

NY Stretch Energy Code-2020 Residential Summary and FAQ

Croton-on-Hudson Sustainability Committee

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NY Stretch 2020 Summary

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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?”

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- 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 ECCCCNYS)*
- 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?

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

Why Should Village of Croton Adopt NY Stretch?

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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?

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- Applies the 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?

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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?

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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

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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?

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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

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

A: High level summary per NYSED:

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

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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).*

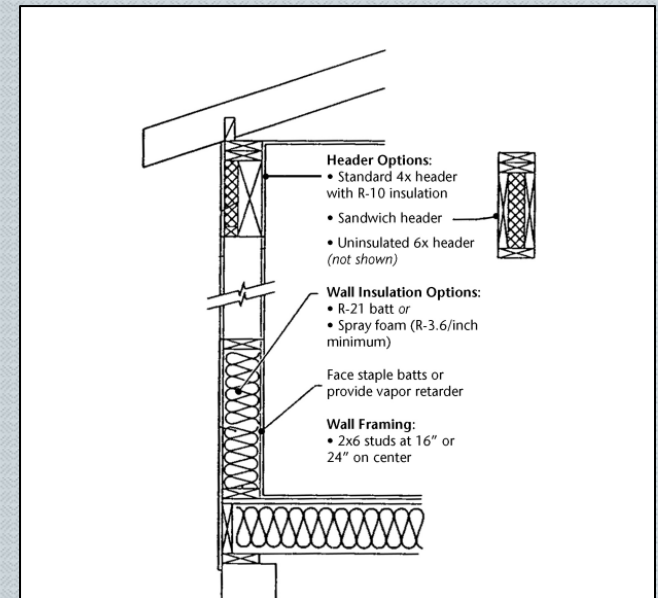
Common Questions / FAQ

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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

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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

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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 ft² 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

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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

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

A: Yes:

- 3rd party inspection of thermal envelope installation
- 3rd party testing of ventilation systems

Stretch Code: Commercial Recap

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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 ECCCCNYS

Estimated incremental costs

- 12.1% - \$4.29/ft² for Full Service Restaurant
- 15.8% - \$3.39/ft² for Stand-alone Retail building

Slightly higher costs for new construction, but lower energy bills

Stretch Code: Commercial Q&A

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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

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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 30th, 2022.
- File forms and documentation with NY DOS within 30 days of adoption.

THANK YOU

Questions?

