Energy

Proposed Code Modifications

Glitch Modifications

This document created by the Florida Department of Business and Professional Regulation - 850-487-1824

TAC: Energy

Total Mods for **Energy** in **Pending Review: 25**

Total Mods for report: 25

Sub Code: Energy Conservation

EN6107

Date Submitted	4/22/2013	**Section**	R401.3	**Proponent**	Ann Stanton
Chapter	Appendix C (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Add the EPL Display Caed to the FBC-Energy Conservation as referenced from Section R401.3.

Rationale

Section R401.3 references an Energy Performance Level (EPL) Display Card. This document, which is required by Florida law, was inadvertently left out of the triennial code change process. It needs to be added for code consistency.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

The EPL Display Card is required by Ch. 553.9085, F.S. and needs to be included in the FBC-Energy Conservation for consistency with Section R401.3 and Florida law.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

APPENDIX C. FORMS

EPL Display Card. Add to read as shown.

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = ____
The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition 1. _____
2. Single-family or multiple-family 2. _____
3. No. of units (if multiple-family) 3 _____
4. Number of bedrooms 4. _____
5. Is this a worst case? (yes/no) 5.. _____
6. Conditioned floor area (sq. ft.) 6. _____
7. Windows, type and area
   a) U-factor: 7a. _____
   b) Solar Heat Gain Coefficient (SHGC)7b. _____
   c) Area 7c. _____
8. Skylights
   a) U-factor: 8a. _____
   b) Solar Heat Gain Coefficient (SHGC) 8b. _____
9 Floor type, insulation level:
   a) Slab-on-grade (R-value) 8a. _____
   b) Wood, raised (R-value) 8b. _____
   c) Concrete, raised (R-value) 8c. _____
9. Wall type and insulation:
11. Ducts, Location & Insulation Level
   a) Supply ducts R= _____
   b) Return ducts R= ____
   c) AHU location _____
12. Cooling system: Capacity: _____
   a) Split system SEER _____
   b) Single package SEER _____
   c) Ground/water source COP _____
   d) Room unit/PTAC EER _____
   e) Other _____
13. Heating system:
   a) Split system heat pump HSPF _____
   b) Single package heat pump HSPF _____
   c) Electric resistance COP _____
   d) Gas furnace, natural gas AFUE _____
   e)Gas furnace, LPG AFUE _____
   f) Other _____
14. Water heating system
   a) Electric resistance EF _____

A. Exterior:	b) Gas fired, natural gas EF_____
1. Wood frame (Insulation R-value) 9A1._____	c) Gas fired, LPG EF_____
2. Masonry (Insulation R-value) 9A2._____	d) Solar system with tank EF_____
B Adjacent:	e) Dedicated heat pump with tank EF_____
1. Wood frame (Insulation R-value) 9B1._____	f) Heat recovery unit HeatRec%__
2. Masonry (Insulation R-value) 9B2._____	g) Other_____
10. Ceiling type and insulation level	15. HVAC credits claimed (Performance Method)
a) Under attic 10a._____	a) Ceiling fans
b) Single assembly 10b._____	b) Cross ventilation
c) Knee walls/skylight walls 10c._____	c) Whole house fan
d) Radiant barrier installed 10d._____	d) Multizone cooling credit
	e) Multizone heating credit
	f) Programmable thermostat

**Label required by Section 303.1.3 of the *Florida Building Code, Energy Conservation,* if not DEFAULT.

I certify that this home has complied with the *Florida Building Code, Energy Conservation*, through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature:: _____ **Date:** _____

Address of New Home: _____ _____

City/FL Zip:

Date Submitted	4/22/2013	**Section**	C402	**Proponent**	Ann Stanton
Chapter	Appendix C (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Revise Form C402 for use with alterations, renovations and building systems.

Rationale

Comment was received at the Commission meeting in February, 2013, that a universal commercial code compliance form would be too complicated to have relevance for all energy code compliance methods. This proposal seeks to revise Form C402 to make it applicable for use only with renovated buildings and replacement building systems.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Less confusing.

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

The 2010 Florida Building Code, Energy Conservation, had a form for renovations and shell buildings. This proposal would limit use of the form to alterations, renovations and building systems.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Revise Form C402 for use with alterations, renovations and building systems as shown:

FLORIDA ~~ENERGY EFFICIENCY CODE FOR~~ BUILDING CODE, ENERGY CONSERVATION ~~CONSTRUCTION~~

CHAPTER C4 – COMMERCIAL ENERGY EFFICIENCY ~~Building Envelope Prescriptive Method~~

Form C402-2013 ALTERATIONS, RENOVATIONS and BUILDING SYSTEMS

Climate Zone:

Project Name:	Occupancy type:
Address:	~~New? Addition~~? Alteration? ~~Repair? Shell?~~ Renovation ? Building System ?
City, Zip Code:	Building Permit No.:
Builder:	Permitting Office:
Owner:	Jurisdiction No.:

BUILDING ENVELOPE INFORMATION (~~Use Table C402.1.1 or Table C402.2~~ where changed)

Envelope Component	Description	Requirement		Efficiency	
		Location	Unit	Required	Installed
Roof type		Table C402.1.2 or Table C402.2	=U-factor or =R-value		
Roof reflectance/ Emittance (low slope roofs)		Table C402.2.1.1	=Solar Reflectance, =Thermal emittance		
Wall type, above grade		Table C402.1.2 or Table C402.2	=U-factor or =R-value		
Wall, below grade					
Floor type					
~~Floor, slab-on-grade~~					
~~Window-to-wall ratio~~	-	-	~~<40 percent~~		
Vertical fenestrations	-	Table C402.3	=U-factor		
			=SHGC		
Skylights	-		=U-factor		
		-	=SHGC		

BUILDING SYSTEMS INFORMATION (for HVAC, service hot water or pool heating, lighting systems, and replacement fenestration (C101.4.7 ~~C403~~)

System	Type (describe system)	Requirement		Efficiency ~~Rating~~ ~~(unit)~~	
		Location ~~Sizing report (Attached)~~	Unit ~~Efficiency Required~~	Required	Installed
Air-conditioning system		~~From~~ Tables C403.2.3 (1-3, 6-8)*:	SEER or EER, IEER		
Heating system		~~From~~ Tables C403.2.3 (2-6 ~~4-5~~)*:	HSPF or COP AFUE, E_t or E_c		
Ventilation/air handling system		~~From~~ Tables C403.2.10.1(1-~~2~~):	Fan Power (cfm):		
Ducts	Location:	Table C403.2.7.1	R-value		
Piping	Fluid design operating temp:	~~Size of pipe: From~~ Table C403.2.8:	Inches		
Hot water ~~(C404)~~		~~From~~ Table C404.2:	EF, E_t, COP		
~~Electric power~~	~~Drawings~~	~~Y N~~	~~Operations manual available upon completion: Y N~~		
~~7Motors~~	~~Open or enclosed~~	-	~~Poles & speed:~~	~~HP~~	-
Lighting ~~(C405)~~	Space types: (append list)	Table C405.5.2(1 or 2)	Lighting power density*		
Fenestrations: Enter information in BUILDING ENVELOPE INFORMATION box above.					
Other:					

~~**Efficiency package option (C406):** C406.2 HVAC ?C406.3 Lighting ?C406.4 Renewable Energy ?~~

COMPLIANCE IS BY ANSI/ASHRAE/IESNA 90.1 ?

(Submit alternate form or append documents as needed)

~~**SUMMARY OF MAJOR PRESCRIPTIVE MEASURES**~~

~~**Components**~~	~~**Section**~~	~~**Requirements**~~
~~Documentation requirements~~	~~C303.3~~ ~~C405.7.4.2~~ ~~C408.2.5~~	~~Maintenance instructions furnished to owner within 90 days of CO. Equipment and systems requiring preventive maintenance; label required. System balancing report. Commissioning report. Lighting systems calibrated, adjusted, programmed, in good working order.~~

~~Air infiltration:~~ ~~Windows & Doors~~ ~~Joints/Cracks~~ ~~Dropped Ceiling Cavity~~	- ~~C402.4.3~~ ~~C402.4.9~~	~~Per Table C402.4.4. To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lights IC-rated; not more than 0.2 cfm unless tested & labeled to ASTM E 283.~~ ~~Vented: seal & insulated ceiling. Unvented seal & insulate roof & side walls.~~
~~Dehumidification~~	~~C403.2.4.3.4~~	~~Controls provided capable of preventing simultaneous humidification/dehumidification~~
~~HVAC Effieiency~~	~~C403.2.3~~	~~Minimum efficiencies: Tables C403.2.3(1) (7)~~
~~HVAC Controls~~	~~C403.2.4~~	~~Zone controls prevent reheat (exceptions); separate thermostatic control per zone; combined HVAC control 5°F deadband, Automatic setback/ shutdown capability. Exceptions.~~
~~Ventilation~~	~~C403.2.5~~	~~Outdoor air supply & exhaust ducts shall have dampers that automatically shut when systems or spaces served are not in use. Demand control provided for spaces >500 s.f., where avg. occupant load 25 people/1000 s.f. Exhaust air energy recovery required for cooling systems.~~
~~HVAC Ducts~~	~~C403.2.7~~	~~Air ducts, fittings, mechanical equipment & plenum chambers shall be mechanically attached, sealed, insulated & installed per Table C403.2.7.2.~~
~~Testing & Balancing~~	~~C408.2.2~~	~~HVAC distribution system(s) tested & balanced. Report in construction documents.~~
~~Piping Insulation~~	~~C403.2.8~~	~~HVAC & service hot water. In accordance with Table C403.2.8, Sec. C404.5~~
~~Fan Power Limitation~~	~~C403.2.10.1~~	~~HVAC system with total fan system nameplate horsepower > 5 hp to meet provisions of Sections C403.2.10.1 through C403.2.10.2.~~
~~Water Heaters~~	~~C404~~	~~Performance requirements in accordance with Table C404.2. Heat trap required.~~
~~Swimming Pools~~	~~C404.7~~	~~Vapor-retardant or liquid cover or other means proven to reduce heat loss on heated pools. Time switch. Readily accessible on/off switch.~~
~~Lighting Controls~~	~~C405.2~~	~~Automatic control required for interior lighting in buildings >5,000 s.f.~~ ~~Space control. Occupancy sensors. Daylighting controls. Tandem wiring. Exit signs = 5 watts/side. Exterior building grounds lighting.~~

I hereby certify that the plans and specifications covered by the calculation are in compliance with the *Florida Building Code, Energy Conservation ~~Code~~*. PREPARED BY: _____ DATE: _____ I hereby certify that this building is in compliance with the *Florida Building Code, Energy*	Review of plans and specifications covered by this calculation indicates compliance with the *Florida Building Code, Energy Conservation ~~Code~~*. Before construction is completed, this building will be inspected for compliance in accordance with Section 553.908, F.S. BUILDING OFFICIAL:_____- _____

Conservation ~~*Code*~~:	DATE: _____
OWNER/AGENT:_____	
DATE:_____	

-

~~Section C402: BUILDING ENVELOPE REQUIREMENTS~~

-	**~~Climate Zone 1~~**		**~~Climate Zone 2~~**	
-	**~~All Other~~**	**~~Group R~~**	**~~All Other~~**	**~~Group R~~**
~~ROOFS~~	-	-	-	-
~~Insulation entirely above deck~~	~~U-0.048~~	~~U-0.048~~	~~U-0.048~~	~~U-0.048~~
~~Metal buildings~~	~~U-0.044~~	~~U-0.0435~~	~~U-0.035~~	~~U-0.035~~
~~Attic and other~~	~~U-0.027~~	~~U-0.027~~	~~U-0.027~~	~~U-0.027~~
~~WALLS, above grade~~	-	-	-	-
~~Mass~~	~~U-0.142~~	~~U-0.142~~	~~U-0.142~~	~~U-0.123~~
~~Metal building~~	~~U-0.079~~	~~U-0.079~~	~~U-0.079~~	~~U-0.079~~
~~Metal framed~~	~~U-0.077~~	~~U-0.077~~	~~U-0.077~~	~~U-0.064~~
~~Wood framed & other~~	~~U-0.064~~	~~U-0.064~~	~~U-0.064~~	~~U-0.064~~
~~WALLS, below grade~~	-	-	-	-
~~Below-grade wall~~	~~C-1.140~~	~~C-1.140~~	~~C-1.140~~	~~C-1.140~~
~~FLOORS~~	-	-	-	-
~~Mass~~	~~U-0.322~~	~~U-0.322~~	~~U-0.107~~	~~U-0.107~~
~~Joist/framing~~	~~U-0.066~~	~~U-0.066~~	~~U-0.033~~	~~U-0.0.33~~
~~FLOORS, slab-on-grade~~	-	-	-	-
~~Unheated slabs~~	~~F-0.73~~	~~F-0.73~~	~~F-0.73~~	~~F-0.73~~
~~Heated slabs~~	~~F-0.70~~	~~F-0.70~~	~~F-0.70~~	~~F-0.70~~

-

-	-	-

~~Section C405: LIGHTING~~

~~*Total interior lighting power shall meet the cumulative interior lighting power LPD by floor area for the Building Area Method from Table C405.5.2(1) or by the Space-By-Space Method from Table C405.5.2(2).~~

-

-

~~Section C406: ADDITIONAL EFFICIENCY PACKAGE OPTIONS (Fulfill ONE of these)~~

~~Section C406.2~~ ~~Efficient HVAC Performance~~	~~Meet efficiencies of Tables C406.2(1) through C406.2(7) for the equipment type in addition to the prescriptive requirements of Section C403.~~
~~Section C406.3~~ ~~Efficient Lighting System~~	~~Total interior lighting power shall meet the cumulative reduced interior lighting power LPD of Table C406.3 by floor area and Building Area Type.~~
~~Section C406.4~~ ~~On-site renewable energy~~	~~Total minimum ratings of on-site renewable energy systems shall be either:~~ ~~1) not less than 1.75 Btu (or 0.50 watts) per square foot of conditioned floor area; or~~ ~~2) not less than 3% of the regulated energy used in the building for mechanical, service water heating and lighting.~~

Date Submitted	4/22/2013	**Section**	R402	**Proponent**	Ann Stanton
Chapter	Appendix C (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Add Form R402 to Appendix C as a code compliance tool for Section R402.

Rationale

Form R402 was not approved by the Florida Building Commission because it did not reflect the final provisions of Section R402 for code compliance. However, this form is referenced from Section R101.5 and is needed for consistency of statewide residential energy code compliance by the prescriptive code compliance method.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Needed for statewide energy code consistency.

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Florida has had a residential prescriptive code compliance form from 1979. Although this form has evolved over the years, it provides a list of criteria for code compliance, which both clarifies the code's requirements for the user and can be readily recognized by code officials.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

APPENDIX C: Forms

Form R402. Add a form R402 to read as shown:

FLORIDA BUILDING CODE, ENERGY CONSERVATION

Residential Building Thermal Envelope Approach

FORM R402-2013 Climate Zone ?

Scope: Compliance with Section R402.1.1 of the *Florida Building Code, Energy Conservation*, shall be demonstrated by the use of Form R402 for single- and multiple-family residences of three stories or less in height, additions to existing residential buildings, alterations, renovations, and building systems in existing buildings, as applicable. To comply, a building must meet or exceed all of the energy efficiency requirements on Table R402A and all applicable mandatory requirements summarized in Table R402B of this form. If a building does not comply with this method, or by the UA Alternative method, it may still comply under Section R405 of the *Florida Building Code, Energy Conservation.*

PROJECT NAME:		**BUILDER:**
		PERMITTING OFFICE:
AND ADDRESS:		**JURISDICTION NUMBER:**
OWNER:		**PERMIT NUMBER:**

General Instructions:

1. Fill in all the applicable spaces of the "To Be Installed" column on Table R402A with the information requested. All "To Be Installed" values must be equal to or more efficient than the required levels.

2. Complete page 1 based on the "To Be Installed" column information.

3. Read the requirements of Table R402B and check each box to indicate your intent to comply with all applicable items.

4. Read, sign and date the "Prepared By" certification statement at the bottom of page 1. The owner or owner's agent must also sign and date the form.

Check

1. New construction, addition, or existing building 1.

2. Single-family detached or multiple-family attached 2.

3. If multiple-family, number of units covered by this submission 3.

4. Is this a worst case? (yes/no) 4.

5. Conditioned floor area (sq. ft.) 5.

6. Windows, type and area

a) U-factor: 6a. b)
Solar Heat Gain Coefficient (SHGC) 6b.

c) Area 6c.

7. Skylights

a) U-factor: 6a. b)
Solar Heat Gain Coefficient (SHGC) 6b.

8. Floor type, area or perimeter, and insulation:

a) Slab-on-grade (R-value) 8a.

b) Wood, raised (R-value) 8b.

c) Wood, common (R-value) 8c.

d) Concrete, raised (R-value) 8d.

e) Concrete, common (R-value) 8e.

9. Wall type and insulation:

a) Exterior: 1. Wood frame (Insulation R-value) 9a1.

2. Masonry (Insulation R-value) 9a2.

b) Adjacent: 1. Wood frame (Insulation R-value) 9b1.

2. Masonry (Insulation R-value) 9b2.

10. Ceiling type and insulation

a) Attic (Insulation R-value) 10a.

b) Single assembly (Insulation R-value) 10b.

11. Air distribution system:

a) Duct location, insulation 11a.

b) AHU location 11b.

c) Total duct leakage. Test report attached. 11c. cfm/100 s.f. Yes ? No ?

12. Cooling system: a) type b) efficiency 12a.

12b.

13. Heating system: a) type b) efficiency: 13a.

13b.

14. HVAC sizing calculation: attached 14. Yes ? No ?

15. Water heating system: a) type b) efficiency 15a.

15b.

I hereby certify that the plans and specifications covered by this form are in compliance with the *Florida Building Code, Energy Conservation.* PREPARED BY:_____ Date_____ I hereby certify that this building is in compliance with the *Florida Building Code, Energy Conservation.* OWNER/AGENT:_____ Date:_____	Review of plans and specifications covered by this form indicate compliance with the *Florida Building Code, Energy Conservation.* Before construction is complete, this building will be inspected for compliance in accordance with Section 553.908, *F.S.* CODE OFFICIAL:_____ Date:_____

TABLE R402A CLIMATE ZONES 1 and 2

BUILDING COMPONENT	PRESCRIPTIVE REQUIREMENTS[1]		INSTALLED VALUES
	Climate Zone 1	Climate Zone 2	
Windows:	U-Factor = 0.65[2] SHGC = 0.25	U-Factor = 0.40[2] SHGC = 0.25	U-Factor = SHGC =
Skylights			

	U-factor = 0.75 SHGC = 0.30	U-factor = 0.65 SHGC = 0.30	U-factor = SHGC =
Doors: Exterior door	U-factor = 0.65[3]	U-factor = 0.40[3]	U-factor=
Floors: Slab-on-Grade Over unconditioned spaces[4]	 NR R-13	 NR R-13	 R-Value =
Walls[4] – Ext. and Adj. Frame Mass Insulation on wall interior: Insulation on wall exterior	 R-13 R-4 R-3	 R-13 R-6 R-4	 R-Value = R-Value = R-Value =
Ceilings[5]	R=30	R=38	R-Value =
Air infiltration	Blower door test is required on the building envelope to verify leakage =5 ACH; test report provided to code official.		Total leakage= ACH Test report Attached? Yes ? No ?
Air distribution system[5] Air handling unit Duct R-value Air leakage[5]: Duct test Ducts in conditioned space	 Not allowed in attic - R-value = R-8 (supply in attics) or = R-6 (all other duct locations) Postconstruction test: Total leakage = 4 cfm/100 s.f. Rough-in test Total leakage = 3 cfm/100 s.f. Test not required if all ducts and ahu are in conditioned space		 Location: R-Value = Total leakage= cfm/100s.f. Test report Attached? Yes ? No ? Location:
Air conditioning systems Central system = 65,000 Btu/h Room unit or PTAC Other:	Minimum federal standard required by NAECA[6]. SEER 13.0 (before 1/1/15); SEER 14.0 (as of 1/1/15) EER (from Table C403.2.3(3)) See Tables C403.2.3(1)-(11)		 SEER= EER =
Heating system	Minimum federal standard required by NAECA[6]		

Heat pump = 65,000 Btu/h	HSPF 7.7 (before 1/1/15); HSPF 8.2 (as of 1/1/15)	HSPF =
Gas furnace, non-weatherized	AFUE 80%	AFUE =
Oil furnace, non-weatherized	AFUE 83%	AFUE =
Other:		
Water heating system (storage type):	Minimum federal standard required by NAECA[6]	
Electric[7]	40 gal: EF = 0.92	Gallons =
	50 gal: EF = 0.90	EF =
Gas fired[8]	40 gal: EF = 0.59	Gallons =
	50 gal: EF = 0.58	EF =
Other (describe):		

NR = No requirement.

(1) Each component present in the As Proposed home must meet or exceed each of the applicable performance criteria in order to comply with this code using this method.

(2) For impact rated fenestration complying with Section R301.2.1.2 of the *Florida Building Code, Residential* or Section 1609.1.2 of the *Florida Building Code, Building* the maximum *U*-factor shall be 0.75 in Climate Zone 1 and 0.65 in Climate Zone 2. An area-weighted average of U-factor and SHGC shall be accepted to meet the requirements, or up to 15 square feet of glazed fenestration area are exempted from the U-factor and SHGC requirement based on Sections R402.3.1, R402.3.2 and R402.3.3.

(3) One side-hinged opaque door assembly up to 24 s.f. is exempted from this U-factor requirement.

(4) R-values are for insulation material only as applied in accordance with manufacturers' installation instructions. For mass walls, the "interior of wall" requirement must be met except if at least 50% of the insulation required for the "exterior of wall" is installed exterior of, or integral to, the wall.

(5) Ducts & AHU installed "substantially leak free" per Section R403.2.2. Test required by Class 1 BERS rater or as authorized by *Florida Statutes*. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope.

(6) Minimum efficiencies are those set by the National Appliance Energy Conservation Act of 1987 for typical residential equipment and are subject to NAECA rules and regulations.. For other types of equipment, see Tables C403.2.3(1-11) of the Commercial Provisions of the *Florida Building Code, Energy Conservation.*

(7) For other electric storage volumes, min. EF = 0.97 - (0.00132 * volume) ;

(8) For other natural gas storage volumes, min. EF = 0.67 - (0.0019 * volume)

TABLE R402B MANDATORY REQUIREMENTS			
Component	**Section**	**Summary of Requirement(s)**	**Check**
Air leakage	R402.4	To be caulked, gasketed, weatherstripped or otherwise sealed per Table R402.4.1.1. Recessed lighting: IC-rated as having =2.0 cfm tested to ASTM E 283. Windows and doors: 0.3 cfm/sq.ft (swinging doors: 0.5 cfm/sf) when tested to NFRC 400 or AAMA/WDMA/CSA 101/I.S. 2/A440. Fireplaces: Tight-fitting flue dampers & outdoor combustion air.	
Programmable thermostat	R403.1.2	Where forced-air furnace is primary system, a programmable thermostat is required.	
Air distribution system	R403.2.2 R403.2.4	Ducts shall be tested to Section 803 of the RESNET standards by a Class 1 BERS rater or as authorized by *Florida Statutes.* Air handling units are not allowed in attics.	
Water heaters	R403.4	Comply with efficiencies in Table C404.2. Hot water pipes insulated to = R-3 to kitchen outlets, other cases. Circulating systems to have an automatic or accessible manual OFF switch. Heat trap required for vertical pipe risers.	
Swimming pools & spas	R403.9	Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency is 82%. Heat pump pool heaters minimum COP is 4.0.	
Cooling/heating equipment	R403.6	Sizing calculation performed & attached. Special occasion cooling or heating capacity requires separate system or variable capacity system.	
Lighting equipment	R404.1	At least 75% of permanently installed lighting fixtures shall be high-efficacy lamps.	

Date Submitted	4/22/2013	**Section**	C101.1	**Proponent**	Ann Stanton
Chapter	1 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Reference Florida code, not IECC.

Rationale

Although the International Energy Conservation Code is the base document, this code will be known as the Florida Building Code, Energy Conservation and should be referenced as such.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Florida has changed the base code in a variety of ways. This section needs to reference Florida's code, not the IECC.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C101.1 Title. Change to read as shown:

Section C101.1 Title. This code shall be known as the *Florida Building Code, Energy Conservation*, ~~*International Energy Conservation Code*~~ and shall be cited as such. It is referred to herein as "this code".

Date Submitted	4/22/2013	**Section**	C101.4.10	**Proponent**	Ann Stanton
Chapter	1 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Delete reference to commercial code compliance form.

Rationale

Comment was received at the Commission meeting in February, 2013, that a universal commercial code compliance form would be too complicated to have relevance for all energy code compliance methods.
Reliance on one form would create conflicts within the updated code. It is recommended that reference to Form C402 be deleted from this section.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

There is no need for a form in this case.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C101.4.10 Limited or special use buildings. Change to read as shown:

C101.4.10 Limited or special use buildings. Buildings determined by the code official to have a limited energy use potential based on size, configuration or time occupied, or to have a special use requirement shall be considered limited or special use buildings ~~and shall comply with the code by Form C402~~. Code compliance requirements may be adjusted by the code official to handle such cases when nationally recognized energy analysis procedures have been used to demonstrate that the building would use less energy than a code compliant building of the same configuration.

Date Submitted	4/22/2013	**Section**	C101.4.9	**Proponent**	Ann Stanton
Chapter	1 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Delete Florida-specific requirements for shell buildings.

Rationale

Florida has not had a viable energy code prescriptive alternative since the 2004 edition of the Florida Building Code, which resulted in this Florida-specific way of handling shell buildings. Now that Florida is directly on the International Energy Conservation Code, there is a viable prescriptive option for commercial shell buildings. Section C101.4.9 does not adequately address those prescriptive alternatives, resulting in a conflict within the code. It is recommended that this section be deleted from the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Florida no longer needs to treat shell buildings in a manner different from the IECC. This would remove a Florida-specific treatment.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C101.4.9 Shell buildings. Delete as shown:

~~C101.4.9 Shell buildings.~~ ~~Nonresidential buildings that are permitted prior to design completion or which will be finished in sections at a time after construction of the shall comply with either Sections C402, C403, C404, C405 and C406, or with Section C407 prior to granting of a permit to build. If Sections C402, C403, C404, C405 and C406 are used, compliance with all applicable code requirements shall be demonstrated when completion of the building (or part of the building) is permitted. If Section C407 is used, all assumptions made about features not installed until later that are not on the building plans shall be listed and appended to the compliance form submitted to the building department. Unless the building is completed as per all assumptions made in the original code compliance submittal, a revised code submittal(s) shall be submitted when completion of the building (or part of the building) is permitted.~~

Date Submitted	4/22/2013	**Section**	C101.5.1	**Proponent**	Ann Stanton
Chapter	1 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Delete Florida-specific references to Form C402 except for alterations, renovations and building systems.

Rationale

Comment was received at the Commission meeting in February, 2013, that a universal commercial code compliance form would be too complicated to have relevance for all energy code compliance methods.
Reliance on one form would create conflicts within the updated code. It is recommended that Section 101.5.1 be amended to specify that the Commission approved code compliance software, but that the code official be provided the authority to determine if the information provided is adequate to determine energy code compliance. It is further recommended that Sections C101.5.1.1 and C101.5.1.2 be deleted from the code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

These requirements were (in part) in the 2010 code under Section 103.2.1

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C101.5.1 Compliance materials. Change to read as shown:

C101.5.1 Compliance materials. The Florida Building Commission shall approve specific computer software. The code official shall be permitted to approve worksheets, compliance manuals and other similar materials that meet the intent of this code. ~~Commission approved code compliance demonstration forms can be found in Table C101.5.1.~~

C101.5.1 Alterations, renovations and building systems. Alterations, renovations and building systems may utilize Form C402. Form C402 can be found in Appendix C.

~~C101.5.1.1 Residential = 3 stories. See Florida Building Code, Energy Conservation: Residential Provisions.~~

~~C101.5.1.2 Commercial and residential >3 stories.~~

~~C101.5.1.2.1 Building thermal envelope alternative. An accurately completed Commercial Building Form C402 shall be submitted to the building official for to demonstrate code compliance by this method.~~

~~C101.5.1.2.2 Simulated performance alternative, commercial and high-rise residential. An accurately completed Commercial Building Form C407 (generated by Commission approved software) demonstrating that code compliance has been achieved shall be submitted to the building official for compliance by Section C407.~~

~~C101.5.1.2.3 ASHRAE 90.1 Alternative. An accurately completed ASHRAE 90.1 form approved by the Florida Building Commission shall be submitted for compliance by this alternative.~~

~~TABLE C101.5.1~~

~~INDEX TO CODE COMPLIANCE FORMS~~

~~FORM~~	~~WHERE FOUND~~
~~Form C402~~	-
~~Florida EZ Com computer printout~~	~~Appendix C~~
~~Form C407 (Commission approved software printout)~~	
~~ASHRAE 90.1 alternative calculation printout~~	

Date Submitted	4/23/2013	**Section**	C110	**Proponent**	Ann Stanton
Chapter	1 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Delete reporting requirement for commercial buildings.

Rationale

Comment was received at the Commission meeting in February, 2013, that a universal commercial code compliance form would be too complicated to have relevance for all energy code compliance methods. As such, it would be impractical to attempt to collect and correlate data for commercial building applications. This proposal would eliminate the reporting requirement for commercial building; it would then apply only to residential buildings of three stories or less.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

This would delete the reporting requirement and thus return Florida to the IECC base in this case.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C110. Delete section as shown:

~~**SECTION C110**~~

~~**REPORTING**~~

~~**C110.0 Reporting to entity representing the Florida Building Commission.** A reporting form shall be submitted to the local building department by the owner or owner's agent with the submittal certifying compliance with this code. Reporting forms shall be a copy of the front page of the form applicable for the code chapter under which compliance is demonstrated.~~

~~**C110.1 Reporting schedule.** It shall be the responsibility of the local building official to forward the reporting section of the proper form to the entity representing the Florida Building Commission on a quarterly basis as per the reporting schedule in Table C110.1.~~

~~**TABLE C110.1**~~

~~**REPORTING SCHEDULE**~~

-

	Group I*	Group II*	Group III*
Quarter 1	12/31	1/31	2/28
Quarter 2	3/31	4/30	5/31
Quarter 3	6/30	7/31	8/31
Quarter 4	9/30	10/31	11/30

*See Appendix A of this chapter for group designations.

Date Submitted	4/22/2013	**Section**	R101.1	**Proponent**	Ann Stanton
Chapter	1 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Reference Florida code, not IECC.

Rationale

Although the International Energy Conservation Code is the base document, this code will be known as the Florida Building Code, Energy Conservation and should be referenced as such.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Florida has changed its base code in a variety of ways. This proposal references the Florida Building Code, Energy Conservation, not the IECC.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section R101.1 Title. Change to read as shown:

Section R101.1 Title. This code shall be known as the *Florida Building Code, Energy Conservation*, ~~*International Energy Conservation Code*~~ and shall be cited as such. It is referred to herein as "this code".

Date Submitted	4/22/2013	**Section**	R202	**Proponent**	Ann Stanton
Chapter	2 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Make definition of Visible transmittance consistent with IECC and the Residential provisions of the FBC-Energy Conservation.

Rationale

Comment was received during the 2013 triennial code change cycle that the definition of Visible Transmittance should be returned to the one used in the IECC. That was done for the Residential provisions of the FBC-Energy Conservation and should be changed in the Commercial provisions of FBC—Energy Conservation as well for code consistency.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

YES

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exhibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Proposal is to return to the IECC definitions.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

VISIBLE TRANSMITTANCE (VT). The ratio of visible light entering the space through the fenestration product assembly to the incident visible light, Visible Transmittance, includes the effects of glazing material and frame and is expressed as a number between 0 and 1.~~Transmittance of glazing material over the visible portion of solar spectrum~~.

Date Submitted	4/28/2013	**Section**	C2	**Proponent**	John Farinelli
Chapter	2 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Revise definition of BTU to avoid a conflict with and for consistency with the definition contained in the Florida Building Code, Mechanical Volume.

Rationale

Revise the definition of BTU to avoid a conflict with and for consistency with the definition contained in the Florida Building Code, Mechanical Volume.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides consistency within the Florida Codes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides consistency within the Florida Codes.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Does not discriminate, provides consistency within the Florida Codes.

Does not degrade the effectiveness of the code

Provides consistency within the Florida Codes.

Is the proposed code modification part of a prior code version? No

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

BTU (British Thermal Unit). ~~The standard unit for measuring heat energy, such as the heat content of fuel. It is the amount of heat energy necessary to raise the temperature of one pound of water one degree Fahrenheit. 1 BTU per minute = 17.6 watts.~~

Abbreviation for British thermal unit, which is the quantity of heat required to raise the temperature of 1 pound (454 g) of water 1ºF (0.56ºC) (1 Btu = 1055 J).

Date Submitted	4/28/2013	**Section**	C2	**Proponent**	John Farinelli
Chapter	2 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Revise the definition as shown for consistency within the code and with other Florida Building Code Volumes.

Rationale

Revise the definition as shown for consistency within the code and with other Florida Building Code Volumes.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides consistency within the Florida Codes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides consistency within the Florida Codes.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Provides consistency within the Florida Codes.

Does not degrade the effectiveness of the code

Does not discriminate, provides consistency within the Florida Codes.

Is the proposed code modification part of a prior code version? No

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

RESIDENTIAL BUILDING. For the purposes of this code, includes ~~detached one- and two-family dwellings and multiple single-family dwellings (townhouses) as well as Group R-2, R-3 and R-4~~ R-3 buildings, as well as R-2 and R-4 buildings three stories or less in height above grade.

Date Submitted	4/22/2013	**Section**	R202	**Proponent**	Ann Stanton
Chapter	2 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Replace the definition of Renovation with the definition of Renovated Buillding as per Florida law and previous Commission action for commercial buildings.

Rationale

Comment was received during the 2013 triennial code change cycle that the definition of Renovation should be returned to the one used in Florida law. That was done for the Commercial provisions of the FBC-Energy Conservation and should be changed in the Residential provisions of FBC—Energy Conservation as well for code consistency.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None. Limit the scope of the term.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. Provides clarity.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

This proposal limits the scope of Renovated Building to that contained in Florida law.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Delete Florida-specific definition of Renovation and add the definition of Renovated Building from Florida law as shown below:

Renovated Building. A residential or nonresidential building undergoing alteration that varies or changes insulation, HVAC systems, water heating systems, or exterior envelope conditions, provided the estimated cost of renovation exceeds 30 percent of the assessed value of the structure.

~~Any structural repair, reconstruction or restoration to a structure, the costs of which equals or exceeds, over a 1-year period, a cumulative total of 30 percent of the assessed value of the structure when that value is assessed, either:~~

~~1. Before the improvement or repair is started; or~~

~~2. Before the damage occurred, if the structure has been damaged.~~

~~For the purposes of this Code, renovation occurs when the first alteration of any wall, ceiling, floor, or other structural part or mechanical system of the building commences, whether or not that alteration affects the external dimensions of the structure.~~

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Correct Table C403.2.3(1) to agree with federal standards.

Rationale

This proposed change addresses the need to update standards for small-duct, high-velocity systems to be consistent with federal law. Without this change the Florida Building Code, Energy Conservation's Commercial Provisions would not meet the U.S Department of Energy requirements issued in Section 5 of the 2012 American Energy Manufacturing Technical Corrections Act for small-duct high-velocity system requirements. The correction for "air conditioners, evaporatively cooled, =240,000 Btu/h and ~760,000 Btu/h, "All other" heating systems, is taken from Table 3 to Section 431.97 noticed in 77 Federal Register 28991 dated May 16, 2012, as amended at 77 FR 76830 dated December 31, 2012

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None. These are national standards.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

- [ ] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [X] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Table C403.2.3(1). Remove column "Before 6/1/2011" and the heading "As of 6/1/2011" from the Minimum Efficiency column. Change the ratings for small-duct, high velocity systems as shown and correct the rating for "air conditioners, evaporatively cooled, =240,000 Btu/h and <760,000 Btu/h" as shown. Correct referenced standards footnote to read Chapter 5. Add a definition for small-duct high-velocity systems.

TABLE C403.2.3(1)

MINIMUM EFFICIENCY REQUIREMENTS

ELECTRICALLY OPERATED UNITARY AIR CONDITIONERS AND CONDENSING UNITS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency ~~Before 6/1/2011~~ ~~As of 6/1/2011~~	Test Procedure[a]
Air Conditioners, air cooled	<65,000 Btu/h[b]	All	Split System	13 SEER	AHRI 210/240
			Single Package	13 SEER	
Through-the wall, air-cooled	=30,000 Btu/h[b]	All	Split system	12 SEER	
			Single Package	12 SEER	
Small-duct, high-velocity systems (air cooled)	<65,000 Btu/h[b]	All	Split system or Single Package	11.0 ~~10.0~~ SEER (before 1/1/2015 12.0 SEER (as of 1/1/2015)	
Air Conditioners, air cooled	=65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or none)	Split System and Single Package	11.2 EER 11.4 IEER	AHRI 340/360
		All other	Split System and Single Package	11.0 EER 11.2 IEER	
	=135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or none)	Split System and Single Package	11.0 EER 11.2 IEER	
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	=240,000 Btu/h and <760,000 Btu/h	Electric	Split System and Single Package	10.0 EER,	

		Resistance (or none)		10.1 IEER	
		All other	Split System and Single Package	9.8 EER 9.9 IEER	
	=760,000 Btu/h	Electric Resistance (or none)	Split System and Single Package	9.7 EER, 9.8 IEER	
		All other	Split System and Single Package	9.5 EER 9.6 IEER	
Air Conditioners, water Cooled	<65,000 Btu/h[b]	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	=65,000 Btu/h and <135,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 340/360
		All other	Split System and Single Package	11.9 EER 12.1 IEER	
	=135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	12.5 EER 12.7 IEER	
		All other	Split System and Single Package	12.3 EER 12.5 IEER	
	=240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	12.4 EER 12.6 IEER	
		All other	Split System and Single Package	12.2 EER 12.4 IEER	
	=760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	12.2 ~~0~~ EER 12.4 IEER	
		All other	Split System and Single Package	12.0 EER 12.2 IEER	
Air Conditioners, evaporatively cooled	<65,000 Btu/h[b]	All	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 210/240
	=65,000 Btu/h and <135,000 Btu/h	Electric Resistance	Split System and Single Package	12.1 EER 12.3 IEER	AHRI 340/360

		(or None)			
		All other	Split System and Single Package	11.9 EER 12.1 IEER	
	=135,000 Btu/h and <240,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	12.0 EER 12.2 IEER	
		All other	Split System and Single Package	11.8 EER 12.0 IEER	
	=240,000 Btu/h and <760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.9 EER 12.1 IEER	
		All other	Split System and Single Package	11.7 ~~12.2~~ EER 11.9 IEER	
	=760,000 Btu/h	Electric Resistance (or None)	Split System and Single Package	11.7 EER 11.9 IEER	
		All other	Split System and Single Package	11.5 EER 11.7 IEER	
Condensing units, air cooled	=135,000 Btu/h			10.5 EER 14.0 IEER	AHRI 365
Condensing units, water cooled	=135,000 Btu/h			13.5 EER 14.0 IEER	
Condensing units, evaporatively cooled	=135,000 Btu/h			13.5 EER 14.0 IEER	

For SI: 1 British thermal unit per hour = 0.2931 W.

[a] Chapter 5, ~~6 of the~~ rReferenced sStandards, contains a complete specification of the reference test procedure, including the reference year version of the test procedure.

[b]Single-phase, air-cooled air-conditioners <65,000 Btu/h are regulated by NAECA. SEER values are those set by NAECA.

Chapter 2, Definitions:

SMALL DUCT, HIGH VELOCITY SYSTEM. A heating and cooling product that contains a blower and indoor coil combination that meets the following:

1) is designed for, and produces, at least 1.2 inches of external static pressure when operated at the certified air volume rate of 220-350 CFM per rated ton of cooling; and

2) when applied in the field, uses high velocity room outlets generally greater than 1,000 fpm that have less than 6.0 square inches of free area.

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Correct Table C403.2.3(2) to agree with federal standards.

Rationale

This proposed change addresses the need to update standards for through-the-wall (space constrained) products and small-duct, high-velocity systems to be consistent with federal law. Without this change the Florida Building Code, Energy Conservation's Commercial Provisions would not meet the U.S Department of Energy requirements issued in 78 Federal Register, No. 210, dated October 31, 2011 for space constrained products and Section 5 of the 2012 American Energy Manufacturing Technical Corrections Act for small-duct high-velocity system requirements.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None. These are federal standards.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

[ ] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[X] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Table C403.2.3(2). Change the criteria for through-the-wall and small-duct, high velocity systems to read as shown. Fix the reference to the Referenced Standards, Chapter 5.

TABLE C403.2.3(2)

MINIMUM EFFICIENCY REQUIREMENTS

ELECTRICALLY OPERATED UNITARY AND APPLIED HEAT PUMPS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure[a]
Air Cooled (Cooling mode)	<65,000 Btu/h[b]	All	Split System	13.0 SEER	AHRI 210/240
			Single Package	13.0 SEER	
Through-the Wall, space constrained Air-cooled cooling mode	=30,000 Btu/h[b]	All	Split System	12.0 ~~13.0~~ SEER	
			Single Package	12.0 ~~13.0~~ SEER	
Small ~~Single~~-duct, high-velocity, air cooled	<65,000 Btu/h[b]	All	Split system	11.0 ~~10.0~~ SEER (before 1/1/2015) 12.0 SEER (as of 1/1/2015)	
Air cooled (cooling mode)	=65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	Split System and Single Package	11.0 EER 11.2 IEER	AHRI 340/360
		All other	Split System and Single Package	10.8 EER 11.0 IEER	
	=135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	Split System and Single Package	10.6 EER 10.7 IEER	
		All other	Split System and Single Package	10.4 EER 10.5 IEER	
	=240,000 Btu/h	Electric resistance (or	Split System and	9.5 EER	

		none)	Single Package	9.6 IEER	
		All other	Split System and Single Package	9.3 EER 9.4 IEER	
Water source (cooling mode)	<17,000 Btu/h	All	86°F entering water	11.2 EER	ISO 13256-1
	=17,000 Btu/h and <65,000 Btu/h	All	86°F entering water	12.0 EER	
	=65,000 Btu/h and <135,000 Btu/h	All	86°F entering water	12.0 EER	
Ground water source (cooling mode)	<135,000 Btu/h	All	59°F entering water	16.2 EER	
		All	77°F entering water	13.4 EER	
Water-source water to water (cooling mode)	<135,000 Btu/h	All	86°F entering water	10.6 EER	
			59°F entering water	16.3 EER	
Ground water source – Brine to water (cooling mode)	<135,000 Btu/h	All	77°F entering water	12.1 EER	ISO 13256-2
Air cooled (heating mode)	<65,000 Btu/h[b]	--	Split system	7.7 HSPF	AHRI 210/240
		--	Single package	7.7 HSPF	
Through the wall, space constrained (Air cooled, heating mode)	=30,000 Btu/h[b] (cooling capacity)	--	Split system	7.4 HSPF	
		--	Single package	7.4 HSPF	
Small-duct high velocity (air cooled, heating mode)	<65,000 Btu/h[b]	---	Split system	6.8 HSPF (before 1/1/2015) 7.2 HSPF (as of 1/1/2015)	
Air cooled (heating mode)	=65,000 Btu/h and		47° db/43° wb Outdoor Air	3.3 COP	AHRI 340/360

	<135,000 Btu/h (cooling capacity)	---	17° db/15° wb Outdoor Air	2.25 COP	
	=135,000 Btu/h (cooling capacity)	---	47° db/43° wb Outdoor Air	3.2 COP	
			17° db/15° wb Outdoor Air	2.05 COP	
Water source (heating mode)	<135,000 Btu/h (cooling capacity)	---	68°F entering water	4.2 COP	ISO 13256-1
Ground water source (heating mode)	<135,000 Btu/h (cooling capacity)	---	50°F entering water	3.6 COP	
Ground source (heating mode)	<135,000 Btu/h (cooling capacity)	---	32°F entering water	3.1 COP	
Water-source water to water (heating mode)	<135,000 Btu/h (cooling capacity)	---	68°F entering water	3.7 COP	ISO 13256-2
		---	50°F entering water	3.1 COP	
Ground source brine to water (heating mode)	<135,000 Btu/h (cooling capacity)	---	32°F entering fluid	2.5 COP	

For SI : 1 British thermal unit per hour = 0.2931 W, °C = [(°F) – 32]/1.8

[a] Chapter 5, ~~6 of the r~~Referenced ~~s~~Standards, contains a complete specification of the referenced test procedure, including the reference year version of the test procedure.

[b] Single-phase, air-cooled air-conditioners less than 65,000 Btu/h are regulated by NAECA. SEER values are those set by NAECA.

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Update and correct errors on Table C403.2.3(3)

Rationale

This proposed change addresses the need to remove the column for “Before 10/08/2012”, which contains outdated standard efficiencies. There are also corrections for Packaged Terminal Heat Pumps (heating mode), which can be verified in the US DOE notice 77 Federal Register 28991 dated May 16, 2012, as amended at 77 FR 76830 dated December 31, 2012.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None. These are federal standards.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

- [ ] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [X] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Table C403.2.3(3). Delete row "Before 10/08/201"and the title "As of 10/08/2012". Correct PTHP (heating mode), new construction, as shown. Correct footnotes to reference a unit and the Referenced Standards in Chapter 5.

TABLE C403.2.3(3)

MINIMUM EFFICIENCY REQUIREMENTS

ELECTRICALLY OPERATED PACKAGED TERMINAL AIR CONDITIONERS, PACKAGED TERMINAL HEAT PUMPS, SINGLE-PACKAGE VERTICAL AIR CONDITIONERS, SINGLE-PACKAGE VERTICAL HEAT PUMPS, ROOM AIR CONDITIONERS, AND ROOM AIR CONDITIONERS HEAT PUMPS

Equipment Type	Size Category (Input)	Subcategory or Rating Condition	Minimum Efficiency ~~Before 10.08/2012~~ ~~As of 10/08/2012~~	Test Procedure[a]
PTAC (Cooling Mode), New Construction	All capacities	95°F db Outdoor Air	13.8 – (0.300 x Cap./1000) EER	AHRI 310/380
PTAC (Cooling Mode), Replacements[b]	All capacities	95°F db Outdoor Air	10.9 – (0.213 x Cap./1000) EER	
PTHP (Cooling Mode), New Construction	All capacities	95°F db Outdoor Air	14.0 – (0.300 x Cap./1000) EER	
PTHP (Cooling Mode), Replacements[b]	All capacities	95°F db Outdoor Air	10.8 – (0.213 x Cap./1000) EER	
PTHP (Heating Mode), New Construction	All capacities	---	3.72 – (0.0526 x Cap./1000) COP	
PTHP (Heating Mode), Replacements[b]	All capacities	---	2.9 – (0.026 x Cap./1000) COP	
SPVAC (cooling mode)	< 65,000 Btu/h	95°F db/75°F wb Outdoor Air	9.0 EER	AHRI 390
	=65,000 Btu/h and <135,000 Btu/h	95°F db/75°F wb Outdoor Air	8.9 EER	
	=135,000 Btu/h and <240,000 Btu/h	95°F db/75°F wb Outdoor Air	8.6 EER	
SPVHP (cooling mode)	< 65,000 Btu/h	95°F db/75°F wb Outdoor Air	9.0 EER	
	=65,000 Btu/h and <135,000 Btu/h	95°F db/75°F wb Outdoor Air	8.9 EER	
	=135,000 Btu/h and <240,000 Btu/h	95°F db/75°F wb Outdoor Air	8.6 EER	

SPVHP (heating mode)	< 65,000 Btu/h	95°F db/75°F wb Outdoor Air	9.0 EER	AHRI 390
	<65,000 Btu/h	47°F db/43°F wb Outdoor Air	3.0 COP	
	=65,000 Btu/h and <135,000 Btu/h	47°F db/43°F wb Outdoor Air	3.0 COP	
	=135,000 Btu/h and <240,000 Btu/h	47°F db/43°F wb Outdoor Air	2.9 COP	
Room Air Conditioner with Louvered Sides	<6,000 Btu/h	---	9.7 EER	ANSI/AHAM RAC-1
	=6,000 Btu/h and <8,000 Btu/h	---	9.7 EER	
	=8,000 Btu/h and <14,000 Btu/h	---	9.8 EER	
	=14,000 Btu/h and <20,000 Btu/h	---	9.7 EER	
	=20,000 Btu/h	---	8.5 EER	
Room Air Conditioner without Louvered Sides	<8,000 Btu/h	---	9.0 EER	
	=8,000 Btu/h and <20,000 Btu/h	---	8.5EER	
	=20,000 Btu/h	---	8.5 EER	
Room Air-Conditioner heat pumps with Louvered Sides	<20,000 Btu/h	---	9.0 EER	
	=20,000 Btu/h	---	8.5EER	
Room Air-Conditioner heat pumps without Louvered Sides	<14,000 Btu/h	---	8.5 EER	
	=14,000 Btu/h	---	8.0EER	
Room air conditioner casement only	All capacities	---	8.7 EER	
Room air conditioner casement-slider	All capacities	---	9.5 EER	

For SI: 1 British thermal unit per hour+ 0.2931 W, °C= [(°F) – 32]/1.8.

"Cap" = The rated cooling capacity of the product ~~project~~ in Btu/h. If the unit's capacity is less than 7,000 Btu/h, use 7,000 Btu/h in the calculation. If the unit's capacity is greater than 15,000 Btu/h, use 15,000 Btu/h in the calculations.

[a] Chapter 5, Referenced Standards ~~6 of the referenced standard~~, contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

[b] Replacement units shall be factory labeled as follows: "MANUFACTURED FOR REPLACEMENT APPLICATIONS ONLY; NOT TO BE INSTALLED IN NEW CONSTRUCTION PROJECTS." Replacement efficiencies apply only to units with existing sleeves less than 16 inches (406 mm) in height and less than 42 inches (1067 mm) in width.

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Add a new table to put federal standards for a/c and condensing units serving computer rooms in the code.

Rationale

This proposed change addresses the need to cover computer room air conditioners to be consistent with federal law. Without this change the Florida Building Code, Energy Conservation's Commercial Provisions would not meet the requirements of Table 7 to S. 431.97, Minimum Efficiency Standards for Computer Room Air Conditioners, published in 77 Federal Register 28991, dated May 16, 2012, as amended at 77 FR 76830 dated December 31, 2012.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. This will bring visibility to the federal standard for computer room air conditioners.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

[ ] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[X] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Add a new table to read as shown. Add definition of equipment to Chapter 2 and add the appropriate standard to Chapter 5.

TABLE C403.2.3(10)

MINIMUM EFFICIENCY AIR CONDITIONERS AND CONDENSING UNITS

SERVING COMPUTER ROOMS

-

Equipment Type	Net Sensible Cooling Capacity[a]	Minimum SCOP-127[b] Efficiency Downflow units/Upflow units	Test Procedure
Air conditioners, air cooled	<65,000 Btu/h	2.20/2.09	ANSI/ASHRAE 127
	=65,000 Btu/h and <240,000 Btu/h	2.10/1.99	
	=240,000 Btu/h	1.90/1.79	
Air conditioners, water cooled	<65,000 Btu/h	2.60/2.49	
	=65,000 Btu/h and <240,000 Btu/h	2.50/2.39	
	=240,000 Btu/h	2.40/2.29	
Air conditioners, water cooled with fluid economizer	<65,000 Btu/h	2.55/2.44	
	=65,000 Btu/h and <240,000 Btu/h	2.45/2.34	
	=240,000 Btu/h	2.35/2.24	
Air conditioners, glycol cooled (rated at 40% propylene glycol)	<65,000 Btu/h	2.50/2.39	
	=65,000 Btu/h and <240,000 Btu/h	2.15/2.04	
	=240,000 Btu/h	2.10/1.99	
Air conditioners, glycol cooled (rated at 40% propylene glycol) with fluid economizer	<65,000 Btu/h	2.45/2.34	
	=65,000 Btu/h and <240,000 Btu/h	2.10/1.99	
	=240,000 Btu/h	2.05/1.94	

a. **Net sensible cooling capacity: The total gross cooling capacity less the latent cooling less the energy to the air movement system. (Total Gross – latent – Fan Power)**
b. **Sensible coefficient of performance (SCOP-127): a ratio calculated by dividing the net sensible cooling capacity in watts by the total powerinput in watts (excluding re-heaters and humidifiers) at conditions defined in ASHRAE Standard 127. The net sensible cooling capacity is the gross sensible capacity minus the energy dissipated into the cooled space by the fan system.**

-

-

CHAPTER 2 DEFINITIONS

-

Add new definition as follows:

-

SECTION C202

GENERAL DEFINITIONS

-

COMPUTER ROOM. A room whose primary function is to house equipment for the processing and storage of electronic data and that has a design electronic data equipment power density exceeding 20 watts/ft^2 of conditioned floor area.

-

-

CHAPTER 5 REFERENCED STANDARDS

-

Add a new standard to read as follows:

-

CHAPTER 5

REFERENCED STANDARDS

-

ASHRAE

-

127-07 Method of Testing for Raining Computer and Data Processing

Room Unitary Air Conditioners Table C403.2.3(10)

-

-

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Uupdate Table C403.2.3(7) to delete outdated standards.

Rationale

This proposed change addresses the need to remove the column for “Before 1/1/2010”, which contains outdated standard efficiencies.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

- [ ] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [X] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Table C403.2.3(7), Minimum Efficiency Requirements: Water Chilling Packages. Delete the column "Before 1/1/2012" and remove the header of the column "As of 1/1/2010" as shown. Correct reference to Referenced Standards, Chapter 5.

Table C403.2.3(7)

Minimum Efficiency Requirements:

Water Chilling Packages

Equipment Type	Size Category	Units	~~As of 1/1/2010~~				Test Procedure
			Path A		Path B		
			Full Load	IPLV	Full Load	IPLV	
[No other change to table contents]							

a., b. [No change]

c. Chapter 5, Referenced Standards, ~~6 of the referenced standard~~ contains a complete specification of the referenced test procedure, including the referenced year version of the test procedure.

EN6100

Date Submitted	4/22/2013	**Section**	C403.2.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Add Table to include federal standards for viariable refrigerant flow multi-split air conditioners and heat pumps.

Rationale

This proposed change addresses the need to cover variable refrigerant flow multi-split air conditioners and heat pumps, that must be addressed to be consistent with federal law. Without this change the Florida Building Code, Energy Conservation's Commercial Provisions would not meet the requirements of Table 8 to S. 431.97, Minimum Efficiency Standards for Variable Refrigerant Flow Multi-Split Air Conditioners and Heat Pumps, published in 77 Federal Register 28991, dated May 16, 2012, as amended at 77 FR 76830 dated December 31, 2012.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None. This mod would give visibility to federal standards for multi-split air conditioners and heat pumps, which were previously not covered by the code.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

[ ] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[X] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Add a table for variable refrigerant flow multi-split air conditioners and heat pumps as shown. Define this equipment and add to Chapter 5, Referenced Standards as shown.

TABLE C403.2.3(11)

MINIMUM EFFICIENCY REQUIREMENTS

VARIABLE REFRIGERANT FLOW MULTI-SPLIT AIR CONDITIONERS AND HEAT PUMPS

Equipment Type	Size Category	Heating Type[a]	Minimum Efficiency	Test Procedure[b]
VRF Multi-Split Air Conditioners (Air-cooled)	<65,000 Btu/h	All	13.0 SEER	AHRI 1230 (omit sections 5.1.2 and 6.6)
	=65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	11.2 EER	
		All other	11.0 EER	
	=240,000 Btu/h and <760,000 Btu/h	Electric resistance (or none)	10.0 EER	
		All other	9.8 EER	
	=135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	11.0 EER	
		All other	10.8 EER	
	=240,000 Btu/h and < 760,000 Btu/h	Electric resistance (or none)	10.0 EER	
		All other	9.8 EER	
VRF Multi-Split Heat Pumps (Air-cooled)	<65,000 Btu/h	All	13.0 SEER 7.7 HSPF	
	=65,000 Btu/h and <135,000 Btu/h	Electric resistance (or none)	11.0 EER 3.3 COP	
		All other	10.8 EER 3.3 COP	
	=135,000 Btu/h and <240,000 Btu/h	Electric resistance (or none)	10.6 EER 3.2 COP	
		All other	10.4 EER	

			3.2 COP
	=240,000 Btu/h and < 760,000 Btu/h	Electric resistance (or none)	9.5 EER 3.2 COP
		All other	9.8 EER
VRF Multi-Split Air Conditioners (Water-source)	<17,000 Btu/h	Without heat recovery	12.0 EER 4.2 COP
		With heat recovery	11.8 EER 4.2 COP
	=17,000 Btu/h and <65,000 Btu/h	All	12.0 EER 4.2 COP
	=65,000 Btu/h and <135,000 Btu/h	All	12.0 EER 4.2 COP
	=135,000 Btu/h and <760,000 Btu/h	Without heat recovery	10.0 EER 3.9 COP
		With heat recovery	9.8 EER 3.9 COP

For SI : 1 British thermal unit per hour = 0.2931 W, $^{o}C = [(^{o}F) - 32]/1.8$

[a] VRAF Multi-Split Heat Pumps (air-cooled) with heat recovery fall under the category of "All Other Types of Heating" unless they also have electric resistance heating, in which case it falls under the category for "No Heating or Electric Resistance Heating."

[b] Chapter 5, Referenced Standards, contains a complete specification of the referenced test procedure, including the reference year version of the test procedure.

CHAPTER 2 DEFINITIONS

VARIABLE REFRIGERANT FLOW MULTI-SPLIT AIR CONDITIONER. A Unit of commercial package air-conditioning and heating equipment that is configured as a split system air conditioner incorporating a single refrigerant circuit, with one or more outdoor units, at least one variable-speed compressor or an alternate compressor combination for varying the capacity of the system by three or more steps, and multiple indoor fan coil units, each of which is individually metered and individually controlled by an integral control device and common communications network and which can operate independently in response to multiple indoor thermostats. Variable refrigerant flow implies three or more steps of capacity control on common, inter-connecting piping.

CHAPTER 5 REFERENCED STANDARDS

AHRI 1230-2010	Performance Rating of Variable Refrigerant Flow (VRF)	
With Addendum 1	Multi-Split Air-Conditioning and Heat Pump Equipment	Table C403.2.3(11)

Date Submitted	4/22/2013	**Section**	C405.7.5	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Remove criteria for motors.

Rationale

This proposed change addresses the need to update standards in the code for open and enclosed motors to be consistent with federal law. Both federal law (77 Federal Register 26635, dated May 4, 2012.) and ASHRAE have updated their motor standards since these efficiency levels were put in Florida's energy code. Motor efficiencies are not included in the IECC. Removing the motor requirements from the Florida Building Code, Energy Conservation, leaves the correct efficiencies in place in ASHRAE 90.1-2010, as regulated by the US Dept. of Energy.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

These standards have been replaced by federal standards for motors

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes. These standards are out of date and have been replaced at the federal level. Motors are not regulated in the IECC.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No.

Is the proposed code modification part of a prior code version? No

- [ ] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [X] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C405.7.5 Electric motors. Delete in its entirety as shown:

C405.7.5 Electric motors. Electric motors shall comply with the requirements of the Energy Policy Act of 1992 where applicable, as shown in Table C405.7.5. Motors that are not included in the scope of the Energy Policy Act have no performance requirements in this section.

-

TABLE C405.7.5

MINIMUM NOMINAL EFFICIENCY FOR

GENERAL PURPOSE Design A and Design B Motors[1]

	Minimal Nominal Full-Load Efficiency (%)					
	Open Motors			Enclosed Motors		
Number of Poles	2	4	6	2	4	6
Synchronous speed (RPM)	3600	1800	1200	3600	1800	1200
	Motor Horsepower					
1.0	---	82.5	80.0	75.5	82.5	80.0
1.5	82.5	84.0	84.0	82.5	84.0	85.5
2.0	84.0	84.0	85.5	84.0	84.0	86.5
3.0	84.0	86.5	86.5	85.5	87.5	87.5
5.0	85.5	87.5	87.5	87.5	87.5	87.5
7.5	87.5	88.5	88.5	88.5	89.5	89.5
10.0	88.5	89.5	90.2	89.5	89.5	89.5
15.0	89.5	91.0	90.2	90.2	91.0	90.2
20.0	90.2	91.0	91.0	90.2	91.0	90.2
25.0	91.0	91.7	91.7	91.0	92.4	91.7
30.0	91.0	92.4	92.4	91.0	92.4	91.7
40.0	91.7	93.0	93.0	91.7	93.0	93.0
50.0	92.4	93.0	93.0	92.4	93.0	93.0
60.0	93.0	93.6	93.6	93.0	93.6	93.6
75.0	93.0	94.1	93.6	93.0	94.1	93.6

100.0	93.0	94.1	94.1	93.6	94.5	94.1
125.0	93.6	94.5	94.1	94.5	94.5	94.1
150.0	93.6	95.0	94.5	94.5	95.0	95.0
200.0	94.5	95.0	94.5	95.0	95.0	95.0

[1] Nominal efficiencies shall be established in accordance with NEMA Standard MG1. Design A and Design B are National Electric Manufacturers Association (NEMA) design class designations for fixed frequency small and medium AC squirrel-cage induction motors.

Date Submitted	4/24/2013	**Section**	C407.3	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Clarify that energy prices used in the performance calculation shall be those contained in the computer program approved by the Florida Building Commission.

Rationale

If the energy cost used by a designer to demonstrate energy code compliance can be a chosen variable, it can be used to "game" code compliance. However, the Commission should not have to approve energy costs separate from those contained in energy code compliance software. This proposal would limit action on energy prices to those contained in the compliance software.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

OTHER

Explanation of Choice

Energy prices in Florida are not consistent with prices elsewhere in the country. Those prices should be consistent among computer programs and be representative of actual energy costs because the commercial energy code compliance is determined by use of the cost of energy for that locations.

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C407.3 Change section to read as shown:

C407.3 Performance-based compliance. Compliance based on total building performance requires that a proposed building (*proposed design)* be shown to have an annual energy cost that is less than or equal to the annual energy cost of the *standard reference design.* Energy prices used in the total building performance compliance calculation shall be those contained in software approved by the Florida Building Commission. ~~taken from a source *approved* by the *code official,* such as the Department of Energy, Energy Information Administration's *State Energy Price and Expenditure Report. Code officials* shall be permitted to require time-of-use pricing in energy cost calculations.~~ Nondepletable energy collected off site shall be treated and priced the same as purchased energy. Energy from nondepletable energy sources collected on site shall be omitted from the annual energy cost of the *proposed design.*

EN6102

Date Submitted	4/22/2013	**Section**	C407.4	**Proponent**	Ann Stanton
Chapter	4 (CE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Remove reference to Section C101.5.1.

Rationale

If Section C101.5.1 is deleted because of potential conflicts in reporting forms among different code compliance methodologies, it should not be referenced from this section.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Section C407.4 Documentation. Change to read as shown:

C407.4 Documentation. Documentation verifying that the methods and accuracy of compliance software tools conform to the provisions of this section shall be provided to the Florida Building Commission ~~code official~~. Computer software utilized for demonstration of code compliance shall have been approved by the Florida Building Commission in accordance with requirements of this code.

C407.4.1 Compliance report. Compliance software tools used to demonstrate code compliance by Section C407 shall generate a report that documents that the *proposed design* has annual energy costs less than or equal to the annual energy costs of the *standard reference design* ~~(see Section C101.5.1).~~ The compliance documentation shall include the following information:

1. Address of the building;

2. An inspection checklist documenting the building component characteristics of the *proposed design* as *listed* in Table C407.5.1(1). The inspection checklist shall show the estimated annual energy cost for both the *standard reference design* and the *proposed design;*

3. Name of individual completing the compliance report; and

4. Name and version of the compliance software tool.

C407.4.2 Additional documentation. The *code official* shall be permitted to require the following documents:

[no change to rest of section]

EN6106

Date Submitted	4/22/2013	**Section**	R405.4	**Proponent**	Ann Stanton
Chapter	4 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Change Section 405.4 to be Florida-specific, require Commission approval of code compliance software, and add the requirement for the EPL Display Car consistent with Section 401.3.

Rationale

Provisions in this proposed mod include Florida specific material contained elsewhere in the Residential provisions of the energy code (Sections R101.5.1, R401.3) and mirror similar Florida-specific changes in Section C407.4 of the Commercial provisions of the Florida Building Code, Energy Conservation. These provisions are intended to ensure consistency of code compliance and documentation among Florida's code jurisdictions. Section R405.4 needs to be fixed to correlate with both other Residential sections of the energy code and documentation provisions of the Commercial energy code.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None. Provides continued uniformity of code compliance.

Impact to building and property owners relative to cost of compliance with code

None

Impact to industry relative to the cost of compliance with code

None

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No

Does not degrade the effectiveness of the code

No

Is the proposed code modification part of a prior code version? No

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

Replace IECC provisions for code compliance documentation for Residential applications of the Energy Conservation code with Florida-specific provisions as shown below:

R405.4 Documentation. Documentation of the software used for the performance design and the parameters for the building shall be in accordance with Sections R405.4.1 through R405.4.3.

R405.4.1 Compliance software tools. Computer software utilized for demonstration of code compliance shall have been approved by the Florida Building Commission in accordance with requirements of this code. ~~Documentation verifying that the methods and accuracy of the compliance software tools conform to the provisions of this section shall be provided to the code official~~.

R405.4.2 Compliance report. Compliance software tools used to demonstrate code compliance by Section R405 shall generate a report that documents that the *proposed design*complies with Section R405.3 (see Section R101.5.1). The compliance documentation shall include the following information:

1. Address or other identification of the residence;

2. An inspection checklist documenting the building component characteristics of the *proposed design*as listed in Table R405.5.2(1). The inspection checklist shall show results for ~~both the *standard reference design* and~~ the *proposed design*, and shall document all inputs entered by the user necessary to reproduce the results;

3. Name of individual completing the compliance report; and

4. Name and version of the compliance software tool.

Exception: Multiple orientations. When an otherwise identical building model is offered in multiple orientations compliance for any orientation shall be permitted by documenting that the building meets the performance requirements in each of the four cardinal (north, east, south and west) orientations.

R405.4.3 Additional documentation. The *code official* shall be permitted to require the following documents:

~~1. Documentation of the building component characteristics of the standard reference design.~~

1.~~2~~ Verification that an EPL Display Card signed by the builder providing the building component characteristics of the *proposed design*will be provided to the purchaser of the home at time of title transfer. ~~A certification signed by the builder providing the building component characteristics of the proposed design as given in Table R405.5.2(1).~~

2. Documentation of the component efficiencies ~~actual values~~ used in the software calculations for the *proposed design.*

Date Submitted	4/24/2013	**Section**	R405.5.2	**Proponent**	Jeff Sonne / FSEC
Chapter	4 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Summary of Modification

Modify Table R405.5.2(1) to provide Standard Reference and Proposed Design specifications for thermal distribution systems.

Rationale

The Standard Reference Design specification for Thermal distribution systems is blank in the IECC 2012 base code. It is not possible to perform the calculations necessary for performance-based compliance without a specification for the Standard Reference Design Thermal distribution systems. Proposed Design specifications for duct and air handler locations are also made in this mod to further clarify the calculations. The specifications proposed are the same as the specifications in the 2009 IECC.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Specification assists code enforcement by providing consistent reference.

Impact to building and property owners relative to cost of compliance with code

None; same methodology used in current Florida Code.

Impact to industry relative to the cost of compliance with code

None.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes; needed to complete performance calculations.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Virtually the same as current code.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No.

Does not degrade the effectiveness of the code

No.

Is the proposed code modification part of a prior code version?

YES

The provisions contained in the proposed amendment are addressed in the applicable international code?

NO

The amendment demonstrates by evidence or data that the geographical jurisdiction of Florida exihibits a need to strengthen the foundation code beyond the needs or regional variation addressed by the foundation code and why the proposed amendment applies to the state?

YES

The proposed amendment was submitted or attempted to be included in the foundation codes to avoid resubmission to the Florida Building Code amendment process?

NO

[X] (a.) Conflicts within the updated code;

[ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;

[ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;

[ ] (d.) Equivalency of standards;

[ ] (e.) Changes to or inconsistencies with federal or state law;

[ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

[Modify Table R405.5.2(1) as follows:]

TABLE R405.5.2(1) SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Thermal distribution systems	Distribution System Efficiency: 0.88	Thermal distribution system efficiency shall be as tested or as specified in Table R405.5.2(2) if not tested.
	Duct location: entirely within the building thermal envelope	As proposed
	Air Handler location: entirely within the building thermal envelope	As proposed
	Duct insulation: R-6	As proposed~~Duct insulation shall be as proposed.~~

[No other changes to table.]

EN6179

Date Submitted	4/24/2013	**Section**	R405.5.2	**Proponent**	Jeff Sonne / FSEC
Chapter	4 (RE)	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation Pending Review
Commission Action Pending Review

Related Modifications

Mod 5677 / code section R403.2.2

Summary of Modification

Modify Table R405.5.2(1) to provide a thermal distribution system testing reference for Proposed Designs.

Rationale

Consistency with FBC approved 2013 code language in mod EN5677-R1.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

None; testing clarification and consistency only.

Impact to building and property owners relative to cost of compliance with code

None; testing clarification and consistency only.

Impact to industry relative to the cost of compliance with code

None; testing clarification and consistency only.

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes; provides clarification and consistency.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes; improves code by providing testing clarification and consistency.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

No; testing clarification and consistency only.

Does not degrade the effectiveness of the code

No; testing clarification and consistency only.

Is the proposed code modification part of a prior code version? No

- [X] (a.) Conflicts within the updated code;
- [ ] (b.) Conflicts between the updated code and the Florida Fire Prevention Code adopted pursuant to chapter 633;
- [ ] (c.) Unintended results from the integration of previously adopted Florida-specific amendments with the model code;
- [ ] (d.) Equivalency of standards;
- [ ] (e.) Changes to or inconsistencies with federal or state law;
- [ ] (f.) Adoption of an updated edition of the National Electrical Code if the commission finds that delay of implementing the updated edition causes undue hardship to stakeholders or otherwise threatens the public health, safety, and welfare.

[Modify Table R405.5.2(1) as follows:]

TABLE R405.5.2(1) SPECIFICATIONS FOR THE STANDARD REFERENCE AND PROPOSED DESIGNS

BUILDING COMPONENT	STANDARD REFERENCE DESIGN	PROPOSED DESIGN
Thermal distribution systems		Thermal distribution system efficiency shall be as tested in accordance with Section 803 of RESNET Standards or as specified in Table R405.5.2(2) if not tested. Duct insulation shall be as proposed.

[No other changes to table.]