

# NY Stretch Energy Code-2020 Residential Summary and FAQ

Croton-on-Hudson Sustainability Committee

1



# NY Stretch 2020 Summary

2

In this presentation we will cover:

- What is “NY Stretch Code 2020” ?
- Why Should Village of Croton Adopt NY Stretch?
- Cost impacts and Energy Savings
- What are some common questions asked about the NY Stretch code *(some not already answered in the NYSERDA provided FAQ documents)*
- Focus on Residential Provisions *(which would be most applicable in Croton on Hudson)*

# What is “NY Stretch Code 2020?”

## 3

- The “NY Stretch Code“ is simply an Energy Code that is **more stringent** than New York State’s base energy code - *also called the 2020 Energy Conservation Construction Code of NYS (2020 ECCC NYS)*
- It’s a model code developed by NYSERDA that can be adopted by any jurisdiction in NYS.
- NY Stretch Code is technically an “overlay” to the base code. Sections of the base code are modified by amendments contained in the NY Stretch Code document.

# What are the Key Changes in NY Stretch for Residences?

## 4

- Envelope Construction: Improved Insulation, Improved Windows ,3<sup>rd</sup> party envelope inspection
- Lighting: Reduced interior and exterior lighting power
- Renewable: Solar PV and Electric vehicle charging Readiness
- Mechanical: ductwork in conditioned space, 3<sup>rd</sup> party testing
- Plumbing: mandatory Energy conservation measure selection

# Why Should Village of Croton Adopt NY Stretch?

5

In addition to benefits stated by NYSERDA – here are some specific benefits the Sustainability Committee has noted:

Reason #1 – **20% Energy Savings = GHG Emissions Reductions**

Reason #2 – Added Clean Energy Community (CEC) Program Points could provide a \$5,000 additional grant to Village for a sustainability project. (Deadline: Adoption and Effective by June 30, 2022)

Reason #3 – Croton continues to be a leader in municipal sustainability

# What would Stretch Code Apply to?

6

- Applies to New Construction, New Additions and major Alterations (*the same way the current energy code does*).
- Applies to both Residential and Commercial construction
- Does NOT apply to existing buildings (not undergoing construction)

# What are the Energy Savings?

7

## How much Energy and Cost Savings?

Climate Design Zone	Total Regulated Site Energy Savings	Total Regulated Source Energy Savings	Total Energy Costs Savings
4A-NYC	21.1%	19.9%	19.0%
4A-balance	21.5%	19.8%	18.8%
5A	25.3%	21.9%	19.6%
6A	26.2%	23.1%	20.9%

- *Extracted from NYSERDA Cost-Effectiveness Analysis Report*
- *Croton is in Climate Zone 4A*
- *Versus 2020 NYS Energy Code*

# How Much will it add to Construction Costs?

8

From the NYSERDA Study:

- About \$2,500 to a new single-family home
- About \$1,500 per dwelling unit for a multi-family building

~ about \$1.25 / Sq. Ft. for typical sized dwelling

- *Extracted from NYSERDA Cost-Effectiveness Analysis Report*



# Local Energy Cost Savings and Payback

9

## How much Added Cost / Simple Payback ?

Climate Design Zone	Single-family			Multifamily		
	Total Annual Energy Cost Savings (\$/dwelling unit)	Total Incremental Costs (\$/dwelling unit)	Simple Payback (Years)	Total Annual Energy Cost Savings (\$/dwelling unit)	Total Incremental Costs (\$/dwelling unit)	Simple Payback (Years)
4A-NYC	\$301	\$1,910	6.3	\$176	\$1,625	9.2
4A-balance	\$301	\$2,463	8.2	\$167	\$1,488	8.9
5A	\$351	\$2,202	6.3	\$172	\$1,751	10.2
6A	\$372	\$1,506	4.1	NA	NA	NA
NY State	\$348	\$2,057	5.9	\$171	\$1,591	9.3

- *Extracted from NYSERDA Cost-Effectiveness Analysis Report*
- *Croton is in Climate Zone 4A*

# Who Else has Adopted NY Stretch?

10

Who else has adopted NY Stretch?

- Currently 24 other NYS municipalities
- Notably: Town of Cortlandt, Town of Ossining, and 7 others in Westchester County

# Common Questions / FAQ

11

Q: How does NY Stretch Code go beyond the 2020 ECCCNY (base code)?

A: High level summary per NYSERDA:

## Where does NYStretch go beyond the 2020 ECCCNY?

- **Building envelope:** Improved insulation and window performance, air barrier commissioning, air leakage testing, and mandatory mechanical ventilation
- **Lighting:** Reduced interior and exterior lighting power and lighting controls
- **Electrical:** Whole-building energy monitoring
- **Compatibility:** Renewable and electric vehicle readiness

- Domestic HW ECMs also required

# Common Questions / FAQ

12

Q: Can the Village adopt only portions of the NY Stretch code, or exclude some parts?

A: The answer is technically Yes, however the Sustainability Committee strongly advises against modifying the Stretch Code\*. Modifications must be accepted by NY DOS and NYSERDA which may jeopardize the approval timeline.

*\* (with one technical exception already approved by NYSERDA, R403.6.2 Balanced Ventilation may be removed).*

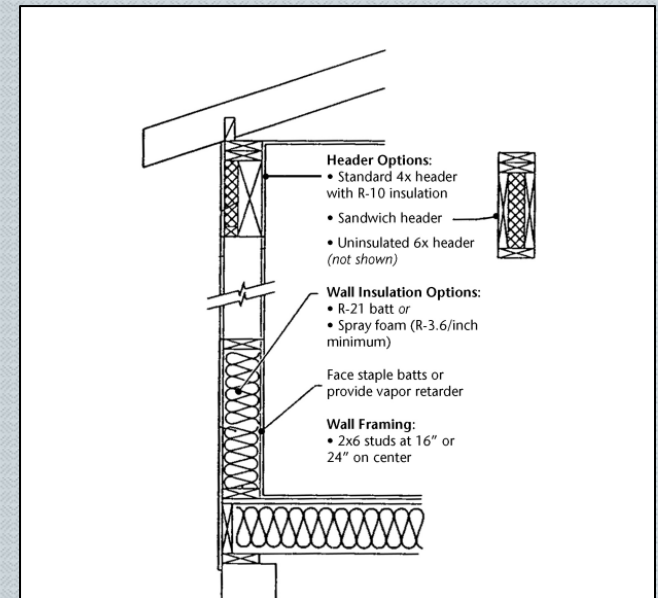
# Common Questions / FAQ

13

**Q:** Does NY Stretch require increasing wall thicknesses for wood framed construction?

**A:** Not necessarily. For prescriptive compliance, NY Stretch requires R-21 in wood framed walls, which has same thickness as R-20.

NY Stretch requires header insulation of R-10.



# Common Questions / FAQ

14

**Q:** What will trigger the requirements of NY Stretch, with respect to existing buildings/residences?

**A:** Short Answer - it's the same applicability as the current energy code.

- NY Stretch does not modify what triggers compliance with the Energy Code.
- Energy Code already applies to Additions, the new portion only, generally without affecting existing parts of a building.
- Energy Code applies to altered parts of building/systems only.

# Common Questions / FAQ

15

Q: Does NY Stretch Code make rooftop solar panels mandatory in any situation?

A: No. However, the NY Stretch code requires that new residential construction having at least 600 ft<sup>2</sup> of roof-area be made “Solar Ready” (with some exceptions).

*Solar ready means “a section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.” Includes interconnection pathway provided and breaker space for a future PV array.*

# Common Questions / FAQ

16

**Q:** Does NY Stretch Code require EV charging stations be installed in any situation?

**A:** No. However, the NY Stretch code requires that new residential construction with on-site parking be made “EV Charging Ready” (240V outlet for each dwelling unit or panel space and conduit for future installation of outlet.)



# Common Questions / FAQ

17

Q: Does NY Stretch Code require additional testing and inspections?

A: Yes:

- 3<sup>rd</sup> party inspection of thermal envelope installation
- 3<sup>rd</sup> party testing of ventilation systems

# Stretch Code: Commercial Recap

18

Analysis of savings in Zone 4A, indicates a simple payback of

- 5.5 years for Full Service Restaurant
- 15.6 years for Stand-alone Retail building

Commercial buildings will save an estimated 7.1% in energy costs compared to 2020 ECCCNY

Estimated incremental costs

- 12.1% - \$4.29/ft<sup>2</sup> for Full Service Restaurant
- 15.8% - \$3.39/ft<sup>2</sup> for Stand-alone Retail building

**Slightly higher costs for new construction, but lower energy bills**

# Stretch Code: Commercial Q&A

19

Q: For commercial buildings, does Stretch Code require additional testing and inspections?

A: Yes. For example, it includes a new section for air-barrier commissioning (design & construction checklists, field inspections, commissioning report).

Q: For commercial buildings, does Stretch Code require installation of PV panels?

A: No, but it requires building to be solar-ready as per Appendix CA of 2018 IECC. Solar ready means *“a section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.”*

# Next Steps

20

## Next Steps for Adoption of NY Stretch Code:

- Raise for discussion at a near-future Board Work Session.
- Hold a public hearing.
- Sustainability Committee to Draft Resolution for review by Village Engineer and Village Attorney.
- Adopt Local Law and make it effective by June 30<sup>th</sup>, 2022.
- File forms and documentation with NY DOS within 30 days of adoption.

# THANK YOU

## Questions?

