

# Addendum to Illinois Technical Reference Manual (TRM) Attachment C: Stretch Code Market Transformation Programs <sup>1</sup>

## 1.1 Introduction

Building codes are recognized as an effective way to move the market for commercial and residential buildings toward more energy efficient buildings. Several states have energy efficiency programs that are designed to influence the building energy code and allow the utility administering the program to claim savings through a Market Transformation (MT) approach to program design and evaluation. California utilities have been actively influencing codes and standards since the late 1990s. States that have more recently developed code programs include Arizona, Massachusetts, Rhode Island and Colorado.

Illinois utilities can currently claim energy savings for incentivizing new construction buildings to be built beyond existing energy code requirements. If a municipality were to adopt a “stretch” energy code—a locally mandated code or alternative compliance path requiring a level of energy efficiency more stringent than the current code—the stretch code would become the baseline against which utilities could claim savings if its new construction programs were to be evaluated as a traditional resource acquisition program. If utility activities are designed and evaluated as MT programs, on the other hand, utility activities would be conducted and evaluated through a different lens. Key activities would include assisting the state and municipalities in developing and implementing a stretch energy code, and in providing assistance to municipalities and buildings in complying with the new code. This document provides an overview of evaluation pathways and methods to be applied under a MT framework for utilities to claim savings for stretch code policy advancement and compliance support.

## 1.2 Stretch Codes Paths in Illinois

A stretch code is a locally mandated code or alternative compliance path that requires a higher level of energy efficiency or sustainability than the adopted base energy code. There are several ways that Illinois municipalities can move forward with adopting stretch codes, as described below.

**Adoption of the CEJA Stretch Code.** Passed in September 2021, Illinois Public Act 102-0662 (the Climate and Equitable Jobs Act, or CEJA) directed the Illinois Capital Development Board (CDB), which manages the state building energy code adoption process, to create a residential and commercial stretch energy code that can be adopted by individual municipalities. Once formally adopted by a municipality, the stretch code would take the place of the municipality’s existing energy code (likely the state base energy code) and establish new minimum energy efficiency requirements for new construction, additions, and major renovation projects.

Illinois municipalities have long had the option of adopting their own version of above-code energy conservation codes for commercial buildings, but no municipality has done so as of August 2022. The CEJA-mandated model stretch code, which will be available for adoption by municipalities no later than January 1, 2024, will offer a pathway to driving higher energy performance in buildings located in those municipalities. While the legislation does not require that a municipality adopt the stretch code and enforce its compliance, utilities can influence/motivate a local stretch code adoption and/or provide compliance support.

**Adoption of energy efficiency measures stronger than the state base code.** Prior to the availability of the model stretch code, a jurisdiction can choose to create its own commercial stretch code that is more stringent than the state base energy code. These early adopter cities could either adopt CEJA commercial stretch code targets (prior to actual code language being developed by the State of Illinois) or adopt something stronger than the base code, and then adopt the state-developed CEJA stretch code once it is officially available if desired. There is currently, nor will there be subsequent to the availability of CEJA stretch code in 2024, a *requirement* that cities adopt stronger energy

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<sup>1</sup> This Addendum was finalized in September 2022 and added to IL-TRM Version 11.0, approved for inclusion in the IL-TRM by the SAG Market Transformation Savings Working Group. In September 2023, this Addendum was removed from IL-TRM Version 12.0, to be consistent with the Working Group’s decision in 2023 not to include MT initiative-specific addendums in the IL-TRM going forward.

efficiency measures than the state base code. Although Illinois municipalities already have the option to adopt commercial energy codes stronger than the base code, none have done so to date. Utilities have the opportunity to help facilitate municipality stretch code adoption.

For residential buildings, no jurisdiction can mandate that residential building codes be stronger than the base state energy code prior to the January 2024 availability of the CEJA stretch code, with the exception of home-rule cities that adopted an energy code prior to 2006 (and municipalities with population greater than 1 million, as described in the section below). These few cities can choose to create their own residential stretch code that is more stringent than the state base energy code.

As in previous legislation, the City of Chicago can choose to adopt any energy conservation code it desires (for both commercial and residential buildings), as long as it is at least as efficient as the state energy code. The City of Chicago may choose to adopt the CEJA Stretch Code, or its own version of a stretch code.

### 1.3 Market Transformation Stretch Code Policy Advancement and Compliance Support Program Description

Attachment C of the Illinois TRM defines MT as the strategic process of intervening in a market to create lasting change that results in the accelerated adoption of energy efficient products, services, and practices. In the energy codes context, using a MT approach, utilities can play a role in two distinct ways: first, by supporting state and municipal efforts to advance and adopt stretch codes through technical guidance and policy development, and second, by providing stretch code compliance support through programs that provide technical assistance, enforcement assistance, and training for municipalities, contractors, and building owners. The utilities should document the MT approach by developing a logic model, associated market progress indicators, and a natural market baseline against which they can measure the effect of utility interventions in the stretch code market.

As outlined in Attachment C, MT programs require methods of evaluation that are substantially different from those used for Resource Acquisition Programs (RAPs). Utility actions in support of stretch code policy advancement versus stretch code compliance support are complementary but differ in many ways. The evaluation methodology must examine the effectiveness of the utility interventions pertaining to both of these sets of actions throughout the process, from the early stages of code policy development to driving compliance with a stretch code after it has been adopted by a municipality, as measured against the defined MT theory and established market progress indicators. A MT evaluation will ensure that savings are not double-counted with existing resource acquisition programs.

#### 1.3.1 Stretch Code Policy Advancement Activities

The process by which a stretch code is adopted at a municipal level is driven by a specific municipality's policy-making process. Utilities may influence stretch code policy advancement by creating, providing and/or presenting utility-initiated research to a group of key stakeholders and providing input to the policy-making process. A utility is uniquely positioned to be involved and influence the process for stretch code adoption through activities such as:

1. Conducting and disseminating research
2. Actively participating in discussions at public or decision-making meetings
3. Attending public meetings (information-gathering with little-to-no participation)
4. Writing and submitting comments
5. Creating, providing and/or presenting information to groups of key stakeholders
6. Convening stakeholder meetings to develop technical aspects/policy language
7. Submitting policy language or recommendations for consideration of adoption
8. Funding and conducting participation in public processes on behalf of the utilities

Giving public testimony in support of or against specific policy language/ideas/activities designed to intervene in the codes market should be documented in the Stretch Codes logic model along with the expected outcomes and outputs from those activities. The activities will have agreed-upon market progress indicators that evaluators will use to assess progress of utility influence.

## 1.3.2 Stretch Code Compliance Support Activities

A stretch code compliance support program works to increase compliance with an above-code policy that has been passed by the local jurisdiction where it then becomes the minimum code. The stretch code compliance support program is implemented once a policy is adopted. Not every building would immediately achieve 100% compliance with the adopted stretch code strategies; the inclusion of utility-support programs will increase compliance over time. Similar to stretch code policy advancement, utilities have a range of options for supporting municipalities in their implementation and enforcement efforts. Some potential code compliance support activities include:

1. Offering training programs targeting code officials, the design and construction community, and city staff to address knowledge gaps about general code topics, specific measures, or strategies for complying with the stretch code
2. Providing technical assistance for professionals and municipal officials that may be unsure of how to comply with or measure compliance for specific code requirements (for example, providing on-demand telephone or e-mail support, creating checklists or offering modeling assistance, or supporting a circuit rider which is a third-party specialist who is not a building code official but is expert in energy codes and compliance strategies)
3. Providing incentives for projects or measures that meet or exceed minimum stretch energy code requirements, such as those available through existing RAPs

Activities designed to intervene in the codes market should be documented in the Stretch Codes logic model along with the expected outcomes and outputs from those activities. The activities will have agreed-upon market progress indicators that evaluators will use to assess progress of utility influence.

## 1.3.3 Logic Model

The starting point in development of a utility MT program is the creation of a logic model. A well-constructed logic model should outline opportunities to influence the market (in this case, for driving adoption of and compliance with energy codes), barriers and constraints that inhibit the desired market changes from naturally occurring, utility activities designed to address the barriers and constraints, outputs that directly measure results of the activities, expected/desired short, medium-term, and long-term outcomes, and the linkages between all of these elements. An overview of the factors to include in the logic model is outlined below, followed by an initial draft of the logic model itself (Figure 1).

Several factors highlight the opportunity for advancement of stretch energy code programs:

1. CEJA sets energy efficiency targets for a new state-developed stretch code that increases efficiency incrementally through 2032
2. CEJA requires development of model stretch energy code language for commercial and residential buildings for the first energy efficiency targets by January 1, 2024
3. Municipalities are increasingly considering the need for responses to climate change in their planning processes, for which stricter energy codes can be a useful action
4. Existing utility resource acquisition programs are available to provide financial and technical assistance in implementing energy efficiency measures
5. Attachment C of the IL TRM allows utilities to use energy efficiency funding to pursue a MT-based approach in support of stretch energy code advancement, implementation, and compliance

### 1.3.3.1 Target Markets

There are several sets of market actors that could be involved in a utility-supported code policy advancement/code compliance support program. These market actors, or target markets, are delineated into three main groups: the jurisdiction/policy-maker sector (TM1), the design and construction industry (TM2), and the enforcement industry (TM3), as shown in Table 1. The TM1, TM2, and TM3 identifiers are used in the *draft* logic model, below.

**Table 1: Targeted market actors for stretch code utility programs**

Targeted market actors	Description of actors
<b>Jurisdiction/Policy-Making Sector (TM1)</b>	<ul style="list-style-type: none"> <li>• Entities and persons involved in state policy development and adoption, including Capital Development Board (CDB), Illinois Energy Codes Advisory Council, and public stakeholders</li> <li>• Jurisdiction-level code development or adoption bodies, such as city/county councils, mayors, sustainability managers, and/or working groups (e.g., the City of Chicago Decarbonization Working Group)</li> <li>• Local and state chapters of the International Code Council (ICC), ASHRAE, Illinois Council of Mayors, Metropolitan Mayors Caucus, and the numerous state and local code official associations in Illinois</li> </ul>
<b>Design and construction industry (TM2)</b>	<ul style="list-style-type: none"> <li>• Construction industry market actors including builders, subcontractors, material supply houses, site superintendents, energy modelers, building scientists, architects, engineers, and designers</li> <li>• Local and state chapters of Homebuilder Associations (HBA), American Institute of Architects (AIA), ASHRAE, International Code Council (ICC), Illinois Plumbing and Heating Association, and Illinois Green Alliance, Association of Licensed Architects, Illuminating Engineering Society, Lighting Controls Association, International Association of Lighting Designers, Building Performance Institute (BPI), Associated General Contractors of America, and others</li> </ul>
<b>Enforcement industry (TM3)</b>	<ul style="list-style-type: none"> <li>• Local building departments, code officials, and jurisdictional employees that review, permit, and inspect energy code requirements</li> </ul>

**1.3.3.2 Major Barriers**

A summary of major barriers facing stretch energy code advancement and compliance are shown in Table 2.

**4.3.3.3 Logic Model and Stretch Code Activity Details**

The draft logic model (Figure 1) may be refined over time without requiring change to the Illinois TRM. Further versions of logic models should align with utility program design (as the programs are developed), the development of market baselines, and evaluator-reviewed Market Progress Indicators (MPIs).

MPIs are the metrics that will be tracked to assess the effectiveness of the activities identified in the program logic model. Table 3 provides suggested utility activities that could impact the stretch energy code advancement process and Table 4 provides a similar table for utility activities that could impact stretch code compliance support. The expected level of impact shown in the right-hand column are intended to provide guidance to utilities on the relative importance of each activity from an evaluation perspective.

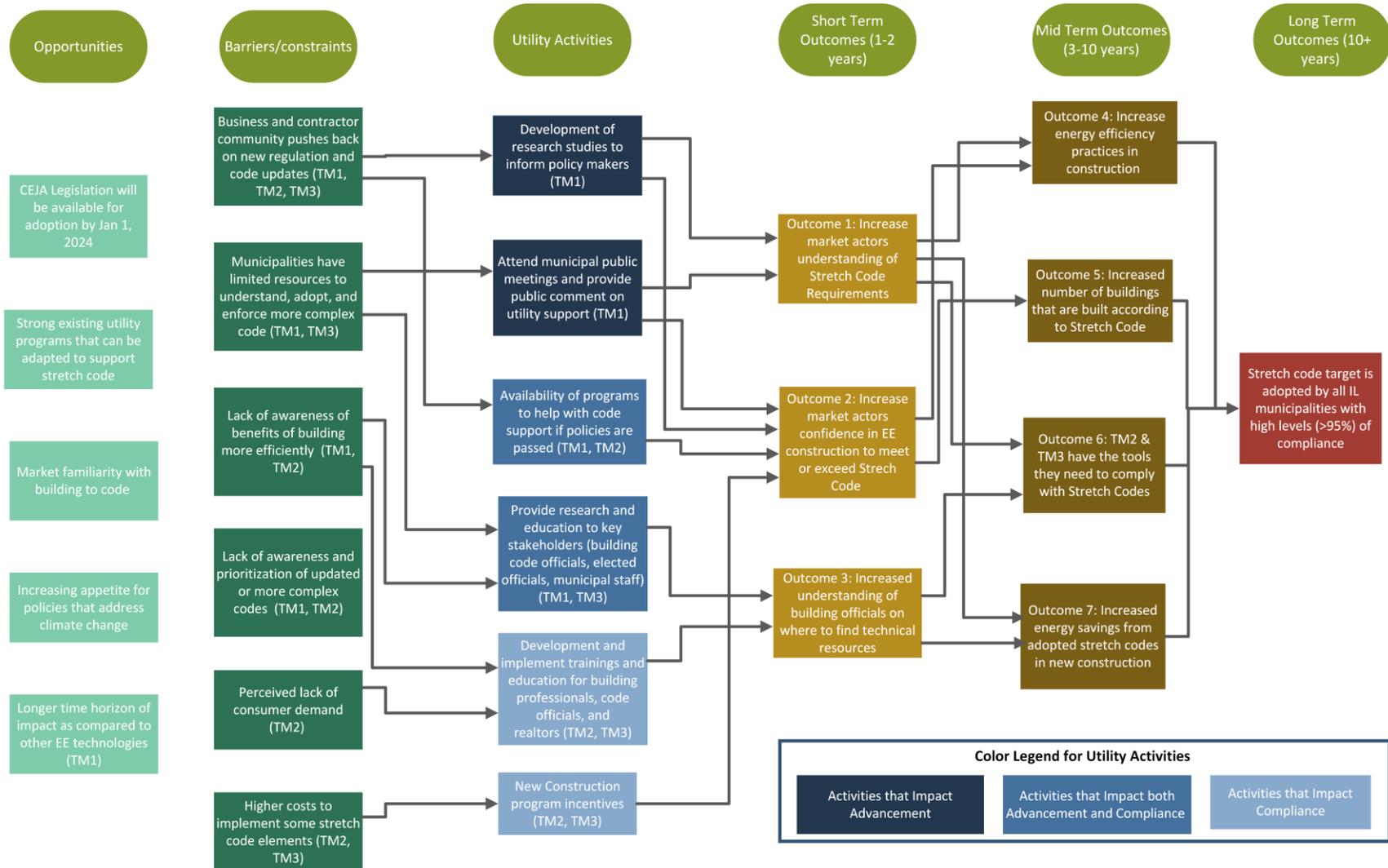
**Table 2: Barriers to advancing and achieving full compliance with energy codes**

<b>Barrier</b>	<b>Description</b>
Business and contractor community may push back against new regulation and updates to the code.	There is a learning curve with new codes. Some contractor and business market actors may not want to add new regulations to their workload, and may believe that their customers do not want to build higher performing buildings.
Municipalities often have limited resources to understand and enforce more complex code.	Energy codes are enforced by code officials that are funded through municipal budgets. Staff time and resources are limited to enforce the code, as well as learn how to enforce increasingly more complex codes.
Design and construction contractors may not be aware of updated or more complex codes.	As new energy codes are adopted, building professionals need time to learn about and understand how updated codes will affect their current building practices.
Enforcement professionals may not prioritize energy code compliance.	Some code officials may not consider energy codes to be the same priority as other life safety codes (such as fire codes).
Higher upfront costs for some energy efficiency investments.	With some higher efficiency building technologies or methods, there can be a higher incremental cost as compared to less efficient alternatives.

**Figure 1. Draft Logic Model for Stretch Codes Policy Advancement and Compliance Support**

**Logic Model for Stretch Codes Advancement and Compliance Support**

**Purpose for stretch code program:** to transform the new construction market by advancing building energy stretch code adoption and support code compliance



**Table 3: Expected levels of impact of utility influence for stretch code advancement**

Activity	Example Market Progress Indicators	Examples Data Source	Expected Level of Impact
<b>Utility-Initiated Research</b>	Funding and conducting research on market analysis, energy analysis, cost-effectiveness, and statewide impacts.	Scope of work and financial receipt for research papers, final research studies and supporting documentation.	High
	Developing revisions to code language that can be used in stretch codes. Reviewing public documentation and information.	Meeting minutes, email discussions, written language revisions and rationale or included in research papers. List of reviewed public documentation and information included in research papers.	Low
<b>Advocacy for Advancing Policy</b>	Actively participating in discussion at public or decision-making meetings. Attending public meetings. Writing and submitting comments in ordinance development process.	Meeting minutes, calendars. List of comments, email discussions, written comments and rationale.	Medium
	Creating, providing and/or presenting information to a group or key stakeholders. Convening stakeholder meetings to develop technical aspects/policy language.	Meeting agendas, meeting minutes, calendars, stakeholder list, presentations, email discussions, written language, stakeholder survey.	Medium
	Submitting policy language or recommendations for consideration of adoption. Funding and conducting participation in public processes on behalf of the utilities. Giving public testimony in support/against specific policy language/idea.	Submission receipt, email/physical copy of submission, policy language. Scope of work and financial receipts, list of public meetings and participation in processes. Testimony language, meeting minutes, stakeholder survey.	Medium
<b>Utility program development</b>	Submitting a plan to provide technical support or incentives via a utility program to support policy implementation. Creating a specific utility program to fit policy implementation needs. Receiving plan and program approval.	Meeting minutes, presentations, email discussions, written or testimony language, stakeholder survey, stakeholder feedback on utility effects. List and details of program components specifically designed to support stretch code.	High
<b>Undefined or miscellaneous</b>	Meaningful influence on code policy advancement outside of the categories of influence listed above.	To be determined. Depends on nature and content of influence.	TBD

**Table 4: Expected levels of impact of utility influence on stretch code compliance support programs**

Activity	Example Market Progress Indicators	Example Data Sources	Expected Level of Impact
Training Sessions: Classroom, In-field, Webinar, etc.	Curriculum covers topics where compliance improvement is possible/necessary, using information from baseline studies	Training materials such as PowerPoints or worksheets	High
	Training sessions are frequent, accessible, and see high attendance as a result	List of trainings held and attendance numbers	
	Training sessions increase knowledge and understanding of attendees	Participant surveys completed after the training sessions	
	Training sessions result in improved practices by relevant attendees	Participant surveys completed 2-6 months after the session	
Phone and Email Technical Support	Experts are consistently available to answer questions regarding code updates, and these resources are advertised to relevant stakeholders	Hours of availability for information resources, as well as marketing materials for/links to these resources	Medium
	Information resources are utilized by relevant stakeholders and useful responses are given in a timely manner	Call and email records to/from information hotlines	
Supporting a circuit rider or third-party specialist.	Credentials and effectiveness of circuit riders or specialists.	Resume, CV and experience notes, as well as satisfaction surveys	High
	Full time equivalence (FTE) of circuit riders or specialists	Employment records and schedule information	
Resource Development: Checklists, Field Guides, FAQs, etc.	Useful resources are developed and distributed by the utility or a third party	Example materials and distribution pathways	High
Stakeholder Engagement	Utility participates in industry groups, maintains contact with building departments to make sure information and resources are up to date	Meeting minutes, emails, etc.	Medium
Offering incentives for construction to the stretch code standard	Utility includes a specific programmatic option that provides financial incentives for projects or specific measures that meet or exceed the stretch energy code minimum requirements	Plan submitted and program component in place to provide incentives	High
Undefined or miscellaneous	Meaningful influence on code compliance outside of the categories of influence listed above	To be determined. Depends on nature and content of influence	TBD

## 1.4 Next Steps

- Finalization of Logic Model
- Finalization of market progress indicators
- Development of Natural Market Baseline for stretch code advancement
- Development of Natural Market Baseline for stretch code compliance