

LEVERAGING BEHAVIORAL STRATEGIES FOR BUILDING DECARBONIZATION



Moderator:

President Joseph Fiordaliso, New Jersey Board of Public Utilities

Panelists:

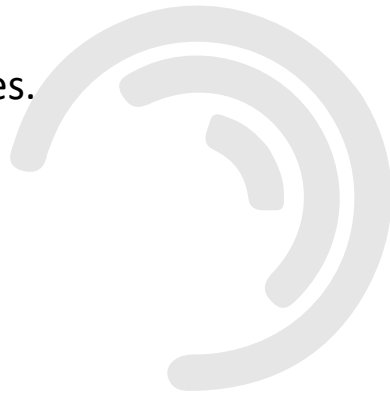
Paul Hibbard, Principal, Analysis Group

Kristin Munsch, Director of Regulatory and Customer Strategy, National Grid

Mary Sprayregen, Director of Regulatory Affairs and Market Development,
Oracle Utilities

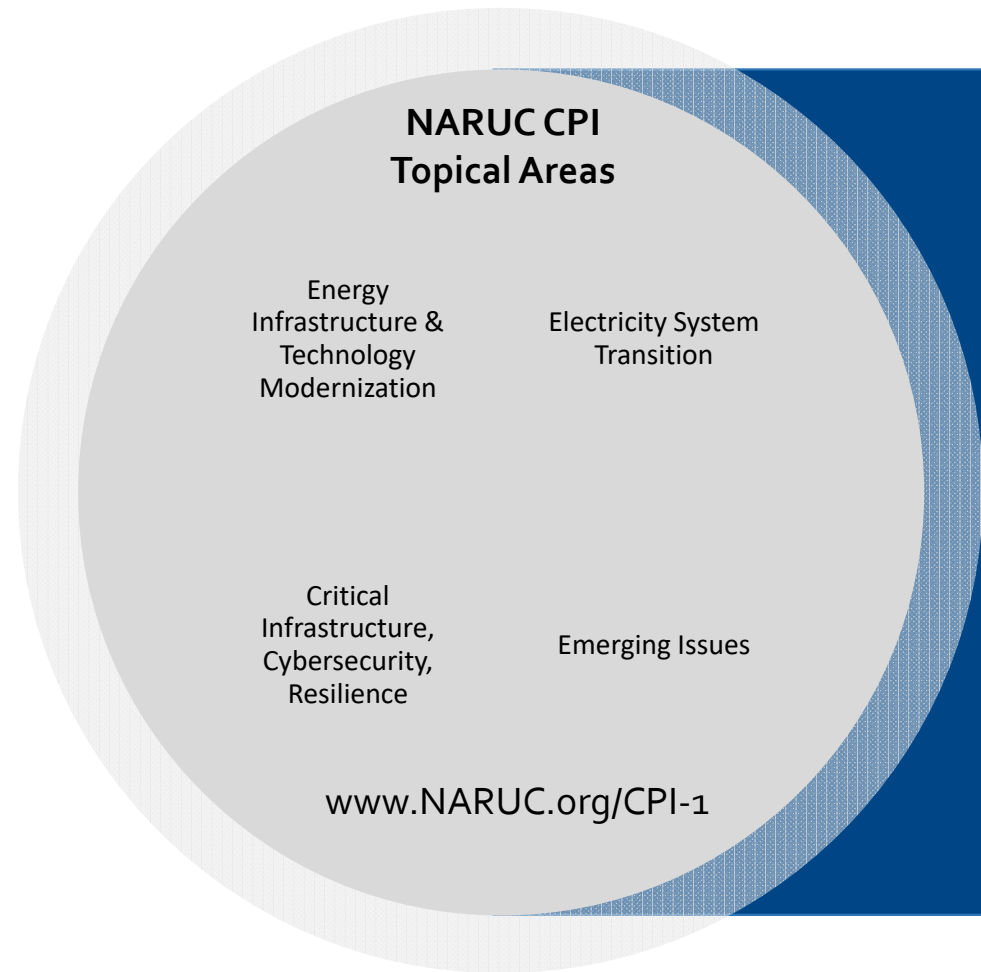
WHAT IS NARUC

- The National Association of Regulatory Utility Commissioners (NARUC) is a non-profit organization founded in 1889.
- Our Members are the state regulatory Commissioners in all 50 states & the territories. FERC & FCC Commissioners are also members. NARUC has Associate Members in over 20 other countries.
- NARUC member agencies regulate electricity, natural gas, telecommunications, and water utilities.



WHAT IS NARUC'S CENTER FOR PARTNERSHIPS AND INNOVATION?

- Grant-funded team dedicated to providing technical assistance to members.
- CPI identifies emerging challenges and connects state commissions with expertise and strategies.
- CPI builds relationships, develops resources, and delivers trainings.



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Energy Efficiency for Climate Policy

Leveraging Behavioral Strategies to Drive Building Decarbonization

Paul J. Hibbard

NARUC Innovation Webinar
September 17, 2020

Overview

- **Changing context for EE investments**
 - Historically utility, ratepayer benefits
 - Shifting more to GHG emission reduction value
- **Important questions in the changing context:**
 - Are we doing as much as we should?
 - Are the climate benefits properly valued (and are the relative values shifting)?
 - Are utility B/C reviews narrowing the pipeline for EE investments?
- **Analysis**
 - Review EE with a focus on climate metrics
 - Time value of GHG emission reductions
 - NPV of damages from climate change avoided due to EE programs
 - How does this affect relative importance of EE program features (e.g. annual savings versus lifetime savings)?
 - Case study: structural energy efficiency (SEE), behavioral energy efficiency (BEE) – is there a difference from a climate policy perspective?
- **Implications for utility and commission review of EE**

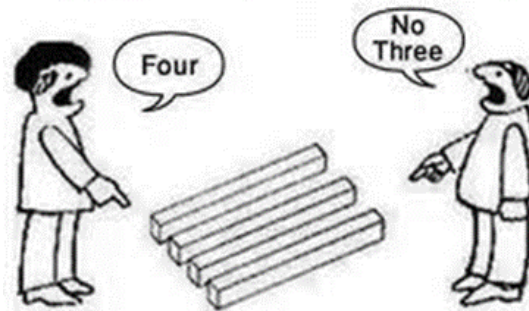
Changing Context

- **Utility Context: Utility, Ratepayer Focus**
 - Reduces generation, transmission and distribution costs
 - Saves consumers money
 - Ancillary: emission reduction benefits
 - *invest up to the point of positive utility, ratepayer returns*
- **Emerging Context: Climate Change, GHG Mandates**
 - State laws, binding GHG emission reduction requirements
 - Urgent need for progress; increasing risks of failure to rein in climate change, risk of passing dangerous thresholds (tipping points)
 - Aggressive mandates, fast timelines
 - Continued increase in stringency with passage of new laws, regulations
 - *invest up to the point that net carbon abatement cost is less than the next option on the carbon abatement supply curve*



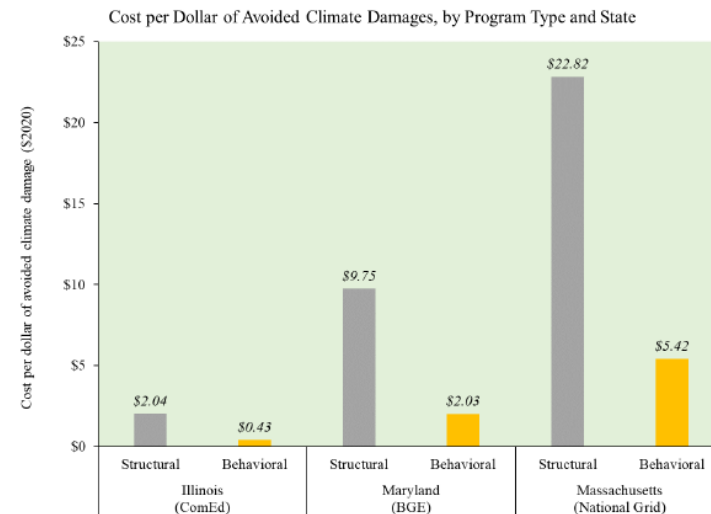
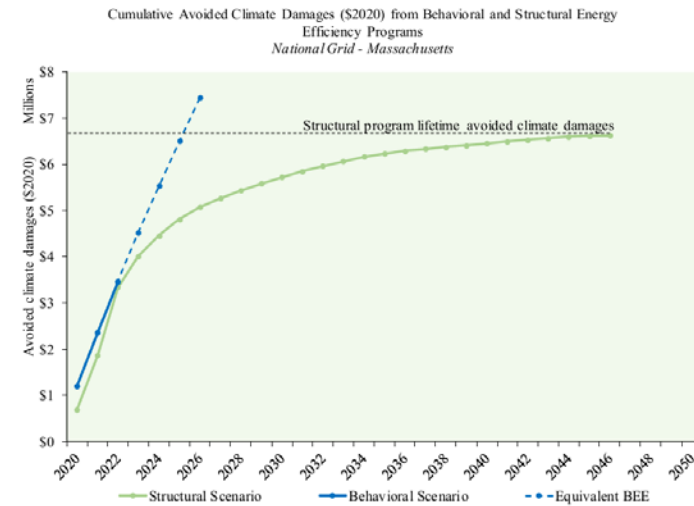
Why Shift Perspectives on EE?

- **Timing Matters**
 - GHG standards are aggressive
 - Will not be easy/cheap
 - States don't yet know how to achieve targets
 - Running out of time from climate and policy perspectives
- **In this context, EE stands out**
 - EE is a low-cost way to achieve carbon reductions
 - EE is often *the lowest cost* way to achieve reductions
 - EE has been key to deriving economic benefits from carbon pricing programs (e.g., RGGI)
 - EE may magnify in importance for reliable power system management
 - Electrification: increase power sector demand and emissions (countering decarbonization)
 - The world of electricity demand and pricing could get stranger – EE can help
 - Some programs can achieve GHG emission reductions sooner and faster than others



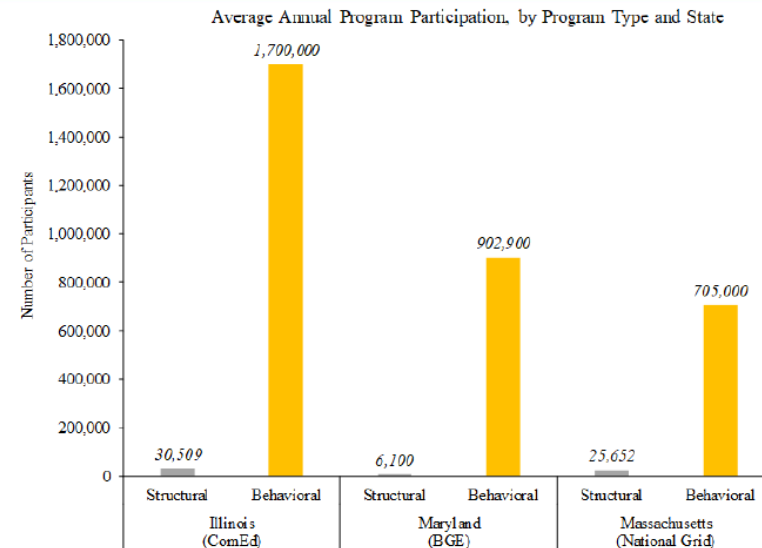
Case Study

- Structural programs are better from climate perspective, right?
 - Long-lived measures
 - Deep reductions per customer
- Not necessarily...
 - Behavioral programs can achieve GHG reductions faster, at lower cost
 - Smaller savings per customer, shorter measure life, but...
 - Many more customers, repeatable, and highly customizable – may be tailored to savings and climate policy goals
 - Can be used to accelerate participation in structural programs
- What does the analysis show?
 - All EE programs are exceptional and needed from a climate change and climate policy perspective
 - BEE programs provide particularly high value due to flexibility and timeliness

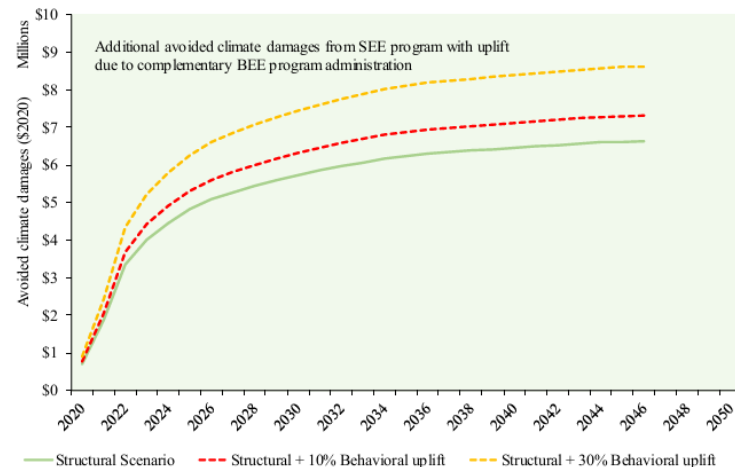


Case Study

- Speed at which BEE programs can be rolled out position them for early action
- Allows for more equitable access to energy savings
- Customers can be reached repeatedly, with tailored and/or changing message depending on climate policy needs
- Ease of customer contact and BEE program administration drives differences from climate change perspective (time value of GHG emission reductions captured through NPV of avoided damages)
- Studies have shown “uplift” – the ability of BEE programs to enhance participation in SEE programs, adding to climate policy value
- Concerted effort to tailor BEE to achieve this result could amplify uplift impacts



Cumulative Avoided Climate Damages (\$2020) from Behavioral and Structural Energy Efficiency Programs
National Grid - Massachusetts



Recommendations

- Pursue all cost-effective energy efficiency
- Recognize the time value of GHG reductions, from climate change (avoided damages) and policy (aggressive timeframe) perspectives
- Integrate GHG-focused metrics for evaluating the design, budgeting and performance of utility EE programs
 - Ability to achieve reductions in GHG emissions sooner rather than later
 - Present value of reductions in damages due to climate change
- Maintain annual energy savings targets
- Design performance incentives that simultaneously maximize cost effective savings and GHG benefits
- Promote more aggressive joint design and administration of BEE and SEE programs

Wrap up

- The context for EE is changing, and must change
- The pace and depth of required reductions in GHGs is accelerating, based on science and targets encoded in state law and policies
- EE stands out as a leading tool for state action
- Urgency of achieving GHG reductions warrants a rapid change of focus in EE program assessment
 - Challenge for commissions - evidence-based decision making tied to economic principles and legal/regulatory precedent will deter fast action
 - But EE assessments need to better reflect the value of EE from a climate perspective as the primary goal, or at least on a par with utility and consumer value
 - Time is of the essence

Paul J. Hibbard

Principal

Analysis Group, Inc.

phibbard@analysisgroup.com

617.425.8171

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