



TRC or Not TRC: What IS the Question?

ACEEE 12th Market Transformation Forum

March 31, 2008

Mike Sherman

Massachusetts Division of Energy Resources



Just Words...

“All Cost- Effective Energy Efficiency”

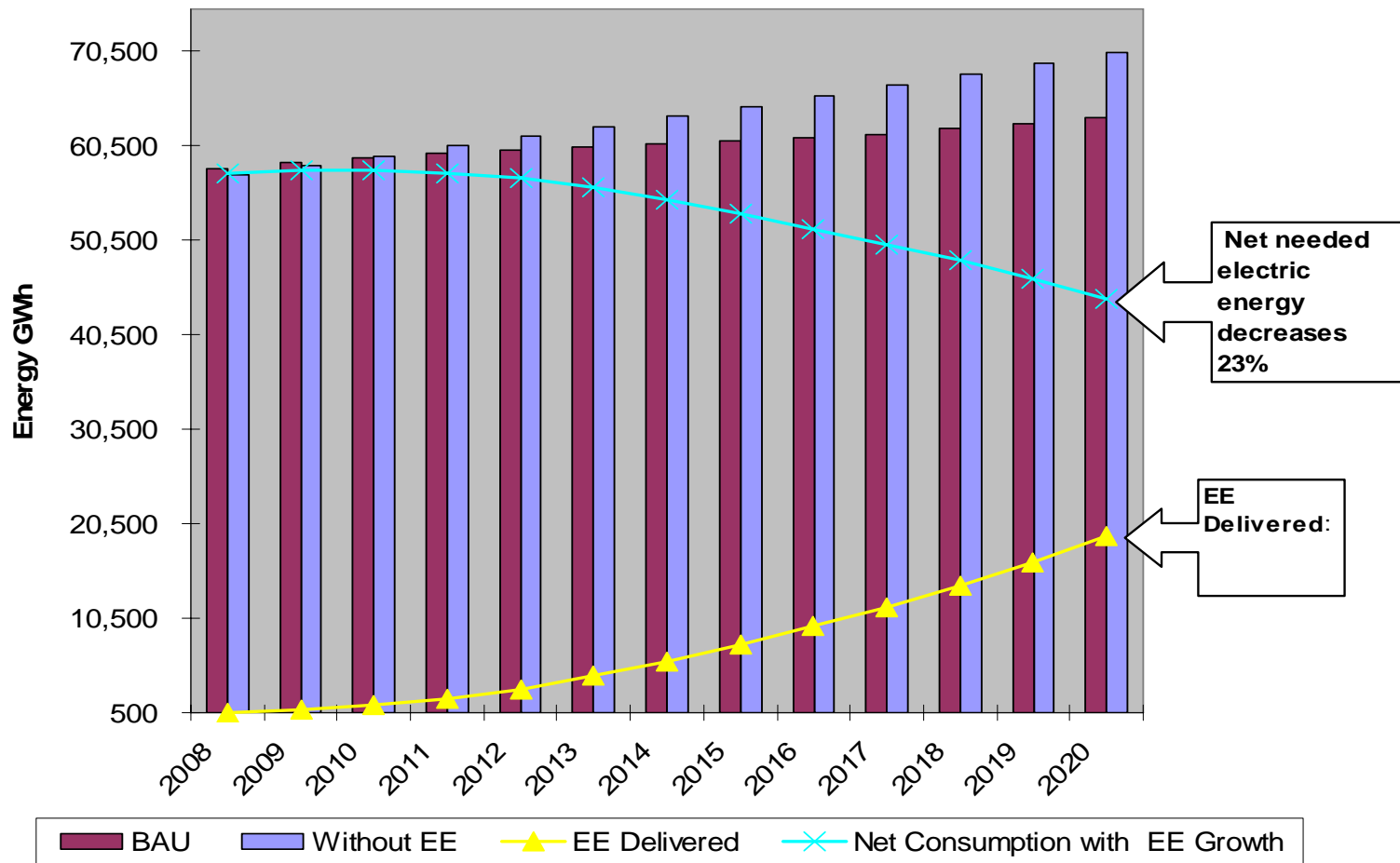
“Least Cost Planning”

“Efficiency Resource Planning”



Many of us have ambitious goals

Effects of Increased Energy Efficiency: Massachusetts Energy Efficiency Forecast 2008-2020





“Broader and Deeper Savings”

- “Broader and Deeper” Programs will continue to be a mix of resource and market transformation programs:
 - Some current market programs may become early retirement resource programs e.g. clothes washers.
 - Some initiatives will require upstream incentives and other MT strategies to move markets to more efficient choices.



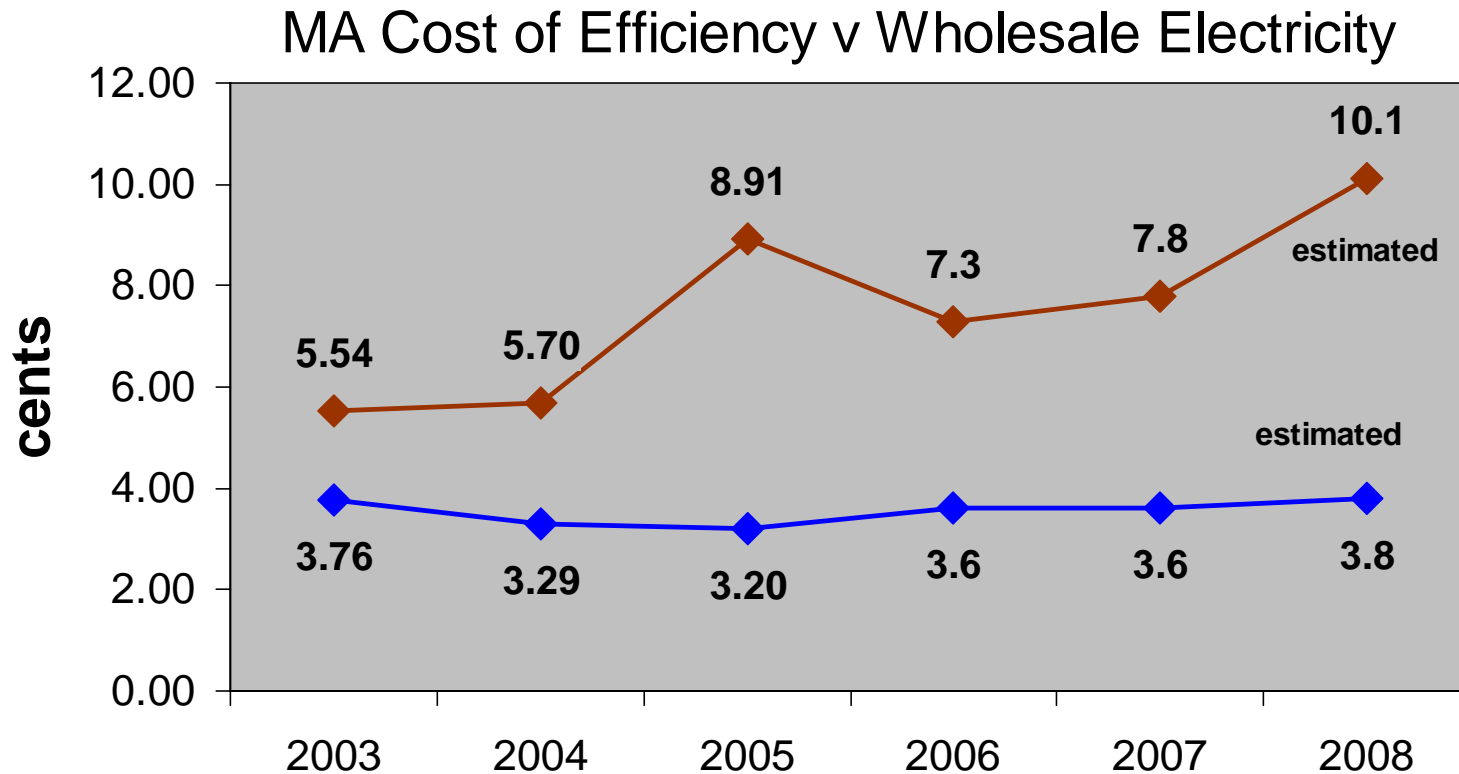
Cost-Effectiveness tests are critical

Our basic models are rooted in resource economics of the 1980's.

- Ratepayer Impact Test
- Utility Test
- Total Resource Test
- Societal Test



The basic economics are still critical





TRC is the most used test

TRC Costs	TRC Benefits
<ul style="list-style-type: none">- Program Planning and Administration, Marketing,- Incentives (sometimes treated as a transfer payment)- Customer Cost- Technical Assistance, Training- Performance Incentive	<ul style="list-style-type: none">- Avoided Supply Costs: Generation, Capacity, T&D- <i>Non-Electric Benefits (sometimes)</i>- <i>Non-Energy Benefits (sometimes)</i>- <i>Other (DRIFE) (sometimes)</i>

Environmental Benefits are typically found in societal tests: We are now beginning to place \$ values for GHG reductions under the Regional Greenhouse Gas Initiative.



Some NEBs

Resource	Participant benefits	1. Value to participant of Continued service
Avoided Heating Oil use	A. Health and Safety	2. Value of participant of increased Comfort
Avoided Water	1. Avoided Fire	Reductions in Greenhouse Gases
Utility benefits	2. Avoided Illness	Reductions in toxic waste stream
1. Arrearage reduction	B. Economic	Productivity increases
2. Avoided Termination, reconnection etc.	2. Property value enhancement	
3. Retained sales	3. Deferred refrigerator (or a/c) purchase	
4. Avoided admin (reduced calls to CSR, etc.)	4. Lighting fixtures	
5. Avoided discounts	O&M	
6. Environmental regulation mitigation	5. Avoided Moving/homeless expense	
	6. Avoided loss of education	



What about Market Effects under TRC?

- In multi-year planning cost-benefits rely on hard-to-predict estimates of future market share.
- One-year estimates may be more accurate but may lead to conclusions that programs aren't cost effective because the program can't reach sufficient market penetration over a short horizon.

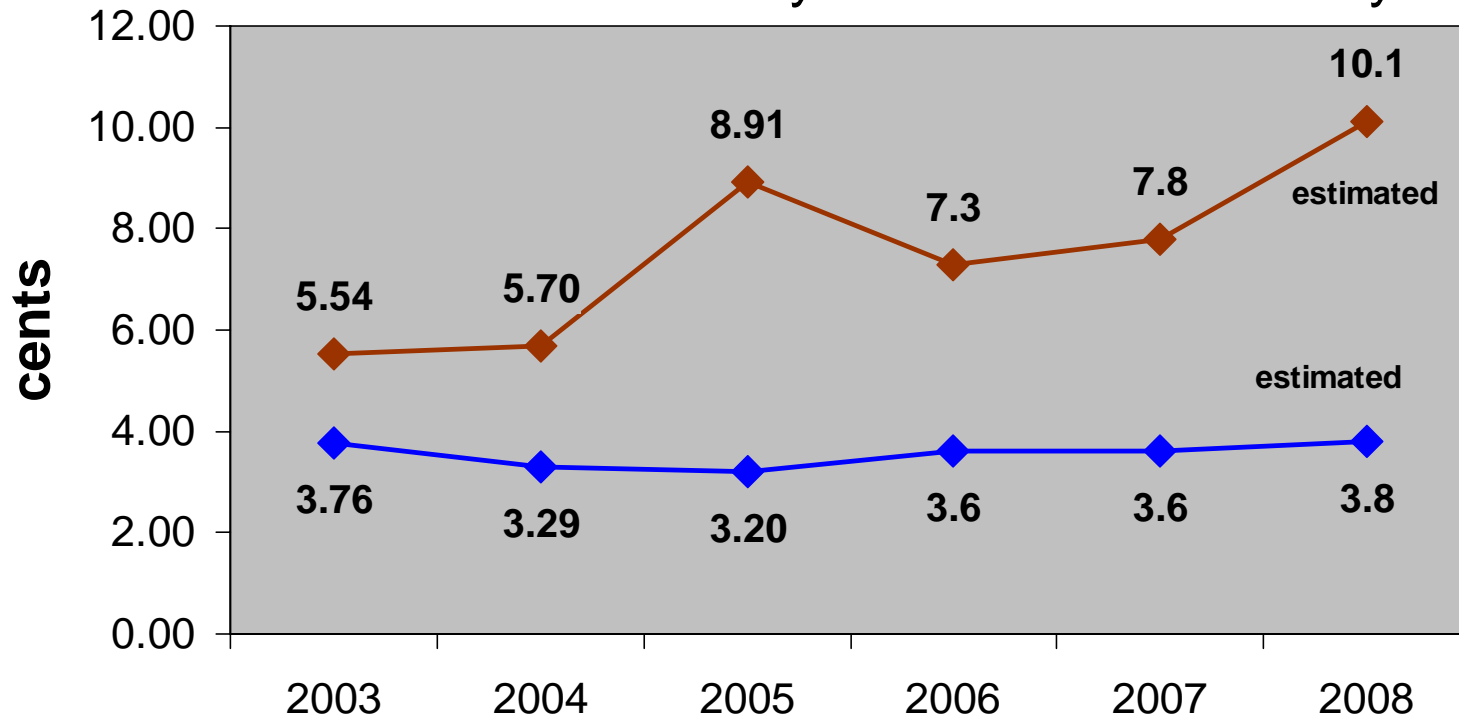


The Utility Test May be Enough in Some States

- IF** electricity prices are high enough **AND** efficiency is a resource,
- THEN** the primary and perhaps only thing we might need to know is whether efficiency (energy and capacity savings) cost less than the cost of fossil generated supply.
- IF** we need to value non-electric and non-energy resources, then broader TRC and Societal Tests are appropriate



MA Cost of Efficiency v Wholesale Electricity





Last thoughts

- Regulators need to be clear about what they are valuing.
- Program Planners need consistency and transparency:
 - Common screening models
 - Consistent assumptions
- Planning must be clearly and directly tied to Evaluation Monitoring and Verification.