

ITEMS FOR 2012 ECCNYS TECHNICAL SUBCOMMITTEE REVIEW
DIVISION OF CODE ENFORCEMENT AND ADMINISTRATION - DEPARTMENT OF STATE

ITEM NO. (✓ - done)	ECCNYS -2010 SECTION	IECC 2012 SECTION	TITLE	SUMMARY
	CHAPTER 1	None	GENERAL	SUGGEST clarifying the applicability of the Energy Code for Log Homes in conjunction with ICC 400 Standard. Pulls in needed requirements for ventilation, venting of combustion appliances, and Kitchen and Bath exhausts. Will have no applicability without the applicability.
	CHAPTER 2		DEFINITIONS	
2-01	202	202	Definitions	<p>Add the following Definitions;</p> <p>Air Impermeable Insulation (In NYS Specific Code ECCCNY-2010)</p> <p>Area Weighted Average (In NYS Specific Code ECCCNY-2010)</p> <p>Log Homes</p> <p>Thermal Envelope</p> <p>Modify the following definitions;</p> <p>Whole House Mechanical Ventilation System – define <i>when applicable</i> in terms of ACH.</p> <p>Roof assembly- needs separate definition for Residential Roof (Vented assembly).</p> <p>Also include the definition of roof defined by angle from vertical.</p>
	CHAPTER 3		CLIMATE ZONES, DESIGN CONDITIONS, MATERIALS EQUIPMENT AND SYSTEMS	<p>Add the following requirement from IRC 2012;</p> <p>R303.4 Mechanical Ventilation (when applicable)</p> <p>M1507.3 Whole house mechanical ventilation system</p> <p>Radon abatement systems? Applicable zone Map?</p>

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3-01	303.1.5	R402.4.2	FIREPLACES	Add exemption for pre-manufactured fireplaces (such as “Rumford” type Fireplaces) where manufacture’s data indicates that the installation of fireplace doors would impede their operation, or cause a hazardous situation. Add exception for Factory built Chimneys and Fireplaces . “Glass doors not required” Additionally consider “Must conform to positive ventilation requirements of The RCNYS Section R1005 and R1006.”.
	CHAPTER 4		RESIDENTIAL ENERGY EFFICIENCY	Prescriptive Requirements for Residential Building Envelope- Changes as noted are IECC-2012 modifications
	Table 402.1.1	Table 402.1.1	Insulation and Fenestration Criteria by Component	
4-01	Skylights- U = 0.60 Climate Design Zones 4, 5 and 6	Skylights- U = 0.55 Climate Design Zones 4, 5 and 6		For Skylights- Required U value decreases from 0.60 to 0.55 (For all Climate Design Zones)
4-02	Fenestration- SHGC Not Required	Fenestration- SHGC- 0.40 Climate Design Zones 4		Solar Heat Gain Coefficient added to glazing in Climate Design Zone 4 only- SHGC= 0.40
4-03	Fenestration- U = 0.35 Climate Zones 5 and 6	Fenestration- U =0.32 Climate Zones 5 and 6		Fenestration required U value decreases from - U = 0.35 to U =0.32 (For Climate Design Zones 5 and 6)
4-04	Ceiling- R-38 Climate Zones 5 and 6	Ceiling- R-49 Climate Zones 5 and 6		Ceiling R value increases from R=38 to R=49 , in Climate Zones 4 and 5.

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4-05	Wood Framed Wall R= 13 Climate Zones 4	Wood Framed Wall R=20, or 13+5 Climate Zones 4		Wood Framed Wall R value increases from R=13, or ,R=20 or 13+5 in Climate Zone 4
4-06	Wood Framed Wall R= 20 or 13+5 Climate Zones 6	Wood Framed Wall R=20+5 or 13+10 Climate Zones 6		Wood Framed Wall R value increases from R=20, or R=13+5 to,R=20+5 or 13+10 in Climate Zone 6
4-07	Mass Wall R= 5/10 Climate Zones 4	Mass Wall R= 8/13 Climate Zones 4		Mass Wall R value increases from R= 5/10 to R= 8/13 in Climate Zones 4
4-08	Mass Wall R= 15/19 Climate Zones 6	Mass Wall R= 15/20 Climate Zones 6		Mass Wall R value increases from R= 15/19 to R= 15/20 in Climate Zones 4
4-09	Basement Wall Climate Zones 5	Basement Wall Climate Zones 5		Basement Wall R value increases from R=10/13 to 15/19 in Climate Zone 5.
4-10	Crawl space Wall Climate Zones 5 and 6	Crawl space Wall Climate Zones 5 and 6		Basement Wall R value increases from R=10/13 to 15/19 in Climate Zones 5 and 6.
4-11	402.2.1.1	-----	Unvented Attic Assemblies	NY State Specific code provision= Allows for unvented, conditioned attic assemblies when all conditions of the code are met. . Makes NYS more stringent. Unvented attics conserve energy.

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4-12	402.2.2	R402.2.2	Ceilings without attic spaces	NY State Specific code provision= Existing ceilings without attic spaces (includes cathedral ceilings). Reason, newly designed buildings can take into account allowances for required insulation. Makes NYS more restrictive.
4-13	New	R402.2.3	Eave Baffle	Eave baffle requirement added adjacent to soffit and Eave vents where air permeable insulation is present in vented attics
4-14	402.2.5	R402.2.6	Steel frame Ceilings, Walls, and Floors	Steel framed walls and floors increase in continuous insulation levels. Section added for steel framed walls w/ studs @ 24" o.c.
4-15	402.2.11 Fenestration U factor= 0.50 Skylight U factor= 0.75	R402.3.5 Fenestration U factor= 0.45 Skylight U factor= 0.70	Sunroom U Factor	Thermally isolated sunrooms fenestration requirements increases from U=0.50 to U=0.45. Skylight U factor decreases from U=0.75 to U=0.70 NY State Specific code provision= Limits Thermally isolated sunrooms to 500 sq. ft. in plan area. Makes NYS more restrictive.
4-16	402.2.12	-----	Tenant Separation Walls	NY State Specific code provision=Requires Tenant Separation Walls to be air sealed in accordance with Section 402.4.1 and to be insulated to no less than R=10. Makes NYS more restrictive.
4-17	402.1.3	R402.1.3	U-Factor alternative	SUGGEST adding sample equation subsequent to code text.
4-18	402.1.4	R402.1.4	Total UA Alternative	SUGGEST adding sample equation subsequent to code text.

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4-19	Table 402.4.2	Table R402.4.1.1	Air Barrier and Insulation Inspection Component Criteria	<p>Multiple Table corrections made by IECC;</p> <ol style="list-style-type: none"> 1.) Air Barrier and Thermal Barrier- Removed language indicating “ Air permeable insulation is inside of an Air Barrier” since not applicable to conventional Attic construction 2.) Walls- Language added “The Junction of the top plate and top of exterior walls shall be sealed. 3.) Walls- Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. 4.) Walls- Language added “Knee walls shall be sealed”. 5.) Windows, Skylights and Doors- :”Skylight framing to be sealed” 6.) Floors (Above garage and cantilevered floors) SUGGEST adding/modifying language “Insulation in cantilevered floors to be in substantial contact with air barrier/sheathing.” 7.) “Common wall” Category added to table. 8.) “Fireplaces” Language added “An air barrier shall be installed on the fireplace walls, Fireplaces shall have gasketed doors.” SUGGEST adding codifying language for, fireplace types, manufactured, traditional, framed, masonry, wood burning, gas, decorative.” Air Barrier and gasketed doors required depending on the type of fireplace. Ie. Masonry fireplace would be required to have an air barrier? SUGGEST adding/modifying language for fireplaces; Add exception for Factory built Chimneys and Fireplaces. “Glass doors not required” Additionally consider “Must conform to positive ventilation requirements of The RCNYS Section R1005 and R1006.”.
4-20	402.4.2.1 Testing Option	R402.4 Air leakage	Air leakage (Mandatory)	<p>ACH 50 (Blower Door testing) becomes mandatory</p> <p>Table R402.4.1.1 Air Barrier and Insulation Installation requirements. The visual inspection requirements of the Air Barrier and Insulation installation components become mandatory.</p> <p>ACH 50 air exchange maximum rate changes from 7 air changes per hour to 3 air changes per hour.</p> <p>SUGGEST adding exemption for ACH 50 testing for building additions,. In the situation of a building addition, the code is applicable only to the building addition. The ACH 50 test cannot be isolated only to the addition., the ACH 50 test is applied to the entire building thermal envelope The entire building envelope is not subject to the requirements of the Energy Code.</p>
4-21	402.4..3	R402.4..4	Recessed lighting	Rate of air leakage not more than 2.0 cfm must be included in the <i>listing</i> of the Lighting fixture.

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4-22	402.5	-----	Vapor retarder	NY State Specific code provision= Add NYS specific requirements for Vapor retarder. Include allowances for Class III Vapor retarder.
4-23	403	R403	Systems	NY State Specific code provision= SUGGEST entire section labeled as Mandatory, IECC labels some sections as <i>Mandatory</i> , and some as <i>Prescriptive</i> , causing confusion with the applicability of requirements of the Section.
4-24	403.2.2	R403.2.2	Sealing (Ducts)	Post Construction test leakage changes from 8 cfm/sq. ft. of conditioned floor area to 4cfm of conditioned floor area. Rough in test leakage changes from 6 cfm/sq. ft. of conditioned floor area to 4cfm of conditioned floor area. Duct testing remains applicable only when ducts are not contained completely within the Building thermal envelope.
4-25	New	R403.2.2.1	Sealed Air Handler	Air Handlers must have a manufacture's designation of a maximum leakage rate of no more than 2% of the design air flow rate, testing in accordance with ASHRAE 193 (2010)
4-26	New	R403.2.3	Building Cavities (Mandatory)	Building Framing cavities shall not be used as ducts or plenums.
4-27	New	R403.4	Service Hot water systems	Hot water systems piping (domestic potable water) shall be insulated to a min. R=3 under the following conditions. <ol style="list-style-type: none"> 1. Piping larger than 3/4inch nominal diameter. 2. Piping serving more than one dwelling unit. 3. Piping from the water heater to kitchen outlets. 4. Piping located outside the conditioned space. 5. Piping from the water heater to a distribution manifold. 6. Piping located under a floor slab. 7. Buried piping. 8. Supply and return piping in recirculation systems other than demand recirculation systems. 9. Piping with run lengths greater than the maximum run lengths for the nominal pipe diameter given in Table R403.4.2. All remaining piping shall be insulated to at least R-3 or meet the run length requirements of Table R403.4.2.
4-28	New	R403.5 Table 403.5	Mechanical Ventilation	Mechanical System ventilation fans must meet efficacy requirements of Table R403.5.1
4-29	403.6	R403.6	Equipment Sizing	Heating and Cooling Equipment must be sized in accordance with ACCA Manual "S" based on building loads calculated with ACCA Manual "J", or other approved heating and cooling calculation methodologies.
4-30	403.9	R403.9	Pools and permanently installed Spas (Mandatory)	R403.9 Pools - Permanently Installed Spas are added.

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4-31	R403.9.3	R403.9.3	Pool Covers	R value of pool cover removed for pools heated to above 90 deg F. SUGGEST to revert to ECCCNY-2010 to meet ARRA requirements (add back requirements for pool cover @ pools heated to 90 deg. F and greater. (exemption for renewable power moved from 60 % renewable to 70 % renewable power.
4-32	404.1	R404.1	Lighting Equipment (Mandatory)	75% minimum High efficacy lamps in permanently installed fixtures.(Changed from 50% minimum). Low voltage lighting not required to utilize high efficacy lighting. Fuel gas lighting shall not have continuously burning pilot.
4-33	405	R405	Simulated Performance Alternative	Modifications Standard reference design/ Proposed Design Glazing - Interior Shade fraction computation changed (SHGC changed. How is this applied in a case where there is no SHGC? Assume it just drops out.) Air Exchange Rate - based on Conditioned floor are and number of bedrooms. Heating systems - Electric heat system treated separately.
4-34	New York State specific requirements		New York State specific requirements Municipalities need to specify or would be less restrictive than NYS Energy Code.	New York State specific requirements Vapor Retarders- General Allowance for Class III Vapor Retarders Prohibition of Class I Vapor Barriers (possibly specific to Climate Design Zones 4 and 5) Cross reference Table R402.1.1 (Insulation and Fenestration Requirements by Component) to New York State Specific Table 402.5.1 Class III Vapor Retarders. To clarify where Class III can and cannot be utilized.
4-35	New York State specific requirements		New York State specific requirements Municipalities need to specify due to lack of IRC 2012. Life Safety Issues.	Building air tightness of ACH 50 of 3/hr and less, address the following; Whole House ventilation minimums per RCNYS- 2012/ventilation rates. Kitchen exhausts in excess of 400 cfm requires make-up air and interlock. Kitchen and Bath fan mandate/minimums in accordance with Code. Combustion efficiency testing mandate w/ ACH 50 of 3/hr and less. Fireplace draft testing conforms to positive ventilation requirements of The RCNYS Section R1005 and R1006.
C4-1	New	401.2	Application	Commercial buildings must comply with one of three options.
C4-2	New	401.2(1)	“ASHRAE 90.1”	The use of this standard as the building’s energy code would satisfy this section.
C4-3	New	401.2(2)	“High efficiency, efficacy, renewable options”	This option mandates higher HVAC efficiencies, low watts per sq. ft. for lighting, minimum renewable power options
C4-4	New	401.2(3)	“Total Building Performance”	A DOE-2 approach shall be 15% more efficient than the standard reference design.

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C4-5	New	401.2.1	Application to existing buildings.	Existing building renovations shall comply to Sections 402-405 to the extent of the project or ASHRAE 90.1-2010.
C4-6	New	402.2.1	Roof assembly.	Skylight curbs shall be insulated to the level of roof insulation or R-5, whichever is less.
C4-7	502.2.6	402.2.6	Slabs on grade.	(Prescriptive) Slab insulation min. R-10 2' down (or for heated slabs R-15 up to 3')
C4-8	New	402.2.8	Insulation of radiant heating systems.	Insulation of R 3.5 required for all radiant floor heating piping, panels, and under floor
C4-9	502.3.1	402.3.1	Fenestration (Prescriptive) – Maximum area.	Vertical fenestration (not including opaque doors) shall be limited to 30% of wall area and skylights max. 3% (unless 50% of conditioned space is daylighting zone controlled with Visible Trans. (VT) of vert. glass \geq 1.1 times SHGC - see many new allowances for daylighting
C4-10	502.4	402.4	Air leakage (Mandatory)	Air barriers are to be specific materials, rated assemblies, or proven via a building blower door test.
C4-11	502.4.1	402.4.3	Maximum air infiltration rate for fenestration	Specifies level, test standard, and how to conform with exceptions.
C4-12	502.4.4	402.4.4&5	Air intakes and doors	Specifies air leakage rates and minimum standards for larger (24" per side) dampers and openings in building envelopes.
C4-13	502.4.6	402.4.7	Vestibules	Requires vestibule for doors adjoining revolving doors.
C4-14	New	403.2.3.1	Water cooled centrifugal chilling package	Equipment designed to operate out of AHRI 550/590 test conditions shall adjust full load and NPLV ratings per the formula provided
C4-15	New	403.2.4.3.3	Automatic start capabilities	All HVAC systems shall be provided with "set start time" controls
C4-16	503.2.5.1	403.2.5.1	Demand controlled ventilation (DCV)	Demand controlled ventilation (DCV) for spaces over 500 ft. sq. w/25 people per 1000 ft. sq. (with an economizer, auto modulating outdoor air, or design outdoor air rates > 3000 CFM) – See exceptions

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C4-17	503.2.6	403.2.6	Energy recovery ventilation systems	Energy recovery ventilation systems are required when fan systems exceed airflow rates of Table 403.2.6 (see zones 4A-6A).
C4-18	503.2.10.1	403.2.10.1	Allowable fan floor horsepower limits	Allowable fan floor horsepower limits has new exceptions for certain highly critical building types like hospitals, vivariums, and laboratories.
C4-19	503.3.1	403.3.1	Economizers	Economizers have a new set of exceptions such as > 33 MBH, humidified spaces, residential below 5 times the number above, refrigerated spaces effected, etc.and control limits follow in sub-sections
C4-20	505.1	405.1	General [Electrical power and lighting systems] (Mandatory)	The exception for residential (dwelling units) from the lighting power density table shall be when the dwellings contain a minimum of 75% of high efficacy lamps.
C4-21	505.2.2.2	405.2.2.2	Occupancy sensors	Occupancy sensors required for new building uses spaces listed such as classrooms, employee lunch rooms, private offices, restrooms, storage closets, etc...and spaces less than 300 sq. ft. enclosed floor to ceiling and the control sequence is specified further
C4-22	505.2.2.3	405.2.2.3	Daylight zone control	Daylight zone control zones shall be designed such that the lights in the zone are controlled independent of general lighting controls (see exceptions and controls that follow in subsections)
C4-22	505.5.2	405.5.2 & Table 405.5.2(1-2)	Interior lighting power	See new values for Lighting Power Densities
C4-23	103.2.2	408	System Commissioning	System HVAC Commissioning for buildings systems where required in 408.2 (see also 403.2.9) where there are many new requirements for documentation and performance testing of air, lighting, and hydronic systems which lead to preliminary and final commissioning reports