



NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

Attributing Building Energy Code Savings to Energy Efficiency Programs

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INTEREST, OPPORTUNITY



1. Significant savings potential from increased state code adoption and compliance
2. States EE goals/targets increasing, with harder to reach savings, cost-effectiveness challenges
3. Unique role and opportunity for PAs to support code adoption and compliance

FEDERAL POLICY FOCUS IN...

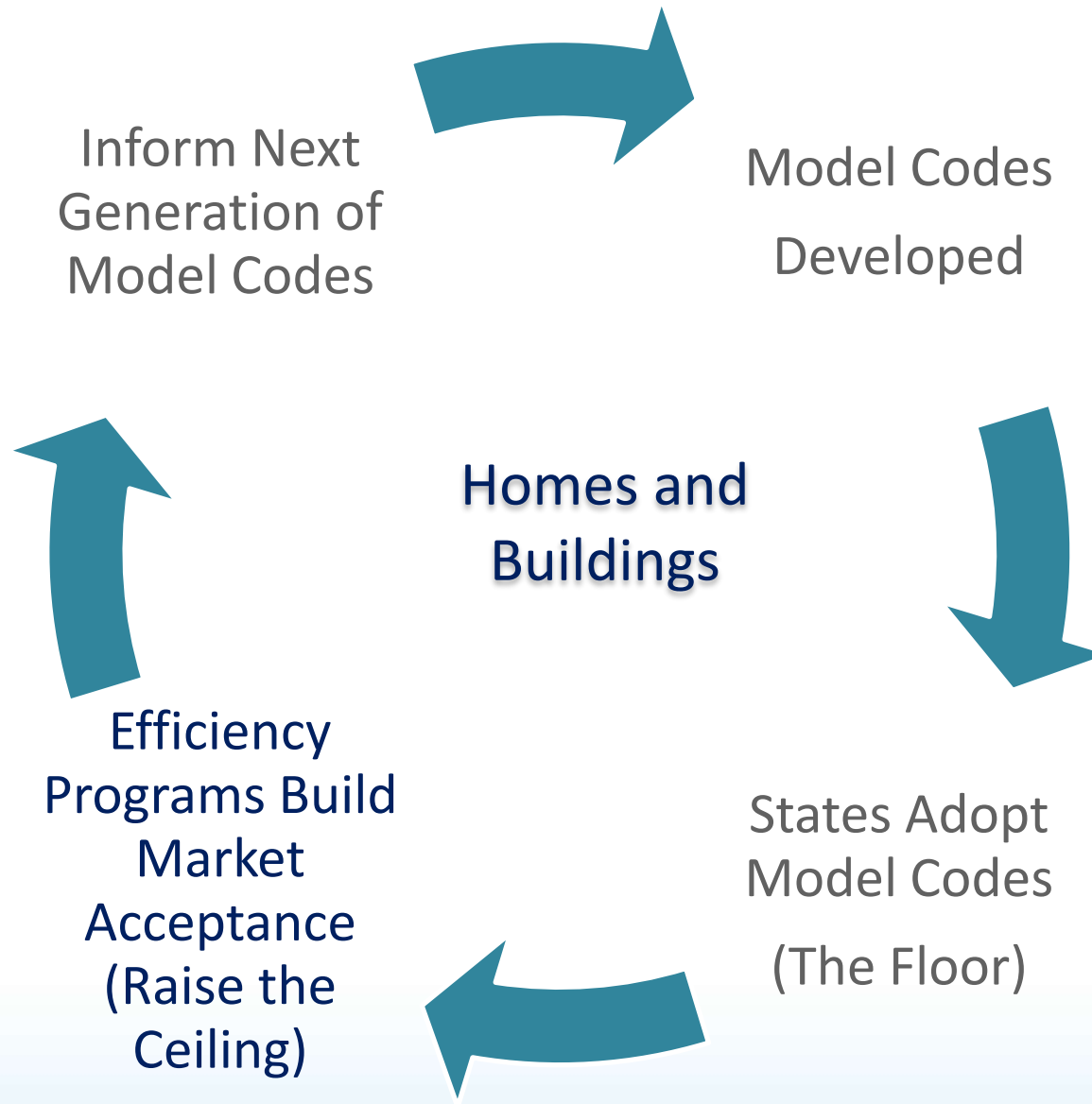


NATIONAL ACTION PLAN FOR ENERGY EFFICIENCY (NAPEE) 2009

“Energy efficiency program administrators have the opportunities to *assist in the development, adoption and implementation phases of mandatory codes*, and can help achieve energy and capacity savings at relative *low program costs per unit of energy saved*.”

“Energy efficiency program administrators are effectively using their experience with voluntary codes programs to assist in the process of developing, adopting and implementing mandatory building energy codes. With evidence that these contributions can be cost-effective and result in mandatory codes that are more cost-effective than they would otherwise be, *administrators and regulators can initiate and expand their efforts*.”

THE CODES/PROGRAMS 'VIRTUOUS' CYCLE



DRIVING FACTORS IN NORTHEAST REGION



NORTHEAST A LEADER IN ENERGY EFFICIENCY

- Over \$2.5 billion committed to EE programs in region
- Aggressive new goals being set
- Next generation of EE program plans going broader and deeper

STATES RECOGNIZING VALUE OF ENERGY CODES

- Codes recognized as cost-effective savings opportunity
- Programs moving to whole building, all fuels approaches
- Links to new construction programs understood

PRACTICAL FACTORS

- State code and energy offices lacking resources
- PAs have funding, expertise, customer relationships
- History of utility involvement:
 - MA utility support with 1st stretch code
 - VT support to municipalities without enforcement officials
 - CT utility code training programs

STATE POLICY FOCUS ON CODES AND EE PROGRAMS IN...



MASSACHUSETTS

Code activities in 2013-2015 coordinated statewide plan

CONNECTICUT

New focus from DEEP

NEW YORK

SBC IV program proposals to advance codes and standards

MARYLAND

EmPOWER Maryland includes code activities

RHODE ISLAND

Code activities in current EE program plan, *with claimed savings*

AS WELL AS CA, AZ AND OTHER JURISDICTIONS

ATTRIBUTING ENERGY CODE SAVINGS

FINAL REPORT

Attributing Building Energy Code Savings to Energy Efficiency Programs

February 2013



National Energy Efficiency Partnership



IEE

INNOVATION
ELECTRICITY
ENERGY

an initiative of the Electric Reliability Council of America



Institute
for Market
Transformation

...To Energy Efficiency Programs

- Convened stakeholder advisory group
- Identified issues related to PA support for codes (and standards)
- Provided procedural guidance for policymakers/regulators, including:
 - ✓ State level estimates of savings potential
 - ✓ Guidelines on attribution methods
 - ✓ Development, Adoption & Compliance

NEEP EM&V FORUM



- **PURPOSE**

- Increase credibility of energy efficiency
- Reduce evaluation, research costs through leveraging
- Inform development of national standards, protocols
- Consistent data to support integration into planning, climate policies

- **WHO**

- 10 jurisdictions: New England states, New York, Maryland, Delaware, DC
- Steering Committee: PUC commissioners, SEO directors, and air regulator representatives
- Project Committees (and subcommittees): PUC staff and air quality agency staff, SEOs, program administrators, US DOE, US EPA

CODES ATTRIBUTION REPORT - CONTEXT



- No single best way to involve PAs in supporting building energy codes - approach selected depends on state regulatory policies, existing programs, and other factors.
- Report focuses on development of PA code programs that would be recognized like conventional EE programs for producing measurable energy savings.
- Report not intended to imply that PAs should support building energy codes *only if* their efforts receive the same treatment as standard efficiency programs.
- Report examines what mechanisms have been and could be used to encourage development of PA code programs.

RECOMMENDED ACTIVITIES FOR UTILITIES / PROGRAM ADMINISTRATORS

Development/adoption

- Provide policy support during state code development and adoption
- Support local code and reach/stretch code adoption
- Provide analysis to support adoption



RECOMMENDED ACTIVITIES FOR UTILITIES / PROGRAM ADMINISTRATORS

Compliance

- Assess compliance with the existing code
- Conduct training of code officials and industry
- Provide technical assistance, materials, and equipment to code officials and industry
- Support third-party enforcement or specialized inspection

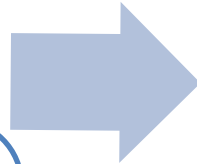




Codes Have Implications

But, it's complicated

- If baseline is assumed to be code and compliance is not 100%, real and credited savings are missed
- If PAs support code upgrades, baseline for other programs increases and savings are harder to achieve

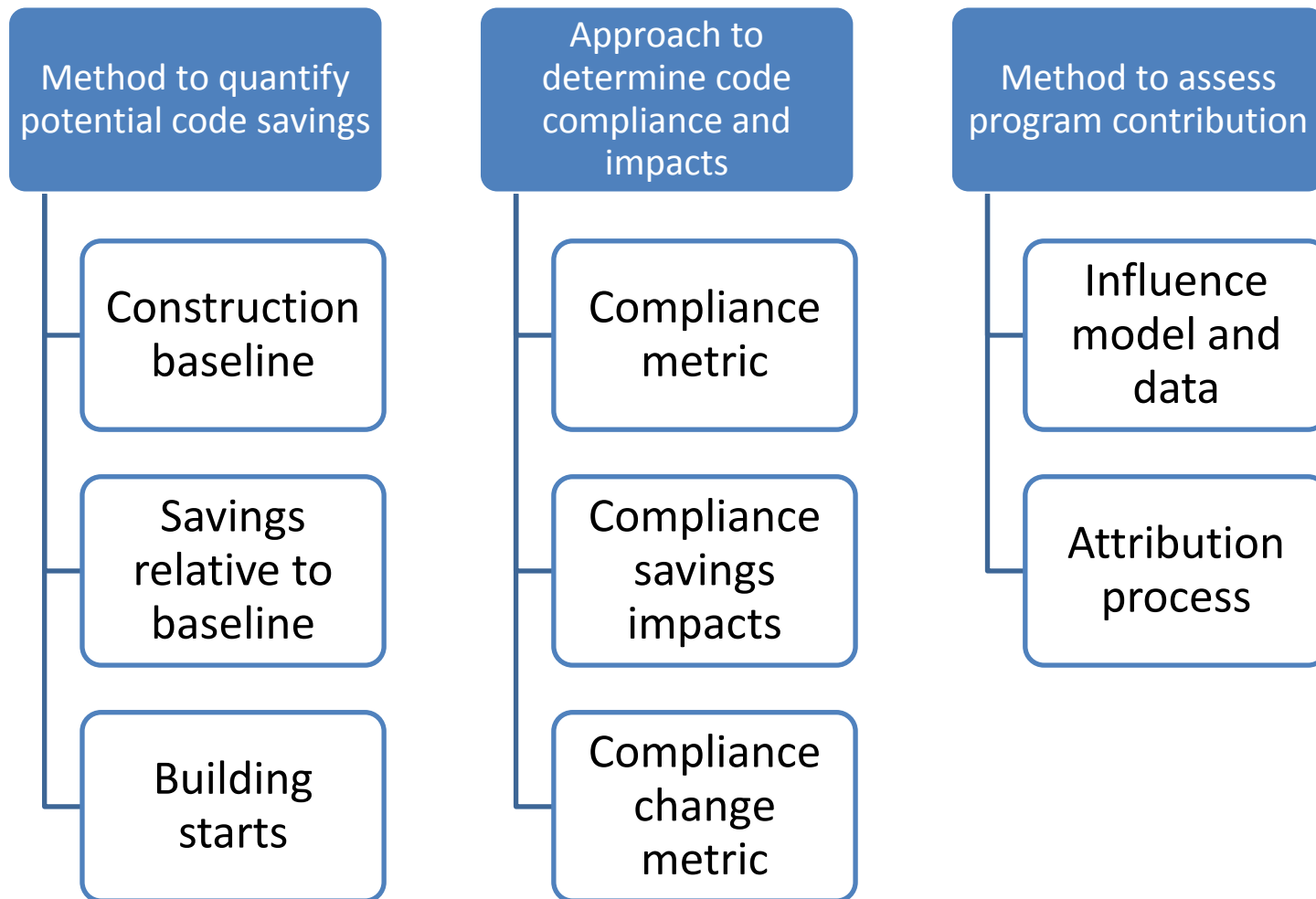


If regulatory structure can provide even playing field for code and efficiency programs, PAs have incentive to support codes and compliance

- Counting energy savings
- Including code savings in performance incentives



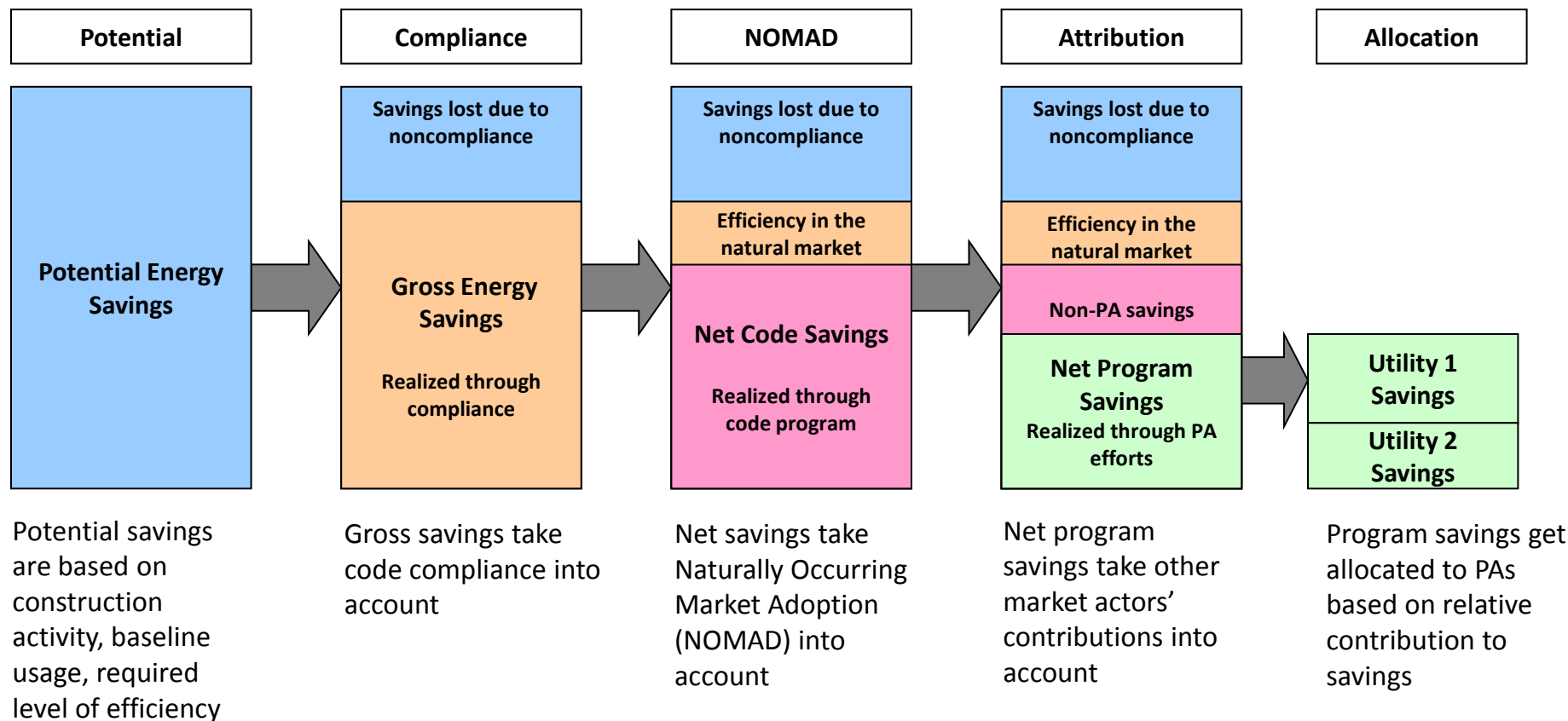
Methods and Data Needed to Attribute Savings





General Evaluation and Attribution Model

- PAs' efforts can affect:**
- Potential savings through measures and stringency of adopted code
 - Gross savings through level of code compliance





Strategy Matrix to Identify and Prioritize Actions—Status Review

| Energy-Efficiency Policy Condition | | Does state code exist? | | Does local code exist? | |
|---|-----|--|--------|----------------------------|--|
| | | Yes | No | Yes | No |
| 1. Are there energy-efficiency goals and/or incentives for PAs? | Yes | CA, CT, GA, IL, IA, MD, MA, MN, NH, NY, OH, OR, RI, VT, WA | AZ, CO | AZ, CA, CO, IL, MD, MA, NY | CT, GA, IA, MN, NH, OH, OR, RI, VT, WA |
| | No | | | | |
| 2. Do code savings count towards an energy efficiency goal? | Yes | CA, NY, OR, RI, WA | | AZ, CA, NY | |
| | No | CT, GA, IL, IA, MA, MD, MN, NH, OH, VT | | CO, IL, MA, MD | |
| 3. Does a quantification method exist? | Yes | CA, NY, OR, RI, WA | | AZ, CA, NY | |
| | No | | | | |
| 4. Does a method exist to attribute savings to PAs? | Yes | CA, NY, OR, RI, WA | | AZ, CA, NY | |
| | No | | | | |
| 5. Is a change in code compliance counted? | Yes | RI | | | |
| | No | CA, NY, OR, WA | | AZ, CA, NY | |



Regulatory Pathways

| | Initial Stage | Intermediate Stage | Final Stage |
|----------------|--|--|--|
| State Status | CO, GA, IL, IA, MD, MN, NH, OH, VT | AZ, CT, MA, RI | CA, NY, OR, WA |
| Description | Situation analysis in progress | Code program established and funded | Code program produces savings (claimed) |
| | Code program not yet staffed, funded | Enabling issues are being addressed | Evaluation process validates savings |
| | Stakeholders not connected | Savings not yet claimed | Attribution process assigns savings to PAs |
| | | Eval. / attribution processes not exercised | |
| PA Role | Initiate code collaborative / task force | Continue collaborative / workshops | Plan for ongoing program operation |
| | Develop code program proposal | Engage with stakeholders | Claim program savings |
| | State / local code adoption | Administer program | Support evaluation |
| | Compliance enhancement | Drive code adoption / compliance | Provide evidence for attribution |
| | Plan to address enabling issues | Propose solns. for EM&V, attribution | Continue to plan for future code actions |
| | Define resources and timeline | | |
| Regulator Role | Participate in code collaborative | Continue to work with stakeholders | Recognize program savings |
| | Support program funding | Address time gap between program and savings | Support future funding |
| | Work to address enabling issues | Consider proposals on enabling issues | Expect code savings in portfolio |
| Barriers | Potential studies do not include savings from building energy codes | | |
| | Regulatory processes do not recognize savings from code programs | | |
| | Multiyear timeline of code programs fails single year cost-effectiveness tests | | |
| | Evaluation methods are not defined for energy savings from code | | |



DOWNLOAD THE REPORT AT:

<http://neep.org/emv-forum/forum-products-and-guidelines/index#codes>



THANK YOU

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