



VERMONT ENERGY
INVESTMENT CORPORATION

Codes and Ratings: Opportunities to Improve Building Performance and Grow the Rating Business

- Experience from the Field -

RESNET Conference | February 17, 2009

Richard Faesy | *Vermont Energy Investment Corp.*
(Dave Beaulieu | *Conservation Services Group*)

Overview

- “The Northeast Update”:
 - Long Island, New York
 - Massachusetts
 - Time of Sale



VERMONT ENERGY
INVESTMENT CORPORATION

Long Island, New York



The Long Island Context

- 2 counties, 13 townships
 - 7.6 million people
 - 900,000 households
- Historically 5,000 new homes/year
- Long Island Power Authority (LIPA)
 - National Grid: contract manager
 - VEIC: program advisor/consultant
- ENERGY STAR Homes Program
 - Launched in 2004
 - Built on NY program
 - CSG: program implementer

History of the Long Island Codes Story

- Neighborhood Networks
 - Neal Lewis as the “Johnny Appleseed of energy efficiency” (Newsday, 7/27/2008)
- Brookhaven and Babylon
 - Race to become the first
- EPA Notification
 - DC meeting
 - Discouragement
 - Suggested not calling code “ENERGY STAR”
- Rater testimony and support at the local level
- Long Island Builders Association (LIBI) support



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October 20, 2006

Dr. Kathleen Hogan, Director
Climate Protection Partnership Division
1310 L St, NW, U.S. EPA
Washington, DC 20005

Dear Kathleen,

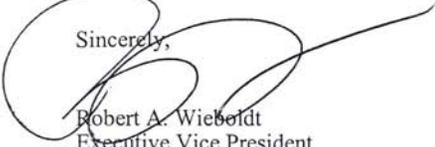
The Long Island Builders Institute (LIBI) realizes the value of the Environmental Protection Agency's (EPA) ENERGY STAR® label and respects the fact that you are hesitant to have that label being viewed as the code by which new homes are being constructed. LIBI appreciates that view, and also the fact that the ENERGY STAR Labeled Homes Program has been a voluntary program, one which builders can choose whether or not to participate in. I also understand that the Long Island Power Authority (LIPA) has met with you to discuss the recent developments on Long Island with respect to the adoption of a Residential ENERGY STAR construction standard by certain Towns on Long Island. These resolutions will require Long Island builders to construct new homes that meet the standards of LIPA's New York ENERGY STAR Labeled Homes Program guidelines.

As Executive Vice President of LIBI, I am writing to you to advise that LIBI endorses the adoption of Residential ENERGY STAR Construction Standards across Long Island for the following reasons:

- Proven paybacks for homeowners are too rapid to ignore,
- Building industry must join efforts to reduce fossil fuel dependency,
- Code requirements create a market volume large enough to achieve economy of scale, i.e. lower per unit cost for high SEER equipment, more choices, etc.
- Market transformation effort of voluntary program was working only slowly
- Significant coalition pushing for it and we are trying to promote uniform standards to avoid 70 separate versions.

Again, LIBI does appreciate and respect the opinions of the EPA and thanks you for your consideration.

Sincerely,



Robert A. Wieboldt
Executive Vice President
Long Island Builders Institute

cc: Kevin Harrison, Long Island Power Authority

LIBI Letter to EPA

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Why Did LIBI Support This?

- Towns were committed to moving forward
 - High energy costs
 - Green is good
 - Opposition was fruitless
- Deal was struck
 - Seat at the table for LIBI in return for support
 - LIBI was able to negotiate delayed implementation dates
- Opportunities for LIBI
 - Training
 - Positive PR
 - Position of influence with other towns

Sample Enabling Language - Hempstead

Legislative Intent

It is the intent of the Town to protect the public health, safety and welfare of its residents by mandating that new dwellings shall comply with the Long Island Power Authority New York ENERGY STAR Labeled Homes Program guidelines, as they may be applicable. This will ensure that the dwelling(s) will use considerably less energy than if built to prevailing building standards. Compliance with the Long Island Power Authority New York ENERGY STAR Labeled Homes Program guidelines as outlined in this section shall be required in addition to compliance with all other applicable requirements, including current standards outlined in the "Energy Conservation Construction Code of the State of New York" (Energy Code) ~

Adoption Timeline

	Town	2007				2008				2009			
		Jan-Mar	Apr-Jun	Jun-Aug	Sept-Dec	Jan-Mar	Apr-Jun	Jun-Aug	Sept-Dec	Jan-Mar	Apr-Jun	Jun-Aug	Sept-Dec
1	Brookhaven		Interim Compliance		Combustion Safety	Full Compliance							
2	Babylon		Interim Compliance		Combustion Safety	Full Compliance							
3	Riverhead		Interim Compliance		Combustion Safety	Full Compliance							
4	Oyster Bay						Full Compliance						
5	Huntington					Interim Compliance		Full Compliance					
6	Hempstead						Full Compliance						
7	Islip								Full Compliance				
8	Smithtown								Full Compliance				
9	South Hampton	Affordable Housing							Full Tiered Compliance				
10	North Heampstead								Full Compliance				

LIPA Support of Towns

- Code support is critical for local and national success
 - Other towns looking at early adopters
 - Long Island in the national spotlight
- Forms and procedures development
- Code officials trainings
- Builder/architect trainings
 - 400+ participants in Southampton meeting

Southampton - Newsday Article

Green, greener, greenest - make it a race

July 27, 2008

To cope with rising home energy costs, here's a race that can make us all winners: a competition among [Long Island](#) towns and villages for the mantle of green champion.

This past week, the Town of Southampton roared past the others into first place, when the town board voted to adopt an imaginative amendment to the building construction code: As of Oct. 1, **the bigger the house you want to build (or substantially rebuild), the more energy-efficient the town will require the house to be.**

The method of measuring efficiency is the Home Energy Rating System (HERS), originally developed by Residential Energy Services Network, a creation of the mortgage industry. Why would that industry care about energy efficiency? Simple: If the soaring cost of heating and cooling a house blows up a family's budget, the family's ability to keep making mortgage payments is threatened. This is not a happy sound in the ears of mortgage lenders.

Under the new code, a house of up to 3,500 square feet would have to get a HERS rating of 84. At the top end of the scale, houses of 6,500 square feet or more would have to get a rating of 95.

Beyond that, the code requires that heaters for swimming pools be solar - unless the town waives that requirement because, for example, there's not enough sunlight available on the lot where the house sits.

Southampton

“Dwellings with over 6,500 square feet of conditioned space shall achieve a minimum home energy rating of 95 on the current expanded home energy rating system (HERS) scoring system adopted by the State of New York [which corresponds to an index of 25 or less as defined in the ‘2006 Mortgage Industry National Home Energy Rating Systems Standards,’ promulgated by the Residential Energy Services Network (RESNET)] or equivalent methodologies as determined by LIPA or its designee.”

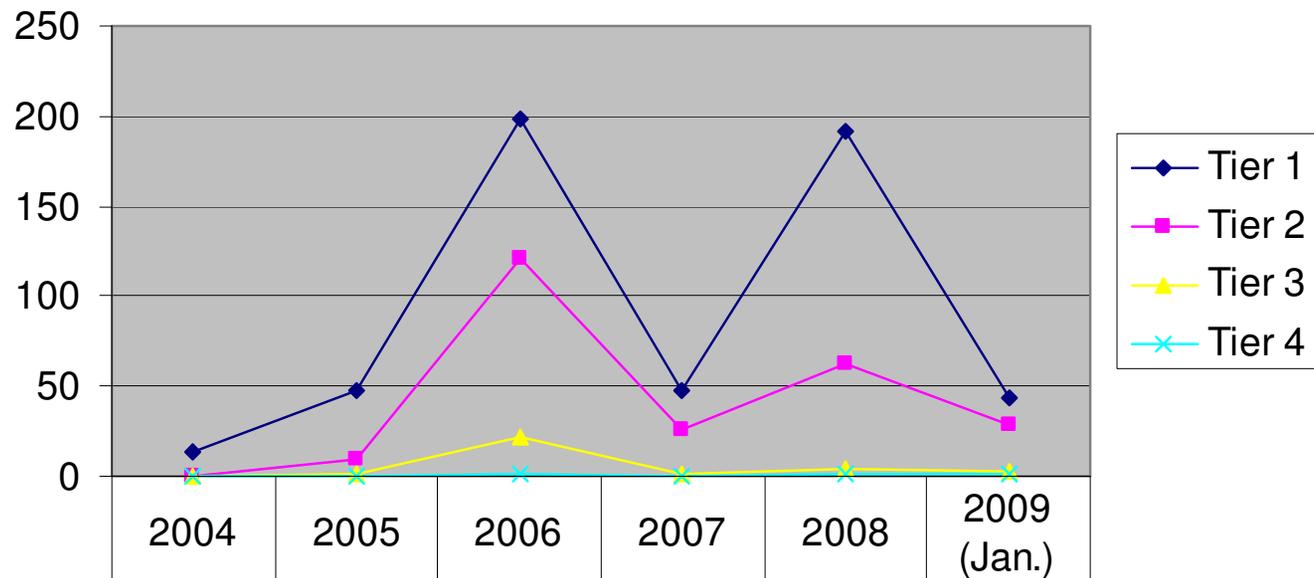
Southampton Rating Requirements

House Size (sq. ft.)	Energy Rating Requirement	
	NY HERS Score (min.)	Equivalent HERS Index (max.)
< 3,500	84	80
3,501 - 4,500	87	65
4,501 - 6,500	89	55
> 6,500	95	25

Current Status – A Growing Market for HERS...

- 10 out of 13 town have adopted ENERGY STAR as code
 - Remaining three are considering or under development
- Number of raters and providers has grown
 - 2004:
 - 3 raters
 - 2 providers
 - 2009:
 - 38 raters
 - 4 providers
- Incentives for ENERGY STAR eliminated in code towns
- Code support is #1 priority for LIPA

LIPA ENERGY STAR Homes Activity by Tier



◆ Tier 1	14	47	198	47	192	44
■ Tier 2	0	10	121	26	62	29
▲ Tier 3	0	1	22	2	4	3
× Tier 4	0	0	2	0	1	1

Claiming Savings

- From 11/6/2007 memo:
“LIPA should continue to claim savings in the towns with codes higher than prevailing State code until such time as that statewide code is equivalent to the local codes. For planning purposes, it seems unlikely that State code will ratchet up to the ENERGY STAR Homes level in less than ten years, so, until there is evidence otherwise, we suggest using a ten year savings horizon for savings from homes built in towns with ENERGY STAR codes. That is, for ten years following the adoption of ENERGY STAR as code, all homes built in that town get to claim savings to the ENERGY STAR level.”

Lessons Learned

1. Leverage town (and elected officials) competition to be “the greenest”
2. Support outside advocacy to avoid perceptions of self-interest
3. Implementation must not burden code officials: use HERS
4. Support of towns is critical for success
5. Create demand and raters/providers will come
6. Builder support is critical and achievable
7. Ramping up code drives builders to higher tiers
8. Programs can claim savings for supporting higher codes
9. Re-define “ENERGY STAR Homes” as higher than code to enable still using it for marketing

What's Happening in Massachusetts

- The next generation of building codes?

Massachusetts

- Green Communities Act (July 2008)
 - IECC updates within a year of national approval
 - BBRS responsibility
- Board of Building Regulations & Standards
 - Responsible for code adoption statewide
 - Resistance to local variations despite language seemingly allowing municipal petitions
 - Utilities, towns, HERS providers and raters, NEEP and others have engaged in discussions
 - Setting the stage for third-party (i.e. HERS raters) implementation for Res. and C&I
 - February 17 release date for proposed 2009 updates

Mass. 2009 Base Code Proposed Updates

- Residential:
 - IECC 2009
 - Includes duct testing if ducts not in conditioned space
 - IECC 2004 currently in place - with additional air barrier requirements
- Commercial:
 - IECC 2009 (includes option of ASHRAE 90.1 2007)
- No big changes to base code - yet

Mass. Proposed “Stretch Code”

- New option for towns and cities to go beyond base code
- Chance to “try before you buy” for builders - foreshadowing statewide changes to the base code in 2012
- Process:
 - Cities & Towns may adopt “stretch code” at town meeting or public hearing, and gain “Green Community” status with access to share of \$10m/year in additional state funding
 - In 2012, statewide code moves to Stretch Code and new 3-year stretch code issued

Mass. Stretch Code Standards

- Homes:
 - HERS 60 for new homes (HERS 50 in 2012)
 - HERS 70 for gut rehabs (HERS 60 in 2012)
 - Additions & Renovations: ENERGY STAR BOP
- Commercial & Industrial:
 - Up to 100,000 sq. ft.:
 - NBI Core Performance (prescriptive)
 - ASHRAE 2007 + 20% (performance)
 - >100,000 sq. ft.:
 - ASHRAE 2007 + 20% (Based on Appendix G)
 - ASHRAE-based and advanced Core Performance higher standards

Stretch Code Next Steps

- Schedule:
 - February 17: Draft for public review
 - March 10: Public hearing & public comment period opens
 - May: Planned implementation
- Towns are ready to adopt
- Gov.'s Zero Energy Task Force recommendations
 - HERS 70 code with HERS 50 as stretch code in 3 years
- Opportunities for third-party modeling and verification

Is Stretch a Model for New Codes?

- NEEP is promoting in the Northeast
- MA Executive Office of Energy & Environmental Affairs encourages input and comments
 - Both from Mass. residents and outsiders
 - Google BBRS after today and provide your (positive) comments

Time of Sale (TOS) Opportunities

- Addressing the energy efficiency potential of existing homes in the Northeast

TOS Activity in the Northeast

- NEEP White Paper
 - What's out there (worldwide)
 - Rating tools
 - Implementation issues
 - Policy options and recommendations
 - Fall 2009
- Mass. and Conn. utility “metrics” for 2009
 - Review rating tools for existing homes
 - Recommend an approach and tools that can be used to address improving energy efficiency in existing homes
- Vermont Time of Sale Legislation
 - Green jobs creator

TOS Policy Options Being Explored

- Disclosure only
- Disclosure with optional follow-on audit services for buyers interested in making improvements
- Audit with recommendations focusing only on areas of opportunity
 - Diagnostics or not
- Comprehensive audit addressing whole house
 - Diagnostics or not
- Full HERS rating
 - With preparation of mortgage financing info or not

TOS Opportunities

- 100 million households
- Much more energy savings potential than RNC
- National, regional, statewide and local interest
- All require energy rating/auditing expertise
- Get ready!

Questions?

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