Energy Codes & Building Performance Standards

IL SAG Market Transformation Working Group

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Agenda

Progress Updates

- Updated logic models and market progress indicators
- Interviews with building industry stakeholders and surveys with municipalities
- Natural market baseline approach under development

Next Steps

- Update stretch code evaluation pathways
- Develop BPS evaluation pathways
- Finalize NMB approach and quantification

Background on Project

Phase 0 (2018)

- Review of energy codes and utility roles across the country

Phase 1 (2020)

- Outreach to municipalities to understand needs
- Understand the potential for building policies
- Estimate energy savings

Phase 2 (2021-present)

- Work with IL Stakeholder Advisory Group Market Transformation working group
- Statewide building energy code updates
- Direct engagement with municipalities through taskforce for policy advancement

Funders: ComEd, Nicor Gas, Peoples Gas and North Shore Gas

Previous SAG Market Transformation Presentations

March 17, 2021
https://www.ilsag.info/event/wed-march-17-market-transformation-savings-working-group/

May 7, 2021 – Small group
https://www.ilsag.info/event/friday-may-7-mt-code-advancement-small-group-meeting/

July 27, 2021 – Small group
https://www.ilsag.info/event/tuesday-july-27-mt-code-advancement-small-group-meeting/

October 4, 2021
https://www.ilsag.info/event/monday-october-4-market-transformation-savings-working-group-meeting/

April 21, 2022
https://www.ilsag.info/event/thursday-april-21-market-transformation-savings-working-group-meeting/

August 16, 2022
https://www.ilsag.info/event/tuesday-aug-16-market-transformation-savings-working-group-meeting/

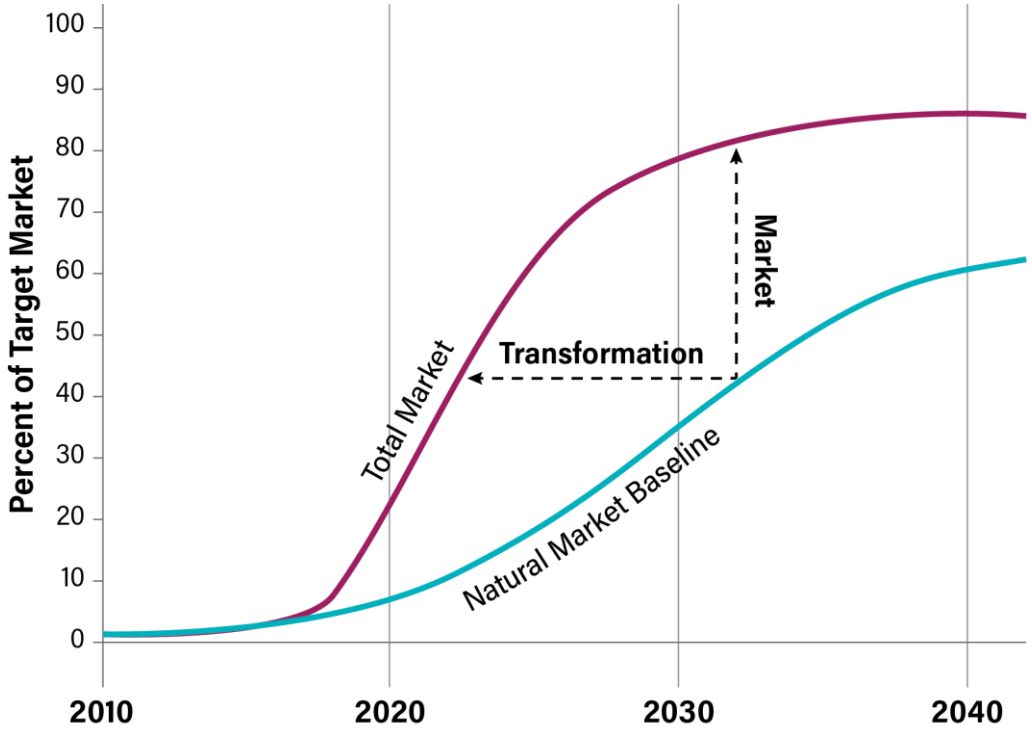
Role of Utility

What utilities can provide

- Support for policy **advancement**
- Support for policy **implementation**

Market Transformation vs. Resource Acquisition

- Long-term vision, goal is structural change
- Focus on savings that occur over a longer time horizon, incorporating many levels of engagement



2022-2023 Tasks and Focus

Evaluation Approach and Development

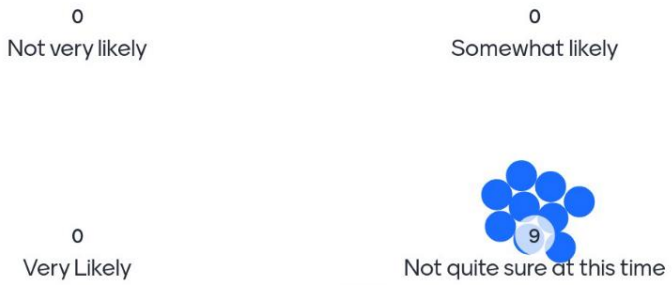
- Submitted evaluation pathways for 2022 TRM on stretch codes
- Continued work through fall 2022 and into 2023 on evaluation
  - Biweekly meetings between utilities, Slipstream, MEEA and Guidehouse to discuss approach
  - Logic model updates
  - Natural market baseline approach and interviews

Policy Advancement Tasks

- Meetings with Advanced Building Energy Efficiency Policy taskforce – group of municipalities through Metropolitan Mayors Caucus
- Development of policy roadmaps and fact sheets for municipalities
- Development of utility support initiatives for stretch code and BPS policies

Community feedback – Stretch Code Adoption

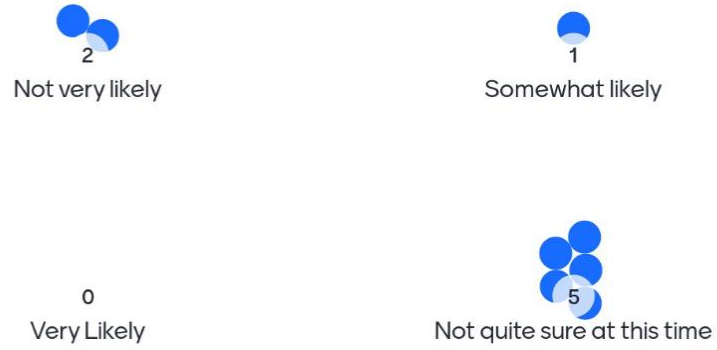
What is the likelihood of your community adopting STRETCH CODES in 2024?



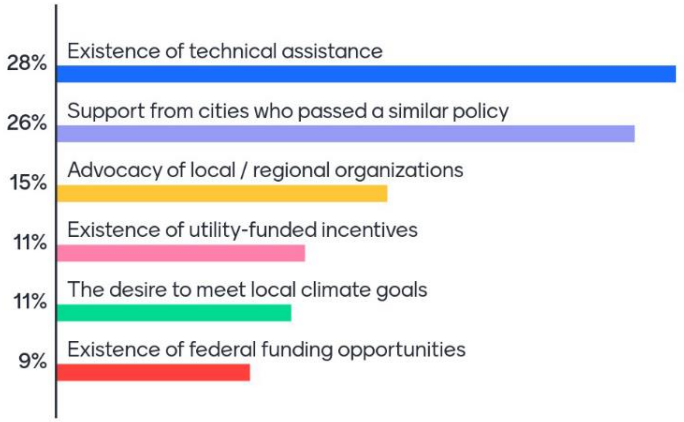
STRETCH CODES: Rank the impact of the following on your community's decision to ADOPT a stretch code

Community feedback – BPS Adoption

What is the likelihood of your community adopting BPS in the next 1 to 4 years ?



BPS: Rank the impact the following on your community's decision to ADOPT a BPS?



Logic Models and MPIs

Overview of Changes

Logic Model Structure

- Updated to include additional key elements (e.g., utility outputs)
- Broadened activities and moved detail to MPIs
- Changed long-term outcome to be focused specifically on increased energy savings

Market Progress Indicators

- Focused on outcomes from logic model
- Most measured through building permit data or surveys
- Propose to measure across time to estimate impact

Logic model and MPIs have been reviewed by utility partners and evaluators (Guidehouse)

Natural Market Baseline

Natural Market Baseline Process Overview

Progress to Date

- Interviews and surveys with key stakeholders
- Ongoing discussion with utility partners and Guidehouse on best way to quantify the natural market baseline

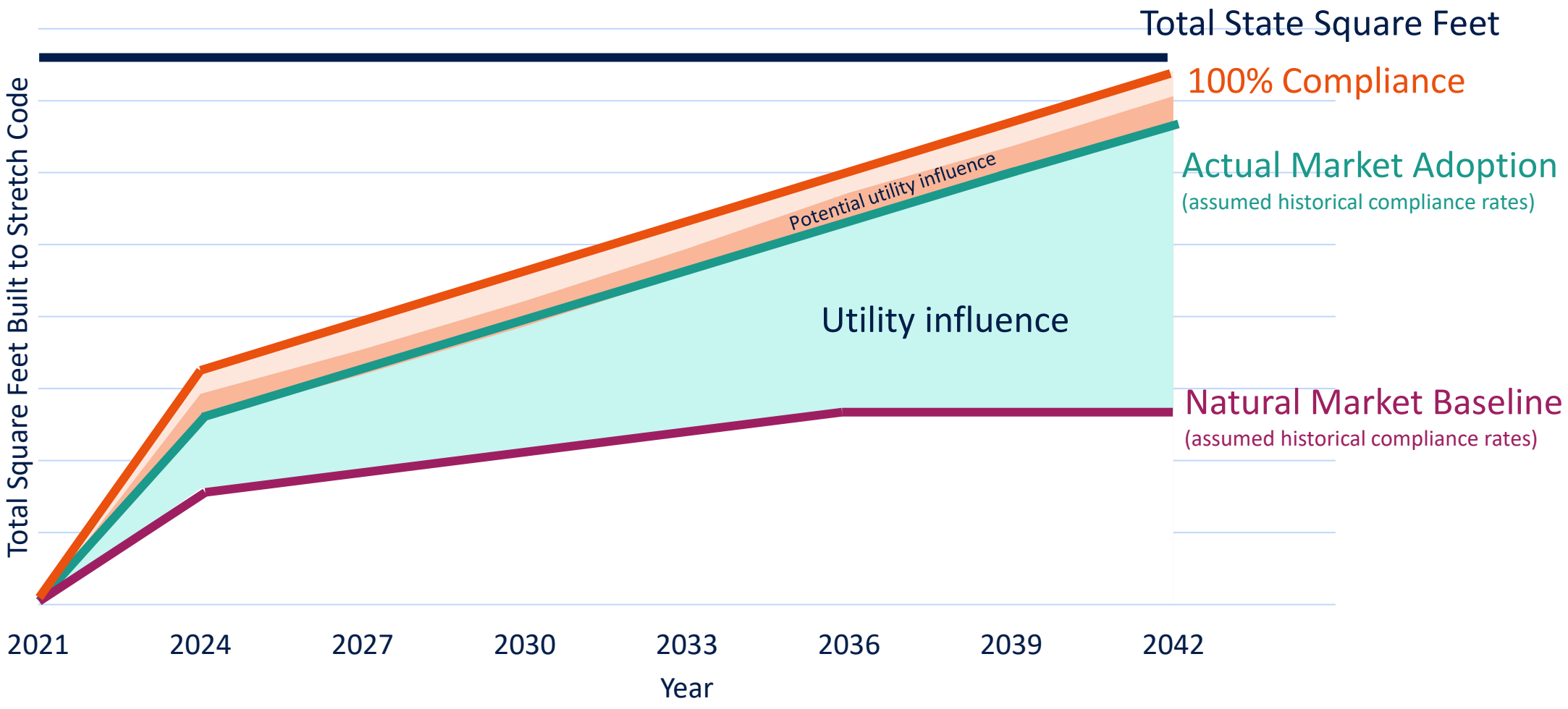
Key Metrics

- Started with measuring in terms of energy use
  - Determined that square feet would better represent the “market” that the programs would be trying to impact
- Current method measures with square feet and will tie back to energy in evaluations pathways documentation

Key Elements of NMB

- Natural market baseline is measured in terms of total square feet building to stretch code or BPS
- Can be measured at statewide level but feedback from municipalities required to understand what influenced decision to adopt stretch code
- Must be reassessed every 3 to 6 years to ensure it still represents the market

Natural Market Baseline Illustration (not to scale)



Quantification Approach

Next Step Process

- Gather total statewide new construction square feet forecasts and existing building square feet by municipality
  - Calculate percent of new construction/existing buildings for municipalities likely to adopt
- Estimate percent influence naturally-occurring versus utility for municipalities
  - Interview municipalities in 2023 and estimate percent influence naturally-occurring versus utility due to market-transformation initiatives
  - Create survey approach to send out to municipalities every few years to understand current likelihood of adoption, influences, and barriers
  - Surveys after adoption to assess influence

Next Steps

Next Steps

Evaluation Pathways

- Complete stretch code pathways document – ready for SAG review by November 2023
- Create BPS pathways document – ready for SAG review by January 2024

Natural Market Baseline

- Gather statewide building square feet data
- Interview and survey municipalities
- Develop NMB curve
- Create NMB memo for SAG review

Slipstream and MEEA contacts

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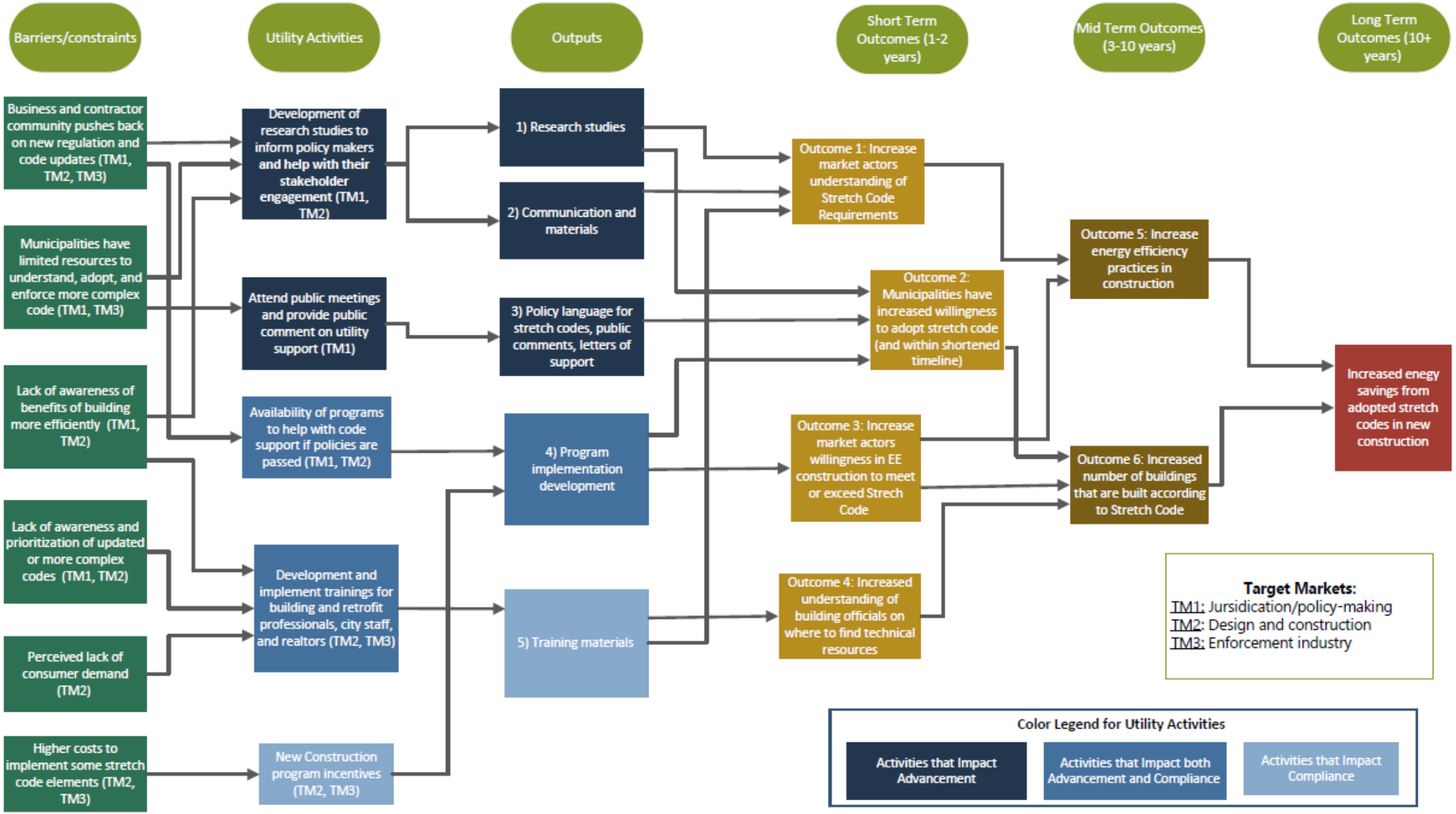
Logic Models and MPIs Appendix

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

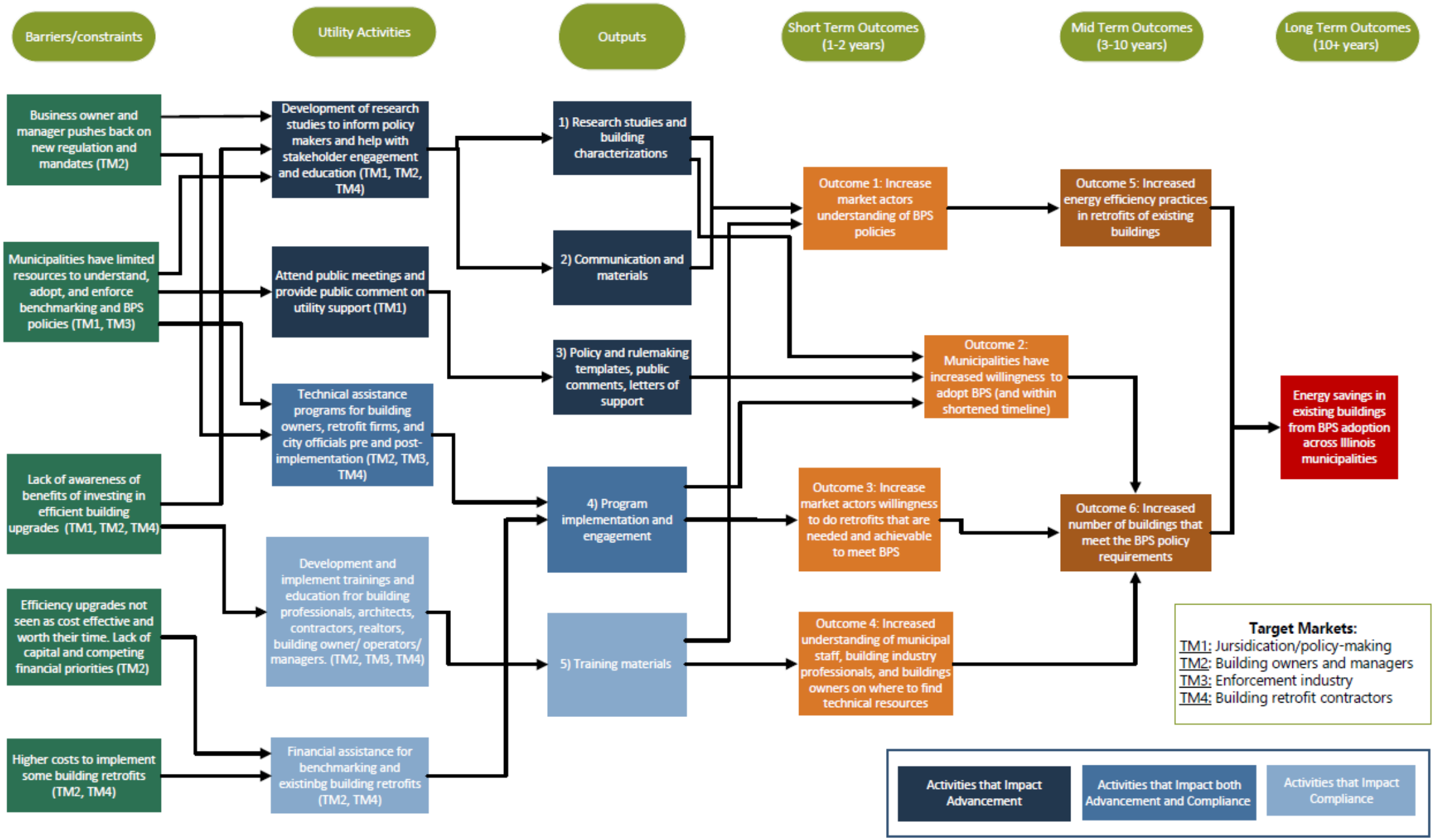


Stretch Code MPIs: Outcomes
Market transformation preponderance of evidence

MPI	Logic Model Outcome	MPI	Data Source
OC1.1	Increase market actors understanding of stretch code requirements	Documented increased understanding of requirements	Survey responses for municipal staff and design/new construction (measured directly after adoption and at least 1 year later)
OC2.1	Municipalities have increased willingness to adopt stretch code within shortened timeline	Increased number of introduced and adopted stretch code ordinances	Meeting notes, policy drafts, passed policy language
OC2.2	Municipalities have increased willingness to adopt stretch code within shortened timeline	Documented increased interest in introducing policy	Survey response across time for municipal staff and council people (measured prior to adoption)
OC3.1	Increase market actors willingness in EE construction to meet or exceed stretch code	Documented interest in EE construction	Survey responses for design/new construction (measured before program implementation and after)
OC4.1	Increased understanding of building officials on where to find technical resources	Number of visits to existing resources	Data on number of website vists, phone calls to hotlines, etc.
OC4.2	Increased understanding of building officials on where to find technical resources	Stated responses that they can tools needed to comply	Survey responses from building officials (measured directly after adoption and at least 1 year later)
OC5.1	Increase energy efficiency practices in construction	Increased energy efficiency measures installed	Program participation data; efficiency measures installed data, survey responses
OC6.1	Increased number of buildings that are built according to stretch code	Number of buildings with permits for stretch code	Permit data from IL municipalities; percent over time that are stretch code
OC6.2	Increased number of buildings that are built according to stretch code	Compliance rates for new construction buildings	Compliance study and/or Delphi panel completed (measured after statewide code updates)

DRAFT Logic Model for Building Performance Standard Advancement and Support

Purpose for BPS: to transform the existing building market by advancing building performance standards and implementation support



BPS MPIs: Outcomes

MPI	Logic Model Outcomes	MPI	Data Source
OC1.1	Increase market actors understanding of BPS policies	Documented increased understanding of requirements	Survey responses for municipal staff and design/new construction (measured directly after adoption and at least 1 year later)
OC2.1	Municipalities have increased willingness to adopt BPS within shortened timeline	Increased number of introduced and adopted BPS ordinances	Meeting notes, policy drafts, passed policy language
OC2.2	Municipalities have increased willingness to adopt BPS within shortened timeline	Documented increased interest in introducing policy	Survey response across time for municipal staff and council people (measured prior to adoption)
OC3.1	Increase market actors willingness to do retrofits that are needed and achievable to meet BPS	Documented interest in EE retrofits	Survey responses for design/new construction (measured before program implementation and after)
OC4.1	Increased understanding of municipal staff, building industry professionals, and buildings owners on where to find technical resources	Number of visits to existing resources	Data on number of website vists, phone calls to hotlines, etc.
OC4.2	Increased understanding of municipal staff, building industry professionals, and buildings owners on where to find technical resources	Stated responses that they have tools needed	Survey responses from building officials (measured directly after adoption and at least 1 year later)
OC5.1	Increased energy efficiency practices in retrofits of existing buildings	Number of buildings going through recommissioning or install EE equipment	Program participation data; efficiency measures installed data, survey responses
OC6.1	Increased number of buildings that meet the BPS policy requirements	Number of buildings that meet EUI targets	Benchmarking data from municipalities, fines issued by municipality