

Town of Andes

NYStretch Energy Code - 2020

October 12, 2021



NYSERDA

Agenda

- > NYStretch Energy Code 2020:
 - Overview - NYStretch
 - Benefits
 - Comparison to 2020 ECCNYS
 - Available resources
 - Timeline
- > Q & A
- > Feel free to enter questions in Chat

Today's Speakers

- > Todd Knobbé, Clean Energy Communities Coordinator
- > Lou Vogel, NYStretch - 2020 Circuit Rider

What is NYStretch Energy Code-2020?

> Readily adoptable local energy code

- Developed by stakeholder group, managed by NYSERDA, public review period
- On average, 11% more efficient than EECNYS-2020
- Expressly authorized by Article 11 of NYS Energy Law
- Presented to the NYS Fire Prevention and Building Code Council on July 10, 2020

> Overlay of IECC-2018/EECNYS-2020

- NYStretch prepares municipalities for future code cycles
- Intended to be a 1-cycle stretch; anticipated to be roughly as efficient as the next version of the State Energy Code

> Based on proven technologies, systems & construction techniques

- Integrates best practices from programs such as ENERGY STAR for Homes
- Does not require builders to use new, unavailable or unfamiliar products
- Does not require building departments to adopt new means of enforcement

Historic Model Code Efficiency Progression



Building Sector Energy Consumption

- About **40%** of all U.S. energy
- More than **70%** of all U.S. electricity
- Accounts for about **40%** of carbon emissions

U.S. DEPARTMENT OF ENERGY
ENERGY Efficiency & Renewable Energy

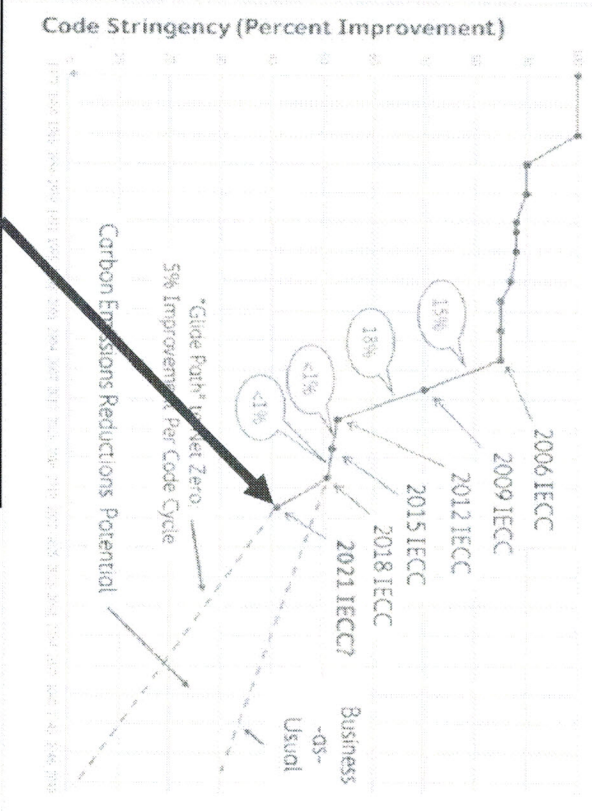
Building Energy Codes Program

Model Building Energy Codes

- Cumulative savings from 2010 to 2040:
- **\$126 billion** energy cost savings
- **841 MMT** avoided carbon emissions
- **12.82 quads** primary energy savings



Efficiency Improvements of IECC: Historic and Projected

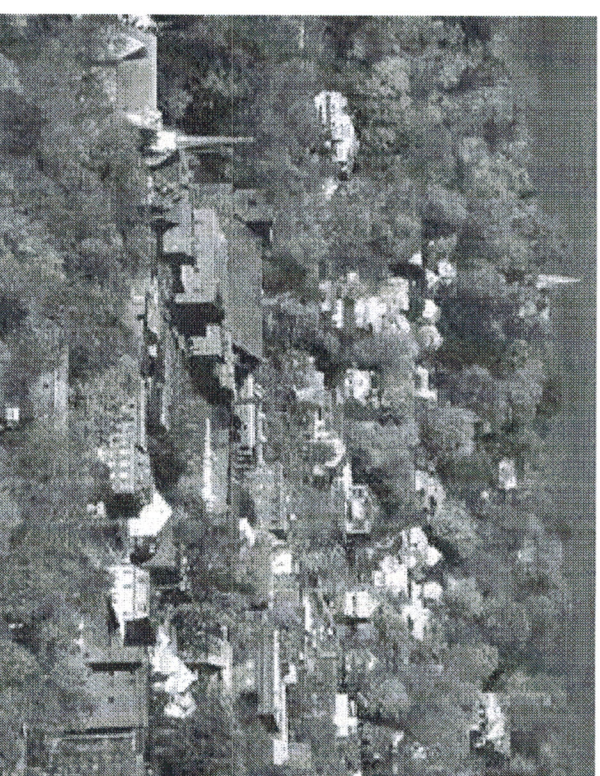


NYStretch-2020

Energy Benefits

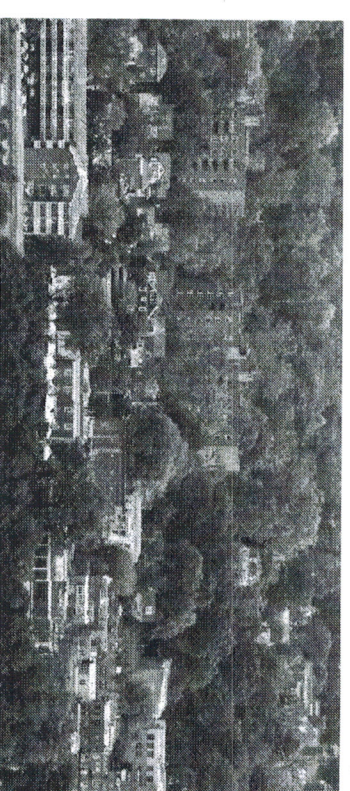
- > Energy and cost savings of roughly 11%¹ over ECCCNY-2020
- > Greater GHG reductions than ECCCNY-2020
- > Residential code near net zero
- > Helps ensure verifiable performance
- > Addresses 40% of our energy use—buildings

1. Based on statewide averages



Non-energy Benefits

- > Long-term benefits of building better today
 - Lower energy use means reduced operating costs, saving building tenants and owners money
 - Money saved in YOUR community is more likely to STAY in the community
- > Climate & community benefits
 - Opportunity for professions involved in higher-performance building design, construction and performance verification
 - Increases community attractiveness - more owners and tenants desire green and energy efficient buildings
 - More resilient buildings and communities
 - Energy Codes help provide healthier indoor environments
 - Greater comfort = resident/occupant satisfaction/comfort



NYStretch-2020 vs ECCNYS-2020: Commercial Differences

> Building Envelope:

- Improvements to the prescriptive tables, applicable to roofs, walls, floors, slabs, windows, skylights and doors
- Air Leakage: Blower door testing required for buildings between 25,000-50,000 SF and < 75ft high

> Lighting/Plumbing/HVAC:

- More efficient lighting; additional occupancy sensors
- Shorter hot water piping lengths or recirculation (2 other options)
- Ducts must be sized properly

NYStretch-2020 vs ECCNYS-2020: Commercial Differences (continued)

> Compatibility:

- EV ready: breaker space in panel and empty conduit run; more than 10 parking spaces
- Solar ready: breaker space in panel and empty conduit run;
- 40% roof space on south side available, 5 stories or less.

> Miscellaneous:

- Whole building energy monitoring:
 - Buildings > 25,000 SF; monitor all supplied energy
- Efficiency requirements for elevators and commercial kitchen equipment
- Air barrier commissioning; buildings > 25,000 SF

> Download the full NYStretch-2020 overlay and/or comparison document, available here:
www.nyserda.ny.gov/stretchenergy2020

NYStretch-2020 vs ECCCNYs-2020: Residential Differences

- > Building Envelope:
 - No Change in R values;
 - Windows slightly better but Energy Star windows qualify.
- > Lighting/Plumbing/HVAC:
 - More efficient lighting;
 - Shorter hot water piping lengths or recirculation (2 other options);
 - Ducts in conditioned space and sized properly
- > Solar and EV ready: breaker space in panel and empty conduit run
- > Ventilation:
 - Requires Energy Recovery Ventilator and testing of ventilation
 - Due to a code conflict, this measure can be removed by severing that section from your local adoption
- > ERI Compliance Alternative:
 - Lower ERI index
- > New Passive House compliance alternative:
 - Passive House Institute US (PHIUS) or Passive House Institute (PHI)
 - Must also comply with mandatory requirements
- > Download the full NYStretch-2020 overlay and/or comparison document, available here: www.nyserda.ny.gov/stretchenergy2020

Maximum ERI	
ECCCNYs-2020	NYStretch-2020
62	50

NYStretch and Existing Buildings


- > Triggers are the same
 - ECCNYS-2020 and NYStretch-2020 apply to existing buildings the same way
 - Only applies to new work—elements of the building that aren't part of the project scope do not require updating
- > Commercial building commissioning and air barrier requirements
 - Will apply to alterations and additions where applicable to the project scope
- > No new existing building requirements for residential construction
- > “In new buildings”
 - Requirements that refer to “in new buildings,” even if mandatory, are NEVER mandatory for existing building projects

COMcheck and REScheck for NYStretch

NYStretch-2020 is supported NOW on COMcheck and REScheck Web

- > Free, commonly used compliance software that most building departments and permit applicants are familiar with
- > Developed by Pacific Northwest National Laboratory with funding from U.S Department of Energy
- > NYStretch-2020 is an option only on COMcheck and REScheck Web
- > 3rd party review where desired
- > <https://www.energycodes.gov/software-and-web-tools>
- > **Reminder: will not include local amendments**

energycode.pnl.gov/COMcheckWeb/index.html

 **COMcheck-Web™**

Code/Location

Code: 2009 IECC

State: 90.1 (2013) Standard

City: 90.1 (2016) Standard

Project: 2009 IECC

Local Codes: 2012 IECC, 2015 IECC, 2018 IECC

Project: Ontario

Project: Puerto Rico 2011

Project: Vermont 2020

Project: This information is for compliance only

Notes: 2020 NYStretch - 2018 IECC

2020 NYCECC Appendix CA (modified ASHRAE 90.1-2016)

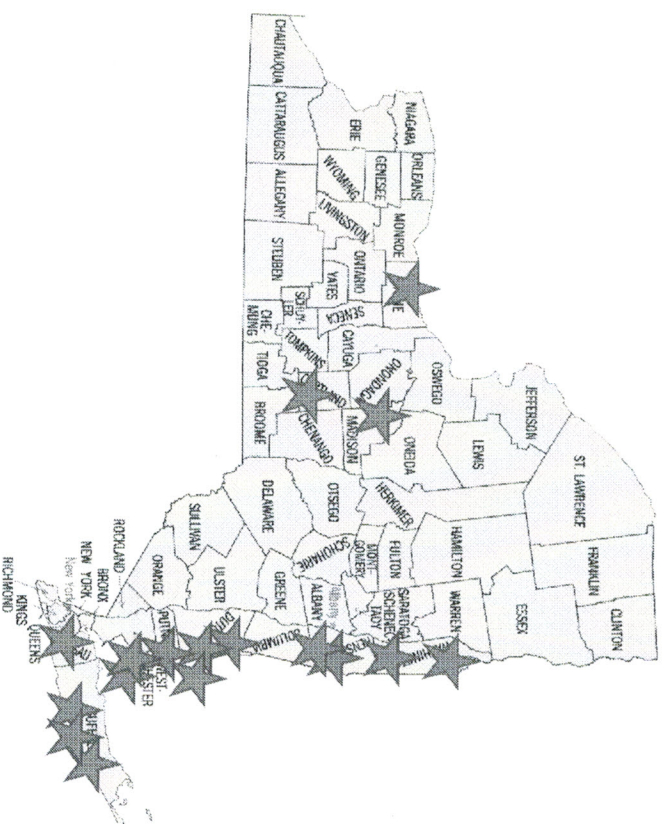
2020 NYStretch - 90.1 (2016) Standard

2020 NYStretch - 90.1 (2016) Modeling Envelope Backstop

2020 NYStretch - 90.1 (2016) Modeling Envelope Backstop

NYStretch – Community Interest

- > New York City's 2020 Energy Code is NYStretch-2020, with amendments
- > Fourteen communities in New York have all adopted NYStretch-2020
- > The Town and City of Ithaca are using NYStretch-2020 as part of their Green Building Code
 - Goal: Carbon-neutral community by 2030
- > Many other municipalities are considering NYStretch-2020 adoption (illustrated on this graphic)
- > SUNY Construction Fund uses NYStretch-2020 as baseline energy code for all building projects



Local Amendments to NYStretch-2020

- > **Municipalities can amend NYStretch-2020**
 - To qualify for CEC points/grants, must be able to demonstrate the code as adopted is no less stringent than NYStretch-2020 as published by NYSERDA
 - NYSERDA does not have resources to perform savings/impact analysis for amendments
- > **Filing with Department of State**
 - Building Code Council may have questions about local amendments
- > **Tools, training and resources**
 - Nothing developed by NYSERDA to support NYStretch-2020 enforcement and compliance will reflect local amendments

Incentive Programs and Services

Utilities, NYSERDA, NYPA may offset or reduce incremental costs for commercial and residential construction projects

- > NYSERDA—New construction programs, design assistance
- > NYPA—Commercial construction programs
- > Utilities—Electrification and focused measures incentives
- > 45L Tax Credit for efficient homes; currently \$2,000 per home

Getting Started with Clean Energy Communities: Call Your Community Coordinator

> Find a coordinator in your region:

- <https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Communities/Find-A-Coordinator>

> Southern Tier CEC Coordinator:

- Schuyler, Steuben, Chemung and Tioga Counties
- Todd Knobbe
- tk656@cornell.edu
- Broome, Chenango, Delaware and Tompkins Counties
- Gina Cassidy
- rcc268@cornell.edu

NYStretch-2020 Circuit Riders, Technical and Adoption Support

NYSERDA NYStretch Circuit Rider Program

Christopher Sgroi - NYSEERDA Project Manager

christopher.sgroi@nyserda.ny.gov

Putnam, Dutchess, Long Island, Hudson Valley and Other Statewide Counties

Sam Bowles - PM

Newport Ventures

sbowles@newportventures

Margo Thompson

Newport Ventures

mthompson@newportventures.net

Matt Evans

Newport Ventures

mevans@newportventures.net

518 377-9410

Westchester, Capital & N. Country

Mike DeWein

North Branch Services

dewein53@gmail.com

518 369-7545

Southern Tier & WNY

Lou Vogel

Taitem Engineering

lvogel@taitem.com

(607) 277-1118 x125

CNY, Mohawk, and Finger Lakes

Kevin and Josh Stack

Northeast Green Building Consulting

josh@resilience.law

(315) 478-6016

Resources

- > NYStretch Circuit Riders—technical and adoption support
- > Adoption Guide & Model Local Law, comparison document, cost effectiveness analysis and FAQs
- > Training and code enforcement tools/checklists (coming soon)
- > Single volume code book, integrating the state code and NYStretch-2020 overlay into one resource (coming soon)
- > NYStretch-2020 for REScheck and COMcheck
- > Hotline for technical and interpretation assistance
- > www.nyserda.ny.gov/stretchenergy2020
- > **Reminder: resources will not reflect local amendments to NYStretch-2020**

