Code Change Review Summary

Residential 2018 IECC changes with respect to the 2015 IECC and 2017 Florida Energy Code (FEC) are summarized in Table A. Sections of the ICC's *Complete Revision History to the 2018 I-Codes* document that contain the full code write-ups for these changes are included below in Table A. Table A contains six columns as follows:

2018 IECC Section and Title: The 2018 IECC code section number and title for the code change.

ICC Code Change No.: Proposed code change number in the ICC's *Complete Revision History to the 2018 I-Codes* document. This code change number is linked to its corresponding section in the abridged Revision History document below Table A.

Change Summary b/t 2015 IECC and 2018 IECC: Brief description of the code change between the 2015 IECC and 2018 IECC.

Change Summary b/t 2017 FEC and 2018 IECC: Brief description of the code change between the 2017 FEC and 2018 IECC.

Anticipated Energy Impact on FEC if Adopted: Anticipated energy use impact from the code change if it is adopted in the FEC. "None" means the code change has no or negligible anticipated impact on energy use.

Anticipated Cost Impact on FEC if Adopted: Anticipated construction cost impact from the code change if it is adopted in the FEC. "None" means the code change has no or negligible anticipated impact on construction cost.

Table A. Residential Code Change Summary for 6th Edition (2017) Florida Energy Code vs. 2018 IECC

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
Chapter R1: Scope and Administration					
R101.1 Title	CCC2-16	Editorial change to title of code	Same as change between 2015 IECC and 2018 IECC	None	None
R101.4.1 Applicability	CE157-16 Part II	Editorial change to clarify residential vs. commercial code applicability for mixed residential and commercial use buildings	Same as change between 2015 IECC and 2018 IECC	None	None
R102.1 General	ADM58-16 Part III	Revises and clarifies language regarding code official authority and process to approve alternative materials, designs or methods of construction, and if approval is not granted, requires official to provide reason in writing	Same as change between 2015 IECC and 2018 IECC	None	None
R102.1 General	ADM60-16 Part III	Clarifies the process for evaluating and approving alternative materials, designs and methods of construction	Same as change between 2015 IECC and 2018 IECC	None	None
R104 [R107 in 2015 IECC] Inspections	CCC5-16 Part III	Editorial section renumbering change for consistency between codes	Same as change between 2015 IECC and 2018 IECC	None	None
R105.1 [R104.1 in 2015 IECC]	ADM82-16 Part III	Clarifies meaning of construction or work accessibility for inspection purposes	Same as change between 2015 IECC and 2018 IECC	None	None
Chapter R2: Definitions					
R202 Addition	ADM1-16 Part III	Adds increase in the number of stories to definition of “addition”	Same as change between 2015 IECC and 2018 IECC	None	None

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		to provide consistency between codes			
R202 Air Barrier	CE3-16 Part II	Clarifies definition of "air barrier"	2017 FEC has much more detailed definition of "air barrier" than 2018 IECC, also breaking definition out to address air distribution systems and building envelopes separately	None (since no difference in intent is perceived) unless adopting 2018 IECC definition with less specifics results in installation of less effective air barriers	None (since no difference in intent is perceived) unless adopting 2018 IECC definition with less specifics results in installation of lower cost air barriers
R202 Air-Impermeable Insulation	RE3-16	New definition to clarify meaning of "air-impermeable insulation"	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Alteration	ADM2-16 Part III	Removes phrase "that requires a permit" from definition of "alteration" for two reasons, 1) the phrase is seen as not pertinent here and 2) to provide consistency between codes	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Approved	ADM4-16 Part III	Revises definition of "approved" to just "Acceptable to the *code official*." to provide consistency between codes	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Approved Agency	ADM6-16 Part III	Adds engagement in "furnishing product certification" to definition of "approved agency"	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Building Thermal Envelope	CE4-16 Part II	Clarifies definition of "building thermal envelope"	Same as change between 2015 IECC and 2018 IECC	None	None
[R202 C-Factor]**	N/A	"C-Factor" term deleted because no longer used in residential code text	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Demand Recirculation Water System	CE174-16 Part II	Editorial revisions to definition of "demand recirculation water system" to make more technically correct	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Fenestration	CE11-16 Part II	Editorial revisions that 1) relocate the definitions of	Largely the same as change between the 2015 and 2018	None unless adopting 2018 IECC	None unless adopting 2018 IECC

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		"skylights" and "vertical fenestration" to under the definition of "fenestration" and 2) edit the definition of "vertical fenestration" to improve clarity and consistency between codes	IECC, except 2017 FEC has additional detail regarding skylight glazing materials	definition with less skylight detail results in energy impacts	definition with less skylight detail results in cost impacts
[R202 F-Factor]	N/A	"F-Factor" term deleted because no longer used in residential code text	Same as change between 2015 IECC and 2018 IECC	None	None
R202 High-Efficacy Lamps	RE5-16	Revises definition of "high-efficacy lamps" to improve clarity (in part adds LEDs to definition)	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Labeled	ADM16-16 Part III	Editorial revision to definition of "labeled" to improve clarity and consistency between codes	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Opaque Door	RE8-16	New definition to clarify meaning of "opaque door" as being "a door that is not less than 50 percent opaque in surface area"	Same as change between 2015 IECC and 2018 IECC	May create some confusion and minor energy impact as Section R405.5.3.3 of the 2017 FEC starts out: "For doors that are opaque or where the glass is less than one-third of the area of the door…" which appears to imply that an opaque door is 100% opaque	May create some confusion and minor cost impact as Section R405.5.3.3 of the 2017 FEC starts out: "For doors that are opaque or where the glass is less than one-third of the area of the door…" which appears to imply that an opaque door is 100% opaque
R202 Roof Assembly	G14-16 Part III	Revises definition of "roof assembly" to improve clarity	Same as change between 2015 IECC and 2018 IECC	None	None
R202 Skylight	CE11-16 Part II	Definition of "skylight" relocated to under definition of "fenestration"	Same as change between 2015 IECC and 2018 IECC	None	None

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
R202 Vertical Fenestration	CE11-16 Part II	Definition of "vertical fenestration" relocated to under definition of "fenestration" and edited to improve clarity and consistency between codes	Same as change between 2015 IECC and 2018 IECC	None	None
Chapter R3: General Requirements					
R303.1.1 Building thermal envelope insulation	CE26-16 Part II	Adds separate R-value labeling requirement for roof insulation installed above the roof deck	Same as change between 2015 IECC and 2018 IECC	None	None
Table R303.1.3(1) Default Glazed Window, Glass Door and Skylight U-Factors	CE30-16 Part II	Removes "Fenestration" and adds "Window, Glass Door and Skylight" to title of Default Glazed [Fenestration] *U*-Factors table to improve clarity	Same as change between 2015 IECC and 2018 IECC	None	None
Table R303.1.3(2) Default Opaque Door U-Factors	CE30-16 Part II	Adds "opaque" to title of Default Door *U*-Factors table to improve clarity	Same as change between 2015 IECC and 2018 IECC	None	None
Chapter R4: Residential Energy Efficiency					
R401.3 Certificate (Mandatory)	RE14-16	Revises who, in addition to the builder, can complete a mandatory efficiency certificate, removing "registered design professional" and adding "other approved party"	2017 FEC Section R401.3 stipulates an Energy Performance Level (EPL) display card be completed and signed by the builder; changing this section of the FEC to 2018 IECC language would require a change to Florida Statutes	Difficult to estimate impact on stringency without research, but anticipated to make FEC slightly less efficient	Difficult to estimate impact on cost without research, but anticipated to not change costs or slightly reduce them
R402.1 General (Prescriptive)	RE17-16	Adds exception to prescriptive thermal envelope requirements for log homes built in accordance with ICC-400	Same as change between 2015 IECC and 2018 IECC	Difficult to estimate impact on stringency without research, but overall impact in Florida's climate anticipated to be small	Difficult to estimate impact on cost without research, but anticipated to not change costs significantly in

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
					Florida's climate overall
Table R402.1.2, Table R402.1.4 and Section R402.2.5 Mass Walls	CE84-16 Part II	Adds notes to Tables R402.1.2 and R402.1.4 to indicate code section that addresses prescriptive requirements for mass walls and slightly revises mass wall section wording	Same as change between 2015 IECC and 2018 IECC	None	None
Table R402.1.2	RE22-16	Moves additional prescriptive R-5 insulation requirement for heated slabs from the perimeter to under the slab	Same as change between 2015 IECC and 2018 IECC	Proponent states that adding R-5 insulation under a heated slab better aligns heated slab performance with the performance of unheated slabs; unlikely to apply to many Florida homes.	Would likely raise cost of compliance somewhat in applicable cases; unlikely to apply to many Florida homes.
Table R402.1.2 and Table R402.1.4	RE31-16	Decreases maximum prescriptive fenestration *U*-factors slightly for Climate Zones 3 through 8	Same as change between 2015 IECC and 2018 IECC	None	None
R402.2.2 Ceilings without attic spaces	RE40-16	Clarifies prescriptive R-Value requirements for ceilings without attic spaces, including specifying that in these cases, the full height of uncompressed insulation must extend over the top the wall plates at the eaves	Same as change between 2015 IECC and 2018 IECC	None	None
R402.2.6 Steel-frame ceilings, walls and floors	CE65-16 Part II	Clarifies prescriptive steel-frame ceiling, wall and floor compliance requirements	Same as change between 2015 IECC and 2018 IECC	None	None
Table R402.2.6 Steel-Frame Ceiling, Wall and Floor Insulation *R*-values	RE53-16	Corrects conflicting prescriptive R-value requirements for 16" on center, steel-framed walls (replaces R-19 + 2.1 option with	Same as change between 2015 IECC and 2018 IECC	Will increase stringency of FEC slightly in applicable cases	Will increase cost of compliance with FEC slightly in applicable cases

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		R-19 + 3.1 for R-13 wood frame equivalent) [It appears the 2018 IECC does not accurately reflect this mod (2018 IECC shows an "R-21+3.1" option while mod shows "R-19+3.1")]		(note proponent's reason for modification indicates the deleted lower R-value requirement was in error)	(note proponent's reason for modification indicates the deleted lower R-value requirement was in error)
Table R402.4.1.1 Air Barrier and Insulation Installation	RE64-16	Clarifies HVAC register boot sealing requirement	Same as change between 2015 IECC and 2018 IECC	None	None
Table R402.4.1.1 Air Barrier and Insulation Installation	RE65-16	Clarifies recessed lighting sealing requirement	Same as change between 2015 IECC and 2018 IECC	None	None
Table R402.4.1.1 Air Barrier and Insulation Installation	RE71-16	Revises HVAC register boot sealing requirement	Same as change between 2015 IECC and 2018 IECC	Proponent's stated reason is to ensure code's intent of durability, comfort, health safely and efficiency is carried out	Proponent indicates a minimal cost impact for additional mastic installation to seal supply boots to subfloor
R402.4.1.2 Testing	RE83-16	Adds RESNET/ICC 380 to building air leakage testing Standard options	ANSI/RESNET/ICC 380 is already included as the building air leakage rate testing Standard in the 2017 FEC	None	None
R402.4.1.2 Testing	RE84-16	Revises building air leakage testing ventilation system sealing specifications to provide clarification and flexibility	Same as change between 2015 IECC and 2018 IECC	None	None, or slightly reduce cost of compliance
R402.4.2 Fireplaces	RE90-16	Removes requirement that where tight-fitting doors are used on masonry fireplaces, the doors be listed and labeled in accordance with UL 907	Same as change between 2015 IECC and 2018 IECC	Proponent argues that "UL 907 is not a useful standard for the purpose of this code requirement", and that the code	Proponent argues that the code change will lower compliance costs "by not having a requirement for a

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
				change will increase the installation of fireplace doors; committee agreed with reason provided	product to meet a non-usable, non-useful standard"
R403.3 Ducts, R403.3.6 Ducts buried within ceiling insulation (New)	RE99-16, RE100-16	Adds new ducts section stipulating R-value and vapor retarder requirements for supply and return ducts buried within ceiling insulation	Same as change between 2015 IECC and 2018 IECC	Proponent states that DOE Building America research definitively shows energy savings from buried ducts. FSEC's position is that adding this buried duct section to the FEC will provide clarification and will not reduce the stringency of the code, but condensation questions remain in our Florida climate for some cases.	Proponent states that adding this option will not add cost in most situations. FSEC's position is that since the buried duct section is optional, adding it to the FEC would not increase the cost of compliance.
R403.3.2 Sealing (Mandatory)	RE102-16	Removes duct sealing exceptions which already exist in the IRC and IMC	The 2017 FEC does not include the removed sections, so no FEC change	None	None
R403.3.3 Duct testing (Mandatory)	RE105-16	Adds duct testing exception for ducts serving HRVs or ERVs that are not integrated with heating or cooling system ducts	Same as change between 2015 IECC and 2018 IECC	If agreed that, as proponent states, this change is only a clarification, no impact on FEC; especially since code compliant mechanical	If agreed that, as proponent states, this change is only a clarification, no impact on cost of compliance with FEC

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
				ventilation is continuous, FSEC does not however agree with the ICC committee reason statement for accepting this change: “there is no concern about duct leakage for ducts for HRV units”	
R403.3.7 Ducts located in conditioned space (New)	RE100-16	Specifies two separate conditions under which ducts are considered as being inside conditioned space: 1) for duct systems that are completely within the continuous air barrier and building thermal envelope, and 2) for buried ducts that meet stipulated air handler location, duct leakage, and ceiling insulation R-value requirements	Same as change between 2015 IECC and 2018 IECC.	Proponent’s justification in part states “The DOE Zero Energy Ready Home defines ducts inside conditioned space as, ‘Duct distribution systems located within the home's thermal and air barrier boundary or optimized to achieve comparable performance.’" Proponent also states that condition #1 (substituting being in conditioned space) “provides for the traditional code definition of being within conditioned space.” The proponent also states that “research has shown that	Proponent states that this code change will not increase the cost of construction, but cost justification appears to be for buried ducts in general, rather than specific to ducts being considered as inside a conditioned space FSEC agrees that the “R403.3.7 Ducts located in conditioned space” part of this mod does not in itself add any stringency, so would not increase the cost of compliance with the FEC

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
				virtually all the benefits of locating ducts inside conditioned space can be achieved" by an air handler located in conditioned space and very low leakage insulated, buried ducts in a vented attic (as is provided in condition #2). FSEC's position regarding condition #1 is that this change may be misguided and should not be part of the Florida code; see discussion in footnote below[1]. FSEC's position on Condition #2 is that overall the buried	

[1] FSEC's position is that duct conduction and leakage are important parameters in Florida. Duct systems may be completely within the continuous air barrier and building thermal envelope and yet not experience the same temperatures as the main conditioned space of a home. For example, duct work in sealed attics that are separated from the conditioned space by a drywall ceiling usually experience summer afternoon temperatures about 5°F (Parker et al. 2002) higher than in the conditioned space below. That temperature difference can make a difference. Software that models the space can apply those effects in the performance method, but to allow the substitute of being in the conditioned space may be misguided and should not be part of the Florida code.

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
				duct and other stipulations provided are not as good as ductwork in the conditioned space but may be close; see discussion in footnote below[2]	
R403.3.6.1 Effective *R*-value of deeply buried ducts (New) [shown as R403.3.8 (New) in Revision History]	RE110-16	Allows an effective duct insulation of R-25 to be claimed for performance simulations for deeply buried ducts that meet stipulated placement and insulation conditions	Same as change between 2015 IECC and 2018 IECC.	Proponent states that effective R-25 value is based on peer reviewed research and similar language is in the California Title 24 energy code FSEC's position is that assigning an effective duct insulation value of R-25 for performance simulation purposes in applicable cases is appropriate and will not reduce the stringency of the FEC, but	Proponent states that this option will not increase the cost of construction, and if used provides an efficiency credit that may make other efficiency measures unnecessary FSEC agrees that since deeply buried ducts are optional and assigning R-25 to them for simulation purposes will allow efficiency trade-offs, adding this section to the FEC would not

[2] Condition #2 (buried ducts) is a little different as it implies that the ductwork is very well insulated through the R-13 duct insulation in our climate and buried in the attic insulation. The criteria for air handler location and extra tight ducts are good measures. Overall this option is not as good as ductwork in the conditioned space but may be close (Mallay 2016). Note that these ducts will still need to be tested just like any attic located ductwork so the prescriptive FEC testing exception for ductwork in conditioned space would not apply.

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
				condensation questions remain in our Florida climate for some cases	increase the cost of compliance
R403.5.2 Demand recirculation water systems	CE174-16 Part II	Editorial revisions to demand recirculation water system section to remove definitional language (moving this language to the corresponding definition in Section R202) and make text more technically correct	Same as change between 2015 IECC and 2018 IECC	None	None
R403.6.1 Whole-house mechanical ventilation system fan efficiency	RE121-16	Rewords exception requiring air handlers used to provide whole-house mechanical ventilation be powered by electronically commutated motors	Same as change between 2015 IECC and 2018 IECC	None	None
Table R403.6.1 Whole-House Mechanical Ventilation System Fan Efficiency	RE121-16	Adds minimum whole-house mechanical ventilation fan efficacy requirement for HRVs and ERVs of 1.2 cfm/watt	Same as change between 2015 IECC and 2018 IECC	May increase stringency of FEC in some cases; proponent estimates ~$92/year in fan energy cost savings vs. worst performing H/ERVs currently available	May increase cost of compliance with FEC in some cases; proponent states that cost change is not significant
R403.10.3 Covers	CE176-16 Part II	Removes "site-recovered energy" from the pool and spa cover exception to clarify that the exception is intended to include heat pump pool heaters	Same as change between 2015 IECC and 2018 IECC	None	None
R403.10.3 Covers	CE177-16 Part II	Makes three revisions to the pool and spa cover exception text: "Where more than ~~70~~75 percent of the energy for heating, computed over an operation season of at least 3 calendar months, is from site-recovered	Same as change between 2015 IECC and 2018 IECC	Will increase the stringency of the FEC in applicable cases where pool or spa covers are not provided	Will increase the cost of compliance with the FEC in applicable cases where pool or spa covers are not provided; proponent

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		energy, such as from a heat pump or ~~solar energy source~~ *on-site renewable energy* system, covers or other vapor-retardant means shall not be required."			estimates increase in cost at approximately 7%.
R404.1 Lighting equipment (Mandatory)	RE126-16	Removes the low-voltage lighting exception from the 75% high efficacy lighting equipment requirement	Same as change between 2015 IECC and 2018 IECC	May increase stringency of code, if per proponent, leaving the exception in place is interpreted as allowing 12-volt halogen fixtures	Proponent states that there is no correlation between lighting fixture voltage and cost, so the change will not increase the cost of compliance
R404.1 Lighting equipment (Mandatory)	RE127-16	Revises wording of lighting equipment efficacy requirement and changes requirement from 75% to 90% high-efficacy	Same as change between 2015 IECC and 2018 IECC	Will increase the stringency of the FEC	Proponent states that high-efficacy lighting is now price competitive with other lighting so this change will not increase the cost of compliance
R405.1 Scope	RE132-16	Adds "mechanical ventilation" to Scope section of simulated performance compliance alternative to clarify code intent that mechanical ventilation is included in performance compliance calculations	Same as change between 2015 IECC and 2018 IECC	None	None
R405.3 Performance-based compliance	RE140-16	Updates name of DOE Energy Information Administration energy price source used for performance compliance calculations	The FEC does not use energy cost for its performance compliance calculation, so this change would not apply in Florida	None	None
R405.4.2 Compliance report	RE142-16	Allows batch sampling to determine performance compliance of stacked multifamily units	Same as change between 2015 IECC and 2018 IECC	May reduce stringency of the FEC in applicable cases	May reduce cost of code compliance in applicable cases

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
Table R405.5.2(1) Specifications for the Standard Reference and Proposed Designs	RE143-16	Removes performance compliance proposed design building air leakage rate for residences that are not tested	The 2017 FEC already has this change. Note: the proponent's argument is that in the IECC building air leakage testing is mandatory in all buildings; the IECC does not include the FEC's two building air leakage testing exceptions	Not applicable to FEC unless current FEC building air leakage testing exceptions are removed	Not applicable to FEC unless current FEC building air leakage testing exceptions are removed
Table R405.5.2(1) Specifications for the Standard Reference and Proposed Designs	RE149-16	Modifies the performance compliance mechanical ventilation standard reference design's energy use equation to use fan efficacy requirements in Table R403.6.1 instead of a fixed efficacy of 2.2 cfm/watt	Same as change between 2015 IECC and 2018 IECC	Potentially reduced stringent for some mechanical ventilation systems	Potentially reduced cost to comply for homes with some mechanical ventilation systems
Table R405.5.2(1) Specifications for the Standard Reference and Proposed Designs	RE152-16	Adds the following exception to the performance compliance thermal distribution systems standard reference design: "For non-ducted heating and cooling systems not having a fan, the standard reference design distribution system efficiency (DSE) shall be 1."	Same as change between 2015 IECC and 2018 IECC	Increases stringency for homes with non-ducted heating and cooling systems.	Potentially increases cost to comply for homes with non-ducted heating and cooling systems.
R406.3, [R406.3.1], R406.6.1, R406.6.4, R406.6.5, R406.7, and [R406.7.1]	RE166-16	References Standard ANSI/RESNET/ICC 301-2014 for Section R406 Energy Rating Index compliance and removes or revises language in Section R406 that is no longer needed because the stipulation is covered in the Standard: 1) Removes Index definition language in Section R406.3 and replaces it with "shall be determined in accordance	2017 FEC and 2018 IECC change summaries below are numbered same as change summaries between 2015 IECC and 2018 IECC in column to left: 1) The 2017 FEC already requires that the ERI be determined according to ANSI/RESNET/ICC 301 2) Since the 2017 FEC already specifies its reference design per	Anticipated energy impacts on FEC below are numbered same as change summaries to left of this column: 1) None 2) None 3) None likely, if RESNET approved software	Anticipated impacts on cost of compliance with FEC below are numbered same as change summaries to left of this column: 1) None 2) None 3) None 4) May slightly increase cost of

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		with ANSI/RESNET/ICC 301 2) Deletes Section R406.3.1 ERI reference design language 3) Revises Section R406.6.1 compliance software tools language, stipulating "Approved Software Rating Tools in accordance with ANSI/RESNET/ICC 301" 4) Revises Section R406.6.4 (formerly R406.7.2) specific approval language, now requiring documentation demonstrating the approval of analysis tools be provided to the code official 5) Revises Section R406.6.5 (formerly R406.7.3) regarding input values, now requiring input values not specified by Sections R402 through R405 to be taken from ANSI/RESNET/ICC 301 instead of an approved source 6) Deletes Section R406.7.1 which defined software tool minimum capabilities	ANSI/RESNET/IECC 301, adopting this change would not change the FEC's reference design 3) The 2017 FEC specifies Florida Building Commission (FBC) approved software 4) Same as change between 2015 IECC and 2018 IECC, except FEC also requires Florida Building Commission approval for analysis tools 5) Same as change between 2015 IECC and 2018 IECC 6) Same as change between 2015 IECC and 2018 IECC	4) None if FEC continues to require FBC approved software 5) May increase consistency of FEC ERI compliance in applicable cases 6) None	compliance if documentation must be provided 5) May slightly reduce cost of calculating compliance in applicable cases since builders can follow the ANSI/RESNET /ICC 301 instead of searching for an approved source 6) None
R406.3 Energy Rating Index	RE166-16 Comment 1	Adds Equation 4-1 to the Energy Rating Index compliance stipulations which specifies the ERI reference design ventilation rate as: Ventilation rate, CFM = (0.01 x total square foot area of	Same as change between 2015 IECC and 2018 IECC	RESNET is analyzing this change and will comment on its likely impact when the analysis is completed; FSEC	RESNET is analyzing this change and will comment on its likely impact when the analysis is completed

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		house) + [7.5 x (number of bedrooms + 1)]		believes the change was made without much discussion and may not be as clearly defined as needed.	
R406.3 Energy Rating Index	CE248-16 Part II	Adds the following text to the Energy Rating Index compliance stipulations as clarification of what is to be excluded from ERI scope (August 2017 first printing version of 2018 IECC provided here instead of revision history version): "Energy used to recharge or refuel a vehicle used for transportation on roads that are not on the building site shall not be included in the ERI *reference design* or the *rated design*."	Same as change between 2015 IECC and 2018 IECC	None	None
Table R406.4 Maximum Energy Rating Index	RE173-16	Increases the IECC Energy Rating Index compliance maximum Index values in all Climate Zones; in Florida (Climate Zones 1 and 2), it raises the maximum Index from 52 to 57	If adopted by the FEC, this change would lower the FEC maximum Index from the current 58 to 57	Will increase the stringency of the FEC slightly	Will increase the cost of compliance with the FEC slightly
Table R406.4 Maximum Energy Rating Index note "a"	RE173-16 Comment 1	Requires 2015 IECC building thermal envelope efficiencies if on-site renewable energy is included for ERI compliance	The 2017 FEC already includes the same requirement	None	None
Chapter R5: Existing Buildings					
R501.4 Compliance	CE274-16 Part II	Adds the IECC and International Existing Building Code to list of codes with which alterations,	Same as change between 2015 IECC and 2018 IECC	The fact that the added codes were not included in the	The fact that the added codes were not included in the

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures are required to comply		2015 IECC is seen as an oversight by the proponent; no stringency impact to FEC if seen the same way	2015 IECC is seen as an oversight by the proponent; no cost impact to FEC if seen the same way
R501.6 Historic buildings	CE275-16 Part II	Change not found in revision history, but August 2017 first printing of 2018 IECC revises wording of historic building compliance exemptions slightly (appears to only be a clarification)	Same as change between 2015 IECC and 2018 IECC	None	None
R502.1.1.2 Heating and cooling systems	RE183-16	Stipulates that Section R403 requirements (instead of only Sections R403.1, R403.2, R403.3, R403.5 and R403.6) must be met for new heating, cooling and duct systems that are part of an addition	Same as change between 2015 IECC and 2018 IECC	Will increase the stringency of the FEC; FSEC's position is that since Section R403 covers a number of systems outside of heating, cooling and duct systems (such as service hot water systems and pools), this change should be further reviewed before including in the FEC	Will increase the cost of compliance with the FEC
R503.1.1.1 Replacement fenestration	RE184-16	Adds the following alterations clarification for replacement fenestration (slight difference in wording between revision history and August 2017 first printing of 2018 IECC; IECC version shown here): "Where more than one replacement fenestration unit is to be	Same as change between 2015 IECC and 2018 IECC	None	None

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		installed, an area-weighted average of the *U*-factor, SHGC or both of all replacement fenestration units shall be an alternative that can be used to show compliance."			
R503.1.2 Heating and cooling systems	RE183-16	Stipulates that Section R403 requirements (instead of only Sections R403.1, R403.2, R403.3 and R403.6) must be met for new heating, cooling and duct systems that are part of an alteration	Same as change between 2015 IECC and 2018 IECC	Will increase the stringency of the FEC; FSEC's position is that since Section R403 covers a number of systems outside of heating, cooling and duct systems (such as service hot water systems and pools), this change should be further reviewed before including in the FEC	Will increase the cost of compliance with the FEC
Chapter R6: Referenced Standards					
RESNET/ICC	RE83-16	Adds ANSI/RESNET/ICC 380-2016 to referenced standards	ANSI/RESNET/ICC 380-2016 is already referenced in the 2017 FEC	None	None
RESNET/ICC	RE166-16	Adds ANSI/RESNET/ICC 301-2014 to referenced standards	ANSI/RESNET/ICC 301-2014 is already referenced in the 2017 FEC	None	None
Appendix RA: Recommended Procedure for Worst-Case Testing of Atmospheric Venting Systems under R402.4 or R405 Conditions <= 5ACH$_{50}$					
[Appendix RA of 2015 IECC]	RE187-16	Deletes informative appendix: Recommended Procedure for Worst-Case Testing of Atmospheric Venting Systems	Same as change between 2015 IECC and 2018 IECC	None (informative only)	None (informative only)

2018 IECC Section and Title	ICC Code Change No.	Change Summary b/t 2015 IECC and 2018 IECC	Change Summary b/t 2017 FEC and 2018 IECC	Anticipated Energy Impact on FEC if Adopted*	Anticipated Cost Impact on FEC if Adopted*
		Under R402.4 or R405 Conditions <= 5 ACH_{50}			

* FSEC assessment of energy and cost impacts consistent with those in 2018 I-Codes Revision History unless otherwise noted.

** Code section numbers in [brackets] are 2015 IECC sections that were deleted in their entirety in the 2018 IECC.

References

Complete Revision History to the 2018 I-Codes. 2017. International Code Council. http://shop.iccsafe.org/codes/2018-international-codes-and-references/2018-international-building-code-and-references/complete-revision-history-to-the-2018-i-codes-successful-changes-and-public-comments-pdf-download.html

Mallay, D. 2016. Compact Buried Ducts in a Hot-Humid Climate House. Golden, CO. National Renewable Energy Laboratory. https://www1.eere.energy.gov/buildings/publications/pdfs/building_america/compact-buried-ducts-hot-humid.pdf

Parker, D., J. Sonne, and J. Sherwin. 2002. *Comparative Evaluation of the Impact of Roofing Systems on Residential Cooling Energy Demand in Florida*. Proceedings of ACEEE 2002 Summer Study, American Council for an Energy Efficient Economy, Washington, DC.