Energy Codes & Building Performance Standards

IL SAG – Market Transformation Working Group
Code Advancement Small Group

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Goals of this Discussion

Purpose of this Discussion

- Discuss proposed options for IL utility involvement and evaluation for stretch code advancement / support and building performance standards
- Address questions and feedback
- Determine clear next steps

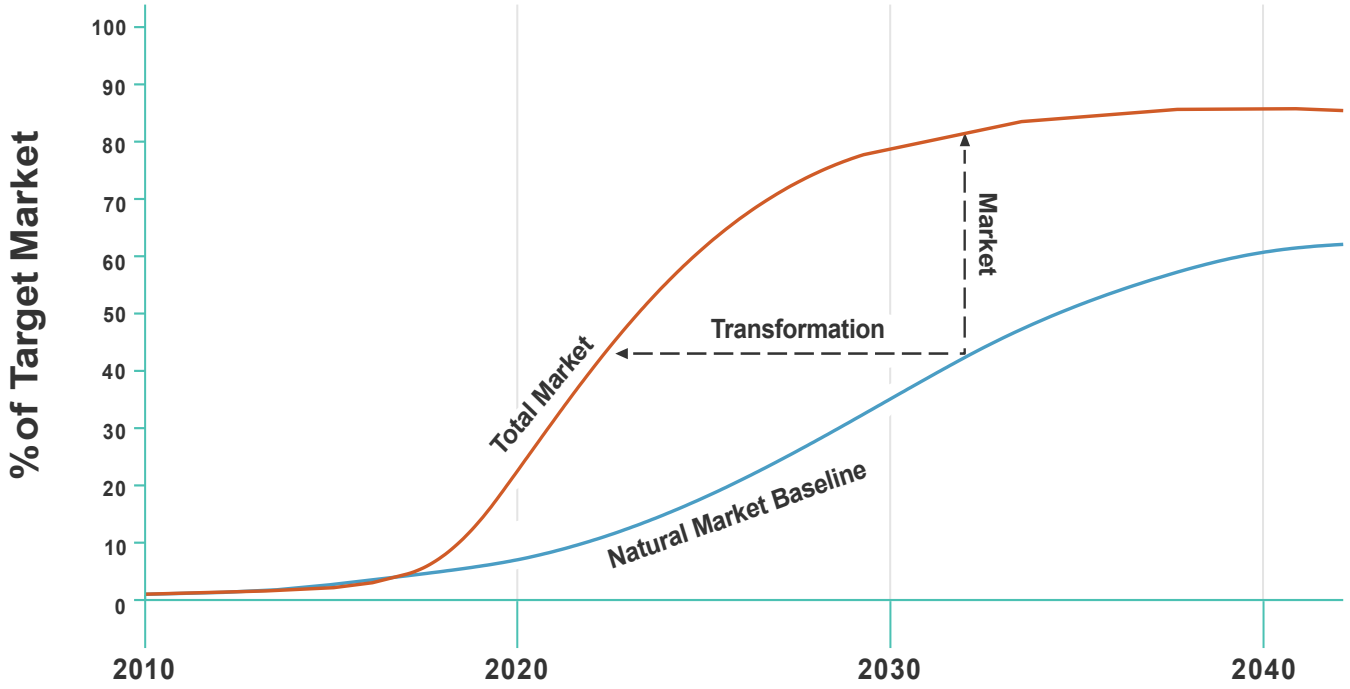
Agenda

- Market Transformation Framework
- Evaluation for Stretch Code Overview
- Evaluation for Policy Advancement
- Evaluation for Code Support Programs

Market Transformation Framework

Market Transformation Framework

	Market Transformation Characteristic
Scale	Entire new construction commercial market
Target	All consumers of the new construction commercial market
Goal	Structural changes in the market leading to long term savings
Scope of Effort	There are multiple levels of utility engagement
Level of Program Administrator Control	PA's are only one set of actors.
Evaluation and Measurement	Interim and long-term indicators of market progress and structural changes, attribution to the program and cumulative energy impacts
Timeframe for planning, savings measurement, and cost-effectiveness	Typically planned and implemented over a 10-20 year timeframe



Market Transformation Savings Framework

Source: 2020 Illinois Statewide Technical Reference Manual for Energy Efficiency Version 9.0, Attachment C

Market Transformation per the IL TRM

- Successful incorporation of MT initiatives into a program portfolio require **stakeholders accept methodological differences** between MT and RA programs
- Attribution can typically only be established **qualitatively**
- Quantitative estimates of net savings should be made but may be **less certain**
- Defensible methods are listed in **Attachment C**

Source: 2020 Illinois Statewide Technical Reference Manual for Energy Efficiency Version 9.0, Attachment C

Utility Involvement

Policy Influence / Advancement

- Development of study reports, market analysis or energy analysis
- Participate or influence adoption of stretch code at municipal level
- Participation in policy development processes either statewide and/or municipal level

Program Support or Compliance

- Training program targeted code officials, contractors or city staff
- Technical assistance
- Circuit rider
- Development of EE hub or collaboration

Evaluation for Stretch Codes Overview

Evaluation for Policy Advancement

Base Code Target

Not to scale, illustration purposes only

Evaluation for Policy Advancement

Base Code Target

Compliance with Base Code

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Evaluation for Policy Advancement

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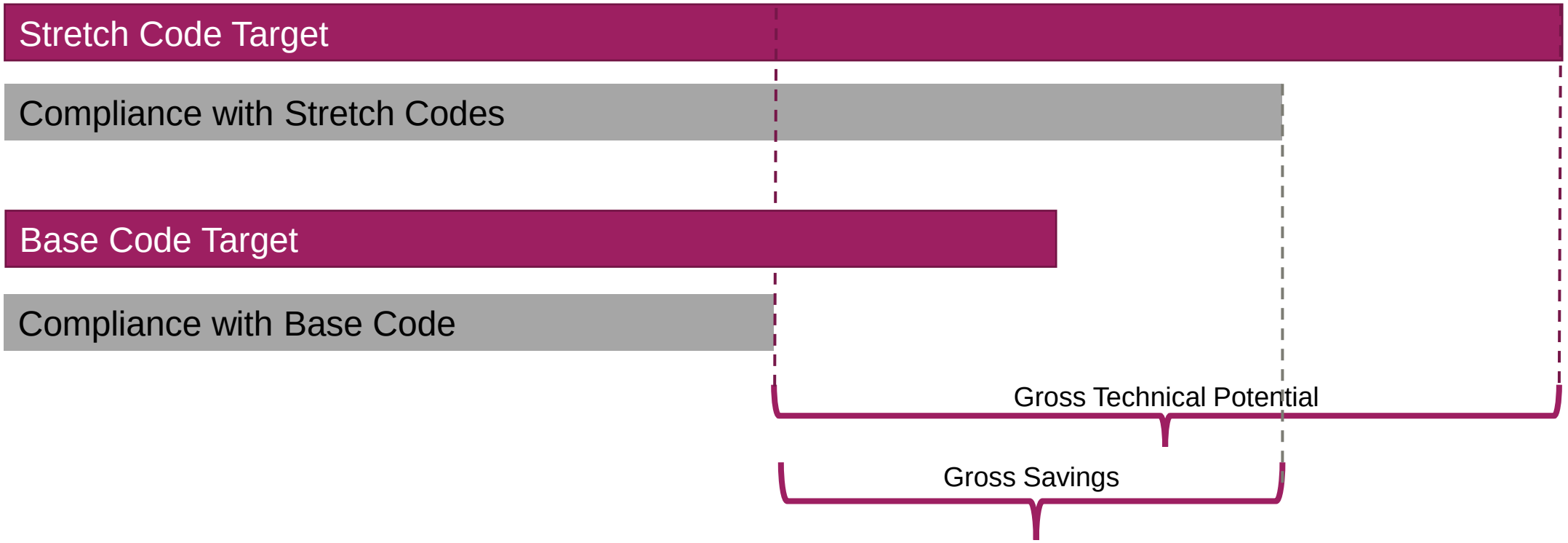
Evaluation for Policy Advancement



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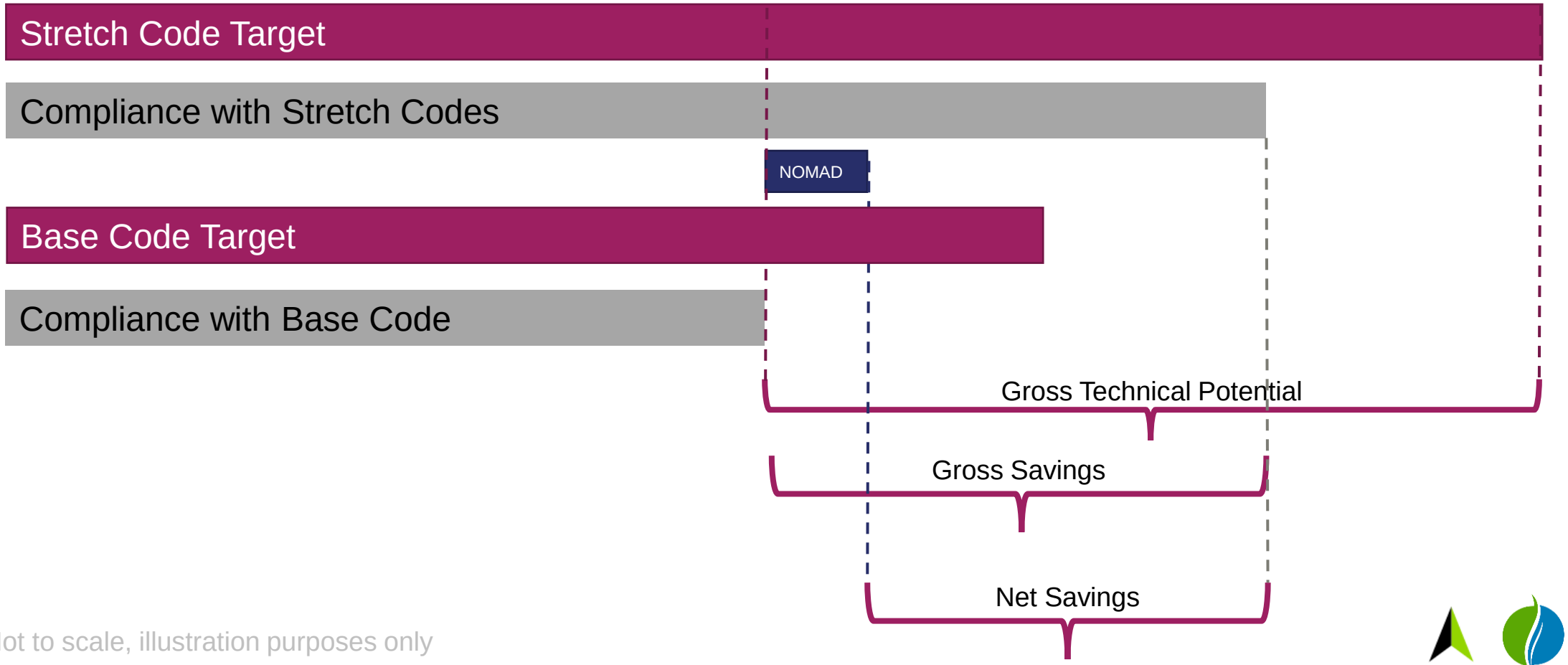
Evaluation for Policy Advancement



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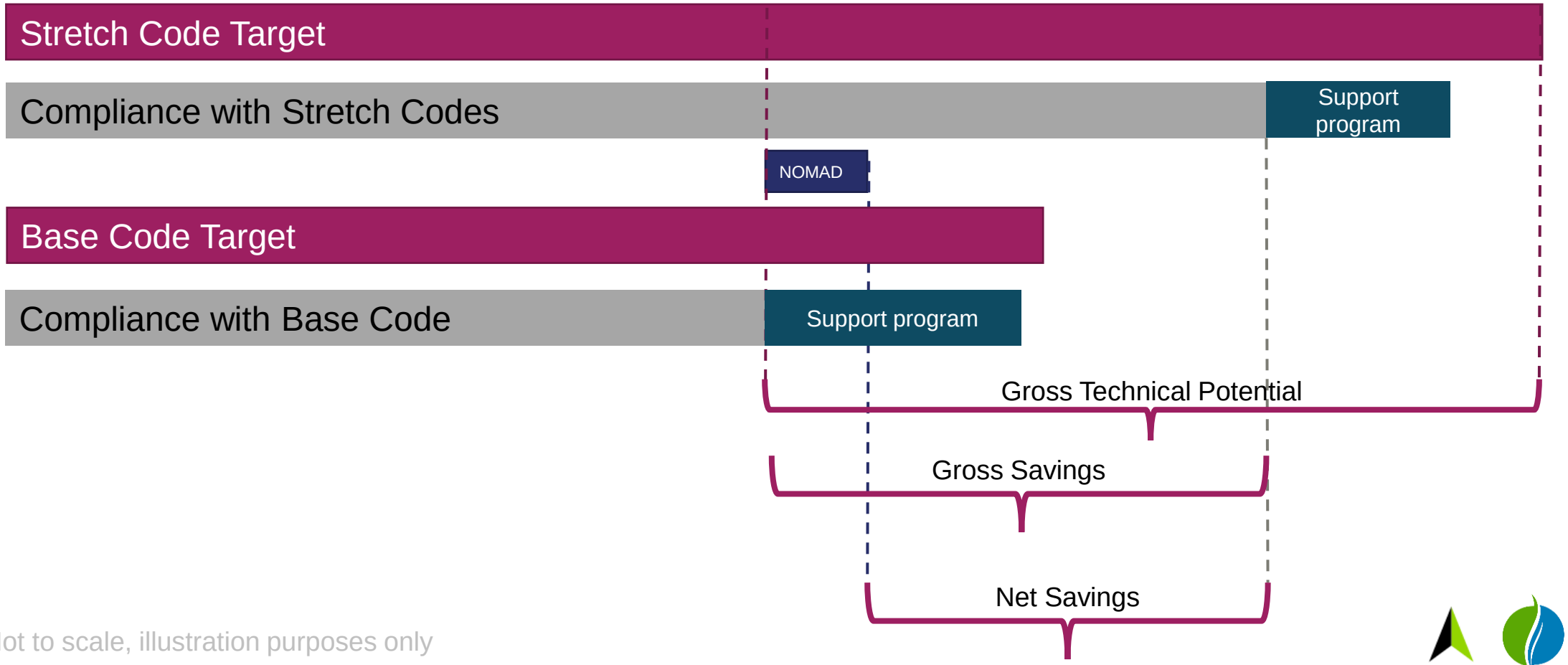
Evaluation for Policy Advancement with Code Support/Compliance



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Evaluation of Policy Advancement

Evaluation Steps: Policy Advancement

Policy Advancement Evaluation:
Gross Technical Potential

Estimate total energy savings potential for the new construction market to meet the stretch code policy. This task includes:

- Review of Primary Sources
- Gap Analysis
- Unit Savings Evaluation
- Unit Quantity Evaluation

Note: the way the policy is written will drive methods of estimating gross technical potential

Policy Advancement Evaluation:
Gross Energy Savings

Evaluators estimate the market effects of the stretch code policy and determine compliance rates over time. The data collection process starts with a sampling plan to stratify the market by building type or size.

Evaluators review the following information:

- Building department records
- Site data collection
- Interviews with facility personnel

Policy Advancement Evaluation:
Net Savings

Naturally-Occurring Market Adoption (NOMAD) or Natural Market Baseline: what would happen if the policy were not in place.

Delphi Panel is a group of experts that reviews existing data to determine the policy's level of influence including:

- Non-Utility EE Advocacy
- Utility Incentive Programs
- Statewide Base Code
- Compliance Intervention

Policy Advancement Evaluation:
Net Program Savings

Evaluators assign relative weights and scores in three areas to attribute savings to the utility's influence on policy:

1. Development of Compliance Determination Methods
2. Development of Technical Information
3. Feasibility of Meeting the Standard

Delphi panel is used to determine attribution scores. The panel is presented with the relevant evidence, including rulemaking dockets, activity and role reports from utilities, and stakeholder interviews.

Policy Advancement Evaluation: Allocation

The estimated level of savings will be allocated to individual utilities for those utilities to claim savings for policy advancement.

Allocation is based on **proportion of sponsor funding.**

Evaluation of Code Support Programs

Code Support Evaluation:
Compliance Baseline

Evaluators must determine a compliance baseline from which they can assess the impacts of utility activities.

Timing: Every time a code is updated, or every 6 years with a Delphi panel employed in the interim code update.

Code Support Evaluation: Gross Technical Potential

Baseline studies and compliance studies are combined with code requirements and expected construction data to determine the total energy left on the table due to **non-compliance** with the stretch or current codes.

Evaluators assemble a **Delphi panel** to determine the impact of compliance program efforts, which includes industry experts: building plans examiners, building commissioners, architects, design engineers, mechanical engineers, consultants, or academics.

Code Support Evaluation:
Determine Code Support Impact

Delphi panel determines energy code compliance levels under two scenarios:

1. Current code compliance once the code support program is in effect.
2. Assuming there was never a code compliance support effort.

Information used to determine utility impact can include:

- Number of attendees at training, pre/post training surveys
- Interview of code officials
- Number of online trainings, website visitors, and/or calls to call center
- Number of circuit rider visits
- Number of participants into other utility RA programs

Code Support Evaluation:
Determine Code Support Impact

Delphi Panel determines the NOMAD based on:

- Non-utility code support (SEDAC, ASHRAE, etc.)
- Other utility incentive programs
- State base code

Questions and next steps

Next Steps

- Provide comment to Celia on the draft MT Pathways document by August 13, 2021
- Slipstream/MEEA/Guidehouse will finalize the Market Transformation Pathways document
- Reconvene as a small group? Discuss at larger MT Working Group?

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