

**To: State of Michigan**

**From: Rebecca Stanfield, Senior Energy Policy Advocate, NRDC Midwest Program**

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**Q14. What methods for measuring costs and benefits (e.g. Utility Resource Cost Test or Total Resource Cost) have been proposed or used by various jurisdictions, and what is the effect of using one method over another? Are annual savings or predicted lifecycle levelized costs used more often, and what effect does selecting one option over another have?**

As described in the answer to Q2, Section 73(2) of PA 295 requires that each utility's portfolio of programs in Michigan be cost-effective as determined by application of the utility system resource cost test (USRCT) which compares the total cost to the utility of administering and delivering the programs, to the total generation, transmission and distribution costs avoided by the programs. This test looks at cost-effectiveness from the perspective of the utility system, and therefore does not take into consideration the value of environmental improvement, the value of the added comfort or convenience to the customer, any macro-economic benefits or any societal benefits created by the programs. ***Even omitting consideration of these critical energy efficiency benefits***, however, the programs have created substantially more benefits than costs.

There are several papers that compare the leading cost-effectiveness tests used across the country, and discussing the merits of each. In 2008, U.S. EPA published, as part of its National Action Plan for Energy Efficiency, a paper called Understanding Cost-Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy-Makers, which includes an extensive discussion of the available tests.

The most often used test is the total resource cost test (TRC) which is used in roughly 30 jurisdictions and differs from the USRCT in that the TRC compares all of the costs and benefits to the entire system, including the costs and benefits to the participant. The USRCT is used by 5 states. Several states require utilities to screen programs using multiple tests. A January 2013 presentation by Steve Schiller of Schiller Associates, for Lawrence Berkeley National Lab includes a summary slide indicating which test is used in each state, and the key characteristics of each test. [http://www.meeaconference.org/uploads/file/ppt2013/MES\\_2013\\_Thu-01-17/MES\\_2013\\_Thu-01-17\\_Schiller.pdf](http://www.meeaconference.org/uploads/file/ppt2013/MES_2013_Thu-01-17/MES_2013_Thu-01-17_Schiller.pdf)

There is growing acknowledgement that most jurisdictions, irrespective of the test that is used, are falling short in terms of giving credit for the full range of program benefits that should be included in the test.<sup>1</sup> The range of under-represented benefits include:

- Utility Benefits
  - Reduced arrearages and carrying costs;

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<sup>1</sup> Tim Woolfe, et. Al, for Regulatory Assistance Project, Energy Efficiency Cost-Effectiveness Screening, How to Properly Account for 'Other Program Impacts' and Environmental Compliance Costs, November 2012.

- Demand Reduction Induced Price Effect (DRIPE)
- Reduced risk (including things like water availability, which folks will remember was a big problem this last summer)
- Customer/Participant Benefits
  - Increased property values for customers (beyond just the lower utility cost benefits);
  - Aesthetics
  - Building durability
  - Comfort
  - Health benefits for participants, Health benefits for society
- Societal Benefits
  - Job creation (direct, indirect and induced)
  - Economic growth from lowering energy costs
  - Environmental benefits (beyond avoided compliance costs)

In part due to this under-counting of benefits, some have suggested that jurisdictions should move away from the TRC, and instead adopt the USRCT, as Michigan has done. Because the USRCT only considers costs and benefits from the perspective of the utility system, the undercounting of benefits has less impact on the outcome of the test.<sup>2</sup> However, even under the USRCT, it is common for the test to be performed without taking into consideration known utility benefits, including reduced arrearages, demand reduction-induced price effect, and reduction in risk. Simply moving to the USRCT should not relieve jurisdictions of the obligation to attempt to include all known quantifiable benefits in the performance of the test, or using reasonable approximations where quantification of the benefit is not possible or would be prohibitively expensive.

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<sup>2</sup> Chris Neme and Marty Kushler. Is it Time to Ditch the TRC? Examining Concerns with Current Practice in Benefit-Cost Analysis. August, 2010. <http://aceee.org/proceedings-paper/ss10/panel05/paper06>