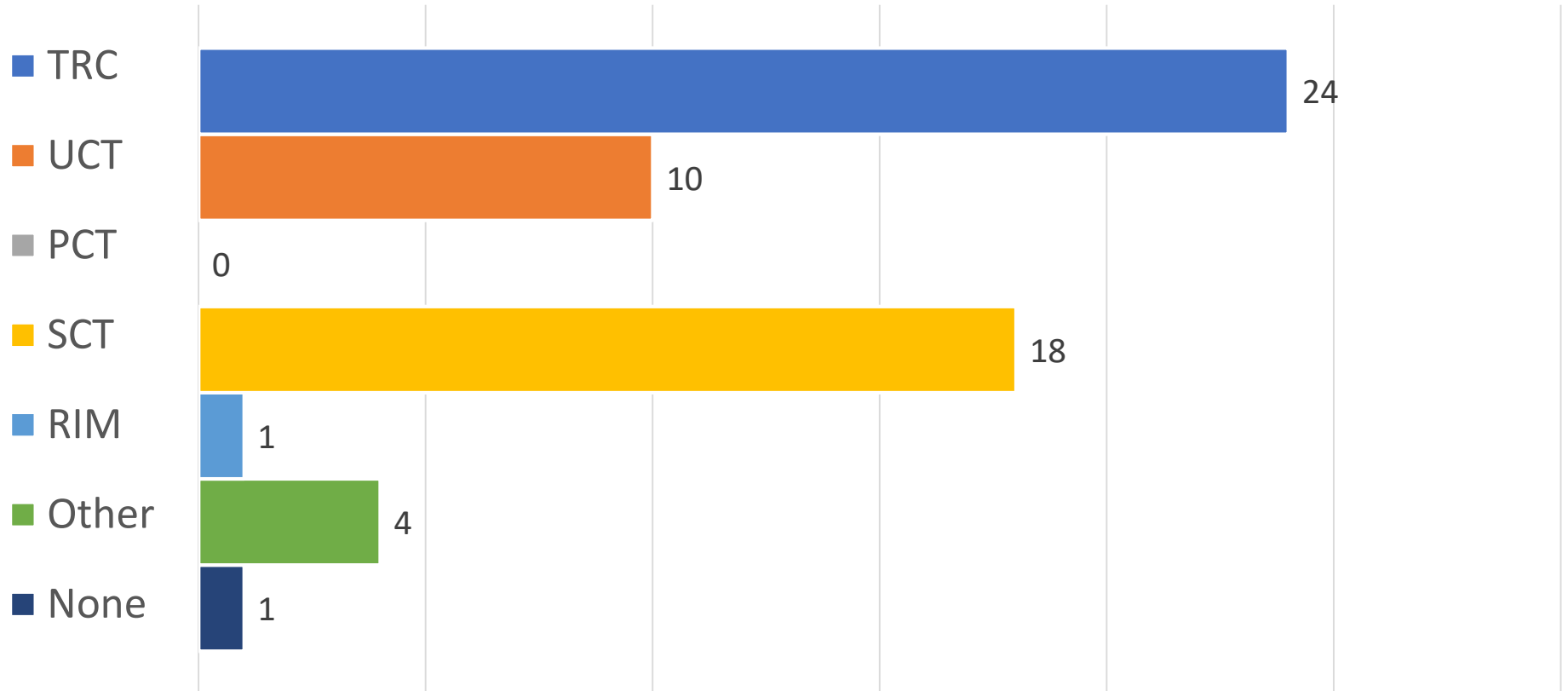


Are evaluation requirements for natural gas energy efficiency programs the same as for electric energy efficiency programs?

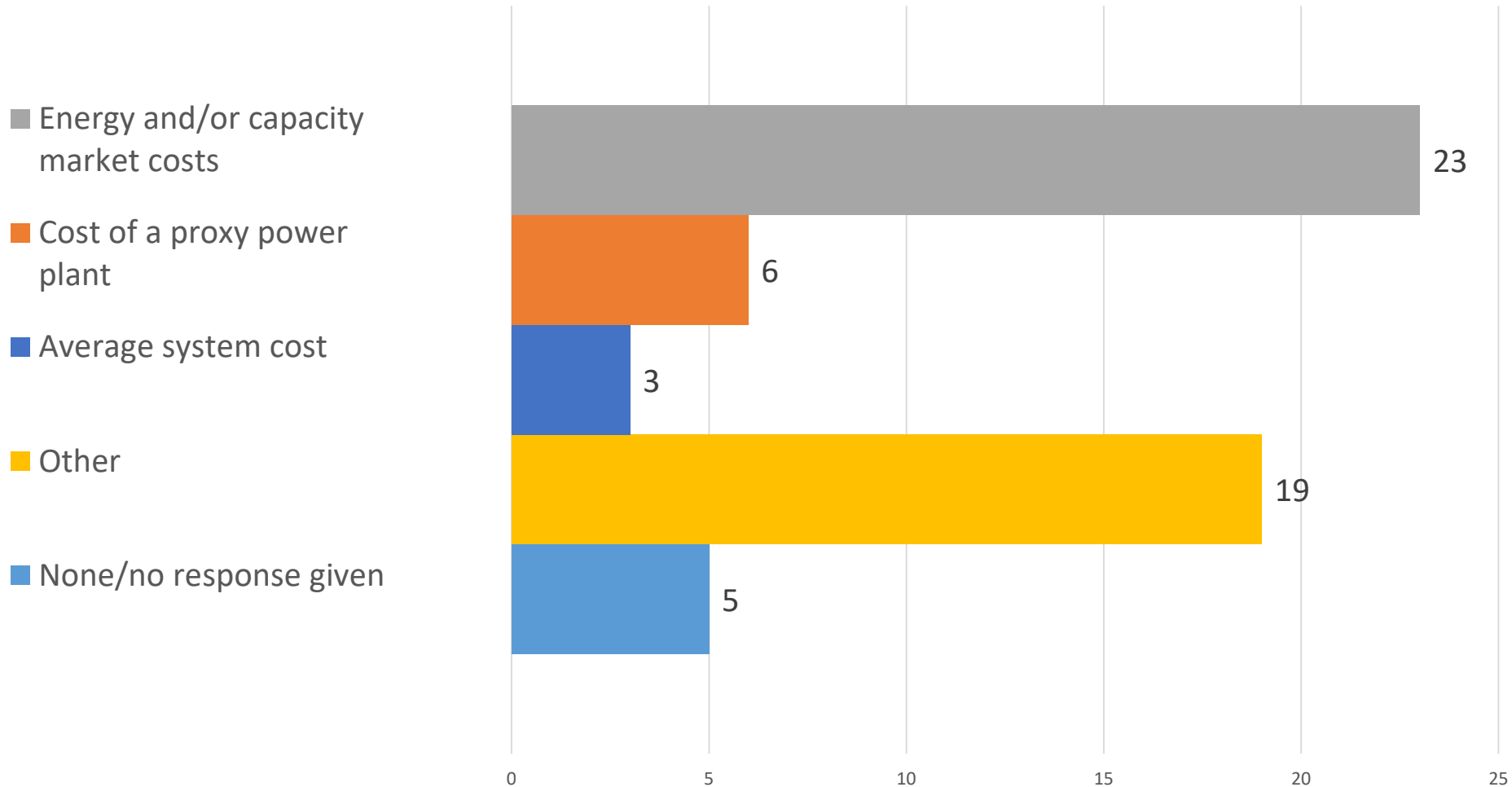


What specific evaluation practices
are in place?

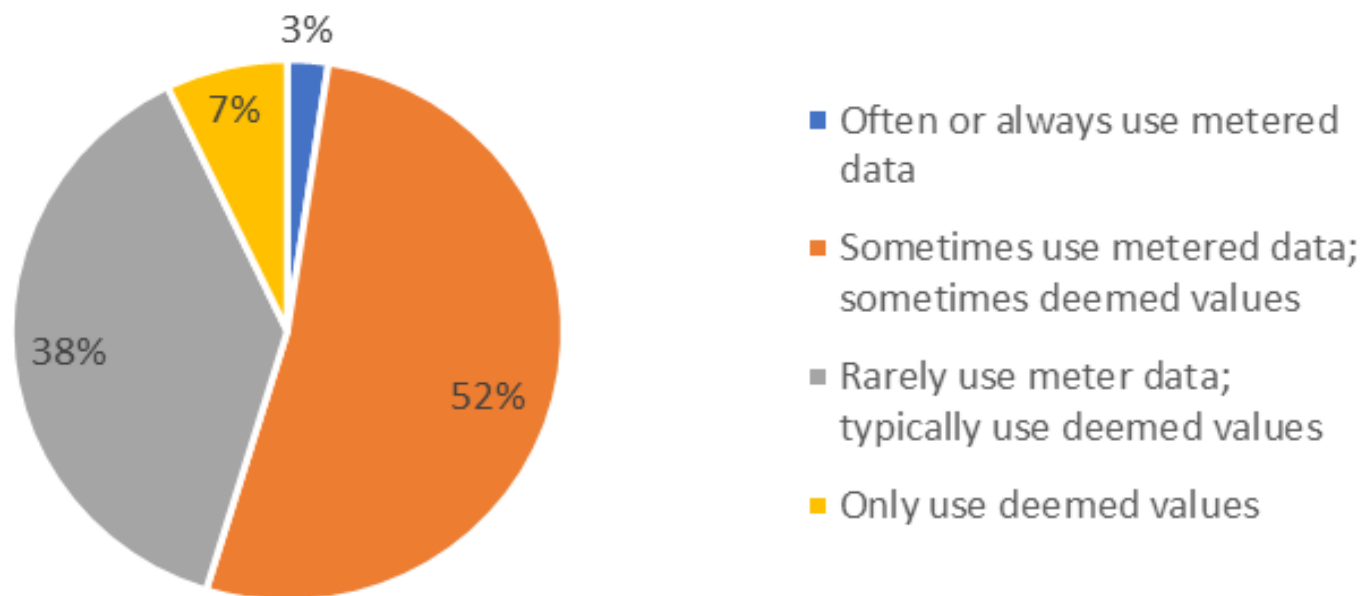
Primary cost-effectiveness test



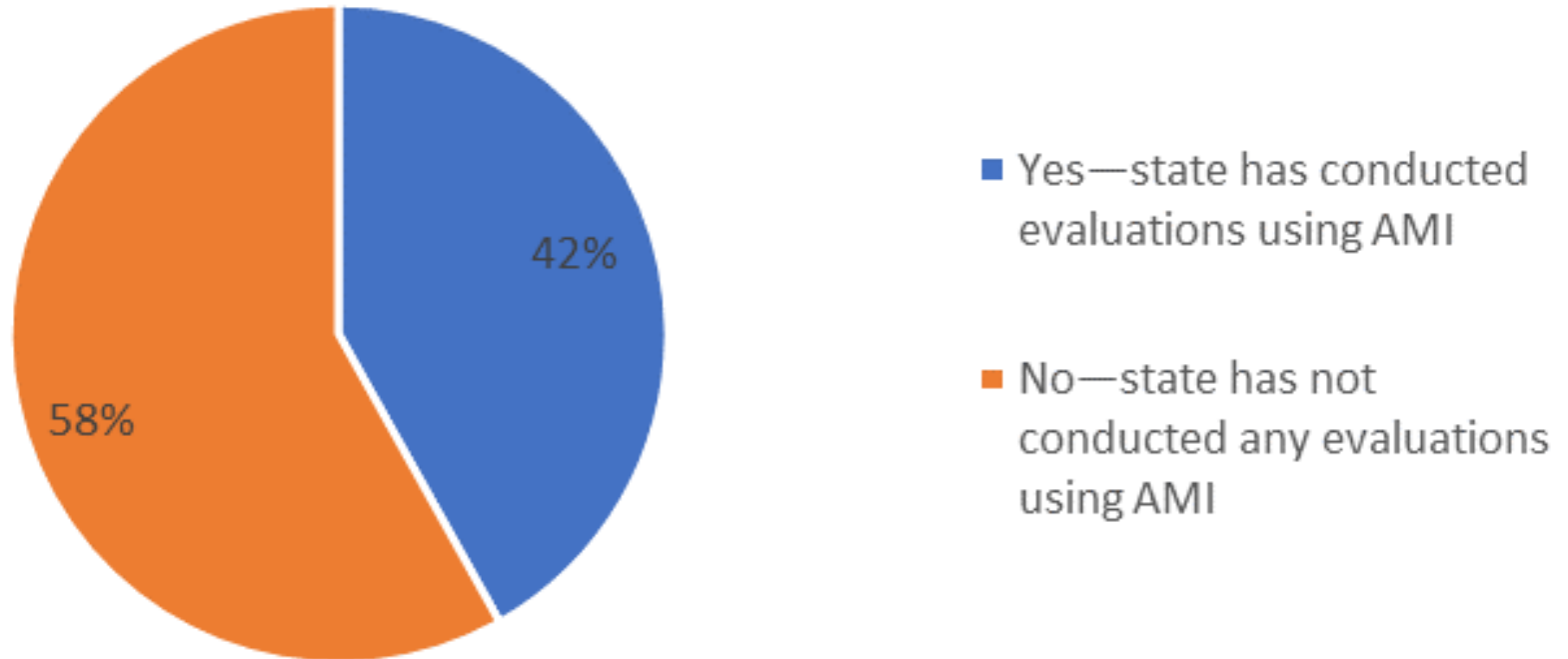
What does your state use to define avoided costs?



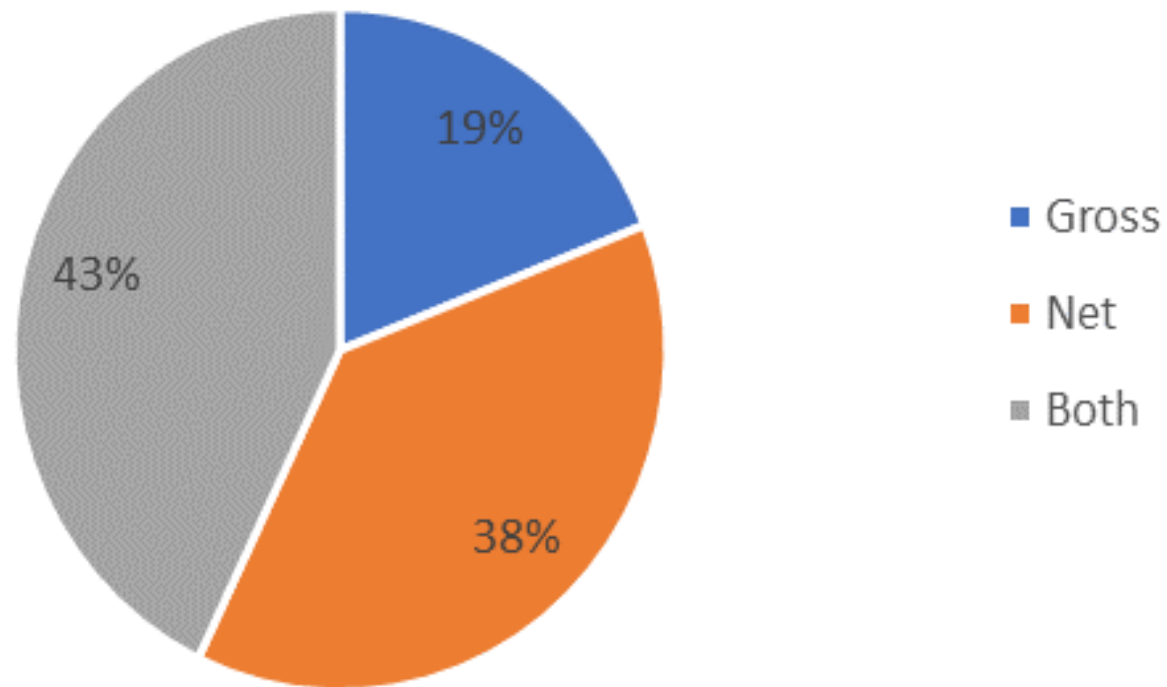
To what extent are savings based on actual utility bills/metered data versus deemed values?



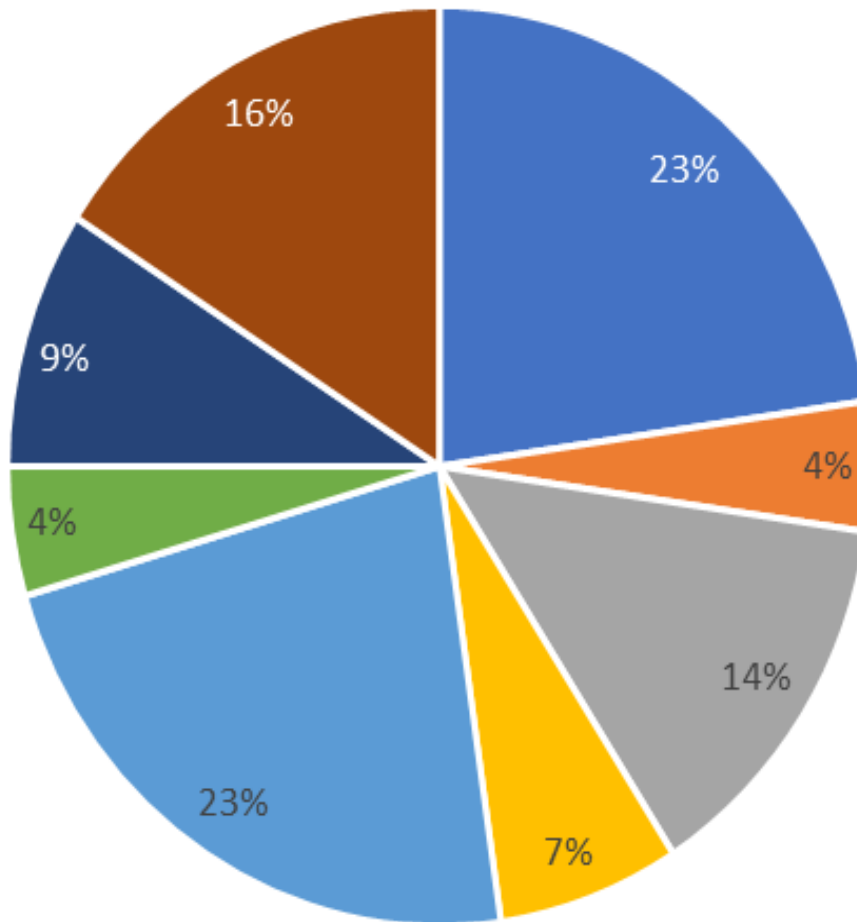
Has your state conducted any evaluations using advanced metering (AMI) technology?



Does your state use gross savings, net savings, or both?



Where and how are the values for variables like a 'net-to-gross ratio' determined?



- Case by case
- Set by state agency
- Determined by technical review committee
- In TRM
- Direct evaluation studies
- Customer surveys
- Only use gross savings
- Other/unknown

Some key findings

- Individual state approaches for administration and use of EM&V vary considerably
- Underlying methodologies and evaluation techniques are common
- Independent contractors perform most evaluation (78%)
- PUCs have been reducing their role in administering evaluations (23%) while utilities expand their role (45%)
- Most evaluation processes (74%) have some type of public involvement and access to evaluation reports (93%)

More key findings

- Almost half (45%) of the states use TRMs (technical reference manuals)
- Nearly all states (95%) subject EE programs to cost-effectiveness tests vs. ~2/3 of demand response programs and less than 1/3 for customer renewables or storage
- Large increase in states using both net and gross savings (from 21% in 2012 to 43% in 2020)

Recommendations

- Continue processes and practices for independent, credible, and transparent evaluation
- Develop and apply new and emerging technologies and methods for evaluation, such as advanced analytics and metering
- Extend evaluation methods to wider range of distributed energy resources
- Enhance efforts to evaluate non-energy impacts
- Advance approaches to value the time and location of savings from EE programs
- Expand efforts to use evaluation to refine and validate TRM assumptions
- Create a national database of evaluation reports

Thank you!

For the full report and results:

National Survey of State policies and Practices for Energy Efficiency Program Evaluation

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<https://www.aceee.org/research-report/u2009>

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