
NON-ENERGY BENEFITS AND COST-EFFECTIVENESS: NATIONAL SURVEY RESULTS, AND SOME RELATED CONCERNS

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TOPICS

- Some initial national survey results regarding the use of NEBs in B/C tests for Energy Efficiency
- Problems with the currently dominant approach (TRC)
- Why this matters

THE ACEEE STUDY

- ACEEE has just completed a national survey to identify and document energy efficiency program evaluation requirements and methods in each of the 50 states.
- Today we can look at some preliminary results relating to the topic of this panel: the treatment of non-energy benefits by states in their benefit-cost testing

CURRENT PRACTICE IN THE STATES REGARDING BENEFIT-COST TESTS [preliminary results]

- 44 states have ratepayer funded energy efficiency programs
- 43 states indicated that they use some type of benefit-cost test

	<u>USE THE TEST</u>	<u>PRIMARY TEST</u>
TRC	35 (81%)	30 (70%)
UCT	28 (65%)	5 (12%)
PCT	22 (51%)	0
SCT	15 (35%)	6 (14%)
RIM	21 (49%)	1 (2%)

BENEFITS INCLUDED IN THE PRIMARY TEST

- Avoided costs: All
- Environmental: 18 (42%) [4 CO2; 5 other 'air; 9 general]
- Other 'societal: 6 (14%) [all also have 'environmental']
- **Customer non-energy: 2 (5%)** [Note: 'NEBs' here don't include water or other fuels]
 - Reduced maintenance: 2 (5%)
 - Health: 0
 - Comfort: 0
 - Improved productivity: 0

[Only 1 out of 35 states using the TRC included a customer NEB as a quantified benefit.]

COSTS INCLUDED IN THE PRIMARY TEST

- Program costs: All
- **Customer costs: 35 (81%) (all of the TRC states)**
- Shareholder incentives: 12 (41% of states with shareholder incentives)

PROBLEM WITH THE TRC

The core problem:

As currently implemented, the TRC test is fundamentally imbalanced....

it includes all customer costs for an energy efficiency project, but essentially ignores the customer 'non-energy' benefits from the project.

CURRENT STATE PRACTICE REGARDING CUSTOMER NON-ENERGY BENEFITS (NEB's)

- 35 out of 43 surveyed states with B/C tests use the TRC
- 34 of those 35 states do not consider any customer 'non-energy benefits' in calculating the TRC
- 1 TRC state has a NEB 'adder' (plus 1 state is examining the issue and may quantify NEBs)

THIS CURRENT PRACTICE WITH TRC IS;

- **Not conceptually logical** – customers invest their money in EE projects for a variety of benefits - - not solely to save energy. Why include all costs they incur but exclude many benefits in a B/C calculation?
- **Systematically biased against EE** – these extra ‘customer’ costs are not considered when selecting supply-side options (e.g., purchased power, distributed generation, customer-sited renewables, etc.)
- **Out-of-step with common practice in program design and marketing** (which often emphasizes NEBs)
- **Will result in ‘screening out’ programs** that would be cost-effective from a utility resource perspective

WHY THIS MATTERS

- Maybe not that important in the past
 - Simpler programs
 - Smaller EE budgets and savings goals
 - Lots of EE ‘passed’ TRC, so not an issue of concern
- Increasingly important today
 - Much more aggressive EE goals...will require “deeper” savings, bigger ‘projects’, with larger customer investment
 - Program strategies increasingly emphasize NEBs in persuading customers to participate

REMEDIATION OPTIONS

1. Adjust ‘customer cost’ to “energy portion only”
2. Add NEBs to “benefits”
3. Switch tests – to the UCT/PACT (or societal)

REALITY CHECK: SOME CHALLENGES TO ADDING NEBs TO B/C TESTING

- NEBs tend to be difficult/controversial to measure
- Additional costs are required to measure
- Many utility commissions feel they lack authority and/or expertise to rule on NEBs

CONCLUSIONS

- Reliance upon TRC for cost-effectiveness screening is very widespread
- This is due more to the legacy of TRC and entrenched practice than it is to the merits of the methodology
- The TRC test (as commonly applied) has serious shortcomings that are likely to impede the full acquisition of cost-effective energy efficiency as a utility resource.
- Need to either fix the TRC to fully incorporate NEBs, or switch B/C tests
- Some combination of a Utility Cost Test and Societal Cost Test is likely a more practical approach