Dr. Jonathan Raab, Raab Associates
2/25/15 EEAC Meeting

EEAC C/I and Residential Workshop: Progress To Date

EEAC Workshops

Commercial/Industrial	Residential
Technologies (2/6)	Overview/Product Programs (2/12)
Implementation Issues (2/17)	Whole House Programs (2/26-AM)
Policy/Additional Issues (3/3)	Multi-Family/Low Income (2/26-PM)
	Wrap-Up/Recommendations (3/9)

Integrating Workshop Results in full EEAC Recommendations for Next 3YP

- Meeting summaries with recommendations will be posted to EEAC website and get approved as minutes at subsequent full EEAC meeting
- Workshop recommendations will feed into a March 31 council resolution that will be developed through the ExCom

Commercial Workshops

C/I RECOMMENDATIONS (MTG 1): Combined Heat & Power (CHP)

- Overall seek ways to increase CHP installations in Massachusetts
- Reassess the CHP economic potential in Massachusetts (Note: Last assessment was done circa 2008]
- Enhance education campaign for CHP technology, including cost-effectiveness and the (DEP) permitting process when applicable
- Evaluate whether CHP should be a stand alone initiative for reporting purposes

C/I RECOMMENDATIONS (MTG 1): CHP (continued)

- Pursue following next steps:
  - Identify barriers to doing more CHP projects with customers of each size, and determine if the barriers are technical, policy, financial, legislative, or market issues. Some identified barriers include:
    - Education
    - Interconnection issues
    - Gas supply constraints and gas price volatility
  - Identify potential solutions to overcome the identified barriers, and determine the feasibility, costs and ability of the Program Administrators to implement the solutions.

C/I RECOMMENDATIONS (MTG 1): CHP (continued)

- Investigate the challenges posed by natural gas availability and volatility in fuel prices for installing CHP systems and potential programmatic approaches to mitigating those risks
- Also, continue to seek ways to install CHP safely on downtown networks

C/I RECOMMENDATIONS (MTG 1): RETRO-COMMISSIONING/BUILDING & LIGHTING CONTROLS/SUB-METERING

- Overall endeavor to scale-up RCx, controls, and sub-metering initiatives in Massachusetts beyond PAs' current programs
- Seek ways to transform RCX into a continuous commissioning process by using appropriate incentives, promoting new technologies, and training system operators
- Consider how to include continuous commissioning as part of the new construction program
- Investigate ways to use benchmarking to identify ideal RCx candidate projects
- Continue to incentivize new building automation and lighting controls that exceed building codes and standard practices

C/I RECOMMENDATIONS (MTG 1): RETRO-COMMISSIONING/BUILDING & LIGHTING CONTROLS/SUB-METERING (continued)

- Decide on guidelines to facilitate and incentivize a more rapid and nimble adoption of emerging new technologies
- Educate customers and vendors about new technologies, particularly through accessible formats, like webinars and videos (including searchable C&I case studies on the Mass Save website)
- Promote open architecture in control systems to facilitate simpler system upgrading
- Update building operator training offerings
- Consider using pilot programs to test new and innovative technologies or program delivery approaches in the areas of submetering, RCx, and advanced building controls.

C/I RECOMMENDATIONS (MTG 2): SMALL BUSINESS

- Priority #1 – Deeper Savings, Priority #2 – Increase participation
- Expand prescriptive menu of services to better advance natural gas energy efficiency opportunities and non-lighting electric measures.
  - Increase participation in the program and deeper savings
  - Use building analytics and benchmarking to target small business customers

C/I RECOMMENDATIONS (MTG 2): Small Business (continued)

- Investigate potential for various program implementation approaches to serving the various strata of small business eligible customers.
  - Increase outreach and awareness programs for greater participation. Work with trade groups and associations.
  - More comprehensive (e.g. integrate gas/electric) marketing programs for small business.
- Determine which implementation strategies, technologies and building diagnostic capabilities are transferable and effective for serving Small Business customers.
  - Explore HES-type approach and segmentation by size and type.

C/I RECOMMENDATIONS (MTG 2): BEHAVIOR/ENGAGEMENT

- Investigate successful behavioral programs to determine the critical elements for success and their cost-effectiveness.
- Research SEM/ CEI programs to determine their applicability, cost effectiveness, and the effort required to implement in Massachusetts.
- Evaluate the potential savings from behavioral and/or SEM/CEI programs
- Incentivize building operators and owners, and provide building operator training around behavior issues (develop in consultation with BOMA and others); and support peer-to-peer cohorts

C/I RECOMMENDATIONS (MTG 2):
Behavioral/Engagement (continued)

- Develop guidelines for how energy savings can be tracked from behavioral programs, and how Pas can get credit for behavioral savings
- Explore leveraging for dispatchable load control
- Provide technical assistance to identify opportunities and implement
- At minimum, do a pilot during the next 3 years for large C/I customers

C/I RECOMMENDATIONS (MTG 2): COMMERCIAL REAL ESTATE

- Implement recommendations from CRE Working Group Roadmap, Massachusetts Commercial Real Estate Survey Analysis and Office Market profile report and other supplemental strategies
  - Add 7 opportunities (see appendix) plus anything additional from Roadmap when completed
- Expand Sustainable Office Design program features, including streamlined review and incentives, to technologies beyond lighting

C/I RECOMMENDATIONS (MTG 2): Commercial RE (continued)

- Explore market transformation opportunities
  - Advanced building operator training
  - Sub-metering and wireless
  - Better financing opportunities
- Mid-size office building targeted program—whole building approach
- Use BERDO data for identifying CRE opportunities in Boston and leveraging participation in EE programs
- Explore main drivers for CRE EE investment opportunities

C/I RECOMMENDATIONS (MTG 2): HOCKEY STICK

- Acknowledge existence and challenges of hockey stick, but don't spend inordinate resources to address
- Improve pipeline forecasting and reporting to improve visibility and predictability
- Avoid offering incentives that create inequities or unintended consequences (e.g., waiting to the end of year or not moving forward)

C/I Workshop #3: Agenda (March 3, 9-1, District Hall)

- Demand Reduction
- Market Segmentation and Customer Segment Specific Approaches
- Delivered Fuels: Oil, Propane, and Bio fuels
- C&I Reporting

Residential Workshops

RES POTENTIAL RECOMMENDATION (MTG 1): LED Lighting

- LEDs are superior to CFLs except for cost
  - the quicker can progress to LEDs in the programs and then phase out the programs the better.
- PAs will likely lead with HES/whole house programs where they could move to 100% LEDs directly installed beginning in 2016,
- Also move rapidly to LEDs for specialty lighting in the products program, and
- Conduct an assessment to determine the strategy for progression to only supporting LEDs for general lighting in the products program
  - The assessment part will need more thinking to provide a more formalized recommendation to the EEAC.

RES POTENTIAL RECOMMENDATION (MTG 1): New Technology

- Each specific technology will likely need own road-map including whether or not, where, and how to apply incentives
  - a one size fits all upstream approach may not be appropriate

RES POTENTIAL RECOMMENDATION (MTG 1): Fuel Blind/Fuel Conversion

- There is desire to make things fuel blind up to a point as long as it does not promote the excessive use of natural gas.
- Additionally, DOER has some specific ideas about what they might want to recommend to the Council; but will need to discuss this further.

Upcoming Residential Agendas

Residential 3/26 AM (Whole House)	Multi-Family Low Income 3/26 PM
HES	Multi-Family Programs
New Construction	Low Income Programs
Behavior Program	

Appendix: CRE 7 Opportunities

Commercial Real Estate EE ADVANCEMENT opportunities

1. Offer pre-packaged suites of energy efficiency options to increase energy efficiency upgrades in buildings (lighting, HVAC and other measures).
2. Increase engagement with tenants. Energy tracking and dashboards are useful to both owners and tenants. CRE actors want to know how they compare to other buildings.
3. Perform outreach to building managers and owners. Work with the owners to incorporate EE into retrofits or tenant fit-out.
4. Target marketing to CRE businesses based on building vintage. The CRE study found that the majority of energy consumption occurs in building built before 1990.

Commercial Real Estate EE ADVANCEMENT opportunities

5. Energy efficiency leases are a longer term market-transformation opportunity.
6. Leverage the role of account managers. The study showed that of the CRE businesses considering energy efficiency investments, a large proportion had PA account managers.
7. Speak to real-estate professionals in their own language.