

Robin LeBaron, Managing Director

National Home Performance Council



Robin is the Managing Director of the National Home Performance Council. His work includes directing NHPC's research projects and standards- and data-related initiatives.

Prior to joining NHPC in 2010, Robin served as executive director of Hope Community, Inc., an East Harlem-based non-profit that owned and managed 70 buildings with more than 1,200 units of affordable housing.

Robin holds a Ph.D. in Anthropology from the New School for Social Research.



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Performance Council

National Home Performance Council

- National non-profit organization based in Washington, D.C.
- Supports whole-house energy efficiency programs like HPwES
- Stakeholder organization with representation from industry, contractors, utilities, state offices, federal agencies on board of directors



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Problems Caused by B/C Tests

- In Virginia, use of the RIM has effectively prevented a wide range of energy efficiency programs, including whole-house programs
- In New York State, application of the TRC at the measure level to NYSERDA's flagship HPwES program has increased costs and led to a decline in jobs completed



The Total Resource Cost Test (TRC)

Ratio of avoided costs of energy (production and distribution)

TO

Cost of running program

and

Incremental cost covered customer beyond what s/he would otherwise have paid



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The Program Administrator Cost Test (PACT)

Ratio of avoided costs of energy (production and distribution)

TO

Cost of running program

and

Incentives paid by utility



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The TRC in Graphic Form

COSTS

**Program
costs \$3.0M**

**Incremental
costs \$5.0M**

BENEFITS

**Avoided Costs of
Energy \$7.5M**



The PACT in Graphic Form

COSTS

**Program
costs \$3.0M**

**Incentive costs
\$4.0M**

BENEFITS

**Avoided Costs of
Energy \$7.5M**



Incremental (Customer) Cost

- “Incremental cost” (customer cost) the single greatest difference between TRC and PACT
- Incremental cost ranges between 25% and 70% of total
- Rebate / incentive amount is the other difference — typically not as significant



White Paper Recommendations

1. If using TRC, use set of “best practices” in administering the test
2. Develop ways to make energy efficiency a resource competitive with supply-side resources – use of PAC Test a possible initial step in this direction



Recommendation I

When using TRC test, employ “best practices”

- TRC is designed to measure costs of program to ratepayers and utilities together
- Tremendous variability in how TRC is administered
- Many of the crucial issues are difficult to quantify



TRC Best Practices

1. Level of Application

- Apply at the level of the program or the portfolio, not the measure

2. Time Frame

- One-year time frame is common: limits consideration of out-year program efficiencies and cost reductions;
- Five-year time frame or longer is better

3. Proportion of Measure Cost Considered

- To the extent that systems need replacing, use incremental cost



TRC Best Practices cont'd

4. Discount Rate

- Participant vs. Societal Test
- Use long-term Federal bond rates

5. Value Avoided Externalities

- CO₂, NO_x, SO_x, VOCs

6. Non-Energy Benefits

- Comfort, health and safety, aesthetics, quality of life, other financial savings
- Can outweigh value of energy benefits
- Incorporate value of NEBs or reduce customer cost share



TRC Best Practices cont'd

7. Effective Useful Life (EUL) of measures

- EULs range, but most programs cap at 20 years
- Especially affects how programs value insulation
- Remove arbitrary caps and use realistic full measure life

8. Value carbon savings

- Reflect avoided carbon emissions
- For now refer to existing pricing mechanisms



TRC Best Practices cont'd

9. Net to gross

- Free ridership
- Spillover (rarely calculated or incorporated)
- Market transformation (long term not short term)

10. Gas and Electric utility jurisdictions

- Segmenting by gas/electric has been common
- Fuel-neutral whole-house approach important
- Apply value to every house served by the participating utility, apportioning costs and benefits.



TRC's Limitations

TRC almost inevitably flawed in practice due to:

- Lack of information about test inputs
- Legitimate disputes about how to define and measure hard-to-quantify costs and benefits

These problems make the TRC another hurdle, rather than a holistic assessment of a program's costs and benefits



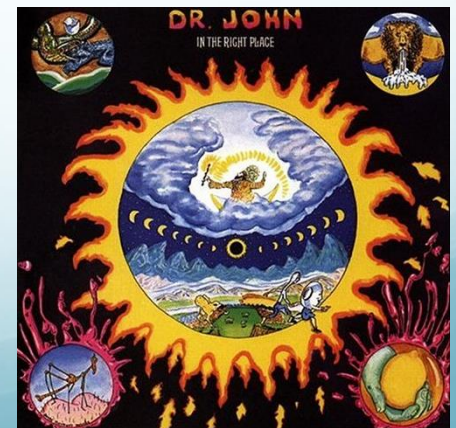
Right Test, at the Wrong Time?

TRC is not an effective tool for thinking about investments from either utility or ratepayer perspective

TRC can provide important information, but should not be the sole determinant of a program's future



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B/C Tests Unfair Burden on Demand Side Resources

- Supply-side resources currently not required to clear the same hurdles as demand-side resources



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Recommendation II

- Give utilities incentives to invest in demand-side as well as supply side resources
- Phase out the tests



*should be
an
investment
option as
well as...*



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Intermediate Strategy

Give more weight to the Program Administrator Cost Test (PACT):

- Gives better perspective on trade-off between supply and demand-side resources
- Relatively simple test to administer
- BUT, not perfect either...



Comments Welcome

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