

# Recommendations on Select 2024 Residential First PC Draft Comments

The EECC has identified key residential comments for review and offers recommendations as follows.

The summary below is not a complete list of comments, but represents those on which the Energy Efficient Codes Coalition has chosen to make recommendations. The summaries and recommendations below reflect EECC’s views at this time and may be updated as proposals evolve.

*This document is not intended as a substitute for reviewing the actual comments published by ICC, and we encourage a full review.*

Comment #		Proponent’s Title	Summary	Committee	Proponent	EECC Recommendations	
RED1-	27	<a href="#">New Appendix RG: Glide Path to Zero Net Energy (1119)</a>	Establishes glide path appendix that is moderately more efficient than base code.	RE Econ, Model, Metric	Gayathri Vijayakumar	NR	Improved envelope backstops should apply across all paths; efficiency could be further improved
RED1-	28	<a href="#">New Appendix RH: Operational Carbon Rating and Energy Reporting (1170)</a>	Creates new appendix that sets CO2e requirement	RE Econ, Model, Metric	Gayathri Vijayakumar	NR	There should be more options for calculating CO2e if appendix is designed to be adopted as mandatory code
RED1-	30	<a href="#">Tighter envelope backstops (1347)</a>	Revises envelope trade-off backstops in above-code programs, performance path, and ERI to UAx1.0 in cz 0-2 and UAx1.1 in cz 3-8.	RE Econ, Model, Metric	Amy Boyce	AS	Necessary update to reduce risk of rollbacks
RED1-	34	<a href="#">Only allow site-energy savings in R405 (1401)</a>	Removes source-based alternatives in standard reference design; decreases stringency by applying 85% multiplier to both fossil fuel and electric homes	RE Econ, Model, Metric	Gayathri Vijayakumar	D	Would limit performance path to all-electric buildings only

RED1-	36	<a href="#">Additional Efficiency for Large Homes (1306)</a>	Tightens threshold for additional efficiency requirements for larger homes by including living space below grade plane	RE Econ, Model, Metric	Kevin Rose	AS	Reasonable efficiency improvement for largest homes
RED1-	37	<a href="#">Section R405.2(3) - Annual energy cost performance (1454)</a>	Requires proposed design to demonstrate 80% annual energy cost of standard reference, regardless of fuel type	RE Econ, Model, Metric	Eric Tate	NR	Prefer RED1-42
RED1-	40	<a href="#">Improved performance path multiplier for larger buildings and/or change to threshold (1348)</a>	Requires buildings >4,000 sq.ft. to achieve additional 10% reduction in annual energy cost in performance path	RE Econ, Model, Metric	Amy Boyce	AS	Reasonable efficiency improvement for largest homes
RED1-	41	<a href="#">R405 Multipliers Public Comment (1087)</a>	Modifies performance path envelope backstop multiplier in cz3-8 from UA*1.15 to UA*1.10	RE Econ, Model, Metric	Ben Rabe	AS	Necessary update to reduce risk of rollbacks
RED1-	42	<a href="#">Revise performance path multiplier to cover addition of equipment trade-offs and duct location (1346)</a>	Revises performance path multiplier to 80% for all-electric or 75% for fossil fuel-heated homes	RE Econ, Model, Metric	Amy Boyce	AS	Helps reduce risk of efficiency rollbacks
RED1-	45	<a href="#">Modify section R405.2.3 (1105)</a>	Requires proposed design to demonstrate 80% annual energy cost of standard reference, regardless of fuel type	RE Econ, Model, Metric	Gary Heikkinen	AS	Prefer RED1-42
RED1-	46	<a href="#">Total reversal of REPI-122 (1272)</a>	Reverses trade-offs for heating, cooling, and water heating equipment and duct location in the performance path	RE Econ, Model, Metric	Amy Boyce	AS	Reverses the single largest efficiency rollback proposed for the 2024 IECC

RED1-	47 P2	<a href="#">Chapter 11 N1105.2 R405.2 Simulated Performance (1174)</a>	Sets performance path multiplier at 100% for all-electric homes; restores source energy multiplier to 3.16.	RE Econ, Model, Metric	Fredric Zwerg	D	Substantially reduces efficiency of performance path
RED1-	47 P1	<a href="#">R405.2 Simulated Performance (1126)</a>	Reduces efficiency by deleting performance path standard reference design multiplier; restores source energy multiplier to 3.16.	RE Econ, Model, Metric	Fredric Zwerg	D	Substantially reduces efficiency of performance path
RED1-	48	<a href="#">R405 Simulated Building Performance (1382)</a>	Weakens performance path by applying 85% multiplier to fossil fuel-fired homes	RE Econ, Model, Metric	Kevin Duell	D	Unnecessary reduction in efficiency
RED1-	49 P1	<a href="#">This section penalizes fuel burning systems in terms of required energy performance (1254)</a>	Reduces efficiency by deleting performance path standard reference design multiplier	RE Econ, Model, Metric	Tom Ortiz	D	Reduces efficiency of performance path
RED1-	49 P2	<a href="#">This section penalizes fuel burning systems in terms of required energy performance (1291)</a>	Reduces efficiency by deleting performance path standard reference design multiplier	RE Econ, Model, Metric	Tom Ortiz	D	Reduces efficiency of performance path
RED1-	50	<a href="#">(N1105) R405 Simulated Building Performance (1383)</a>	Weakens performance path by applying 85% multiplier to fossil fuel-fired homes	RE Econ, Model, Metric	Ian Casey	D	Unnecessary reduction in efficiency
RED1-	51	<a href="#">Annual energy cost performance (1406)</a>	Strengthens performance path by applying 80% multiplier to non fossil fuel-fired homes	RE Econ, Model, Metric	Ted Williams	AS	Prefer RED142
RED1-	53	<a href="#">Unfair Treatment of Fuel Gas Homes (1491)</a>	Weakens performance path by applying 85% multiplier to fossil fuel-fired homes	RE Econ, Model, Metric	Renee Lani	D	Unnecessary reduction in efficiency

RED1-	59	<a href="#">R405.4 Calculation Procedure (1402)</a>	Reverses equipment trade-offs and duct location trade-offs in performance path	RE Econ, Model, Metric	Andrea Papageorge	NR	Prefer RED1-46
RED1-	60	<a href="#">Set duct location assumption at 100% inside conditioned space (1315)</a>	Sets standard reference design assumption for duct location at 100% inside conditioned space	RE Econ, Model, Metric	Amy Boyce	AS	Eliminates potentially large free-ridership credit that would reduce efficiency
RED1-	62	<a href="#">Table R405.4.2.(1) IECC-C reference stricken (1414)</a>	Strikes performance path reference to heat pump efficiency (in commercial chapter) but does not replace it with reference to efficiency level	RE Econ, Model, Metric	Greg Johnson	NR	Proposal is incomplete
RED1-	65	<a href="#">Clean-up R406 (1400)</a>	Allows averaging of HERS scores for multifamily buildings	RE Econ, Model, Metric	Gayathri Vijayakumar	D	Averaging is inappropriate for code compliance; concern about lack of verification of dwelling units
RED1-	69	<a href="#">Maintain or improve stringency of ERI path (1349)</a>	Maintains stringency of 2021 ERI Index	RE Econ, Model, Metric	Amy Boyce	AS	Restores 5% efficiency improvement in 2021 IECC ERI
RED1-	71	<a href="#">Adding a Reduced Air Leakage measure to R408.2.1 (1120)</a>	Adds a credit to R408 for 2ACH50 in cz0-5	RE Econ, Model, Metric	Gayathri Vijayakumar	NR	Prefer RED1-72
RED1-	75	<a href="#">R408 Credit for Homeowner Education (1354)</a>	Awards R408 credits for homeowner education	RE Econ, Model, Metric	Amanda Hickman	D	Could support as mandatory requirement, but not as extra credit
RED1-	76	<a href="#">R408 Off-site Renewables (1038)</a>	Creates R408 credit for off-site renewable energy	RE Econ, Model, Metric	Alex Smith	D	Purchase of RECs will not provide same level of benefit as new renewable infrastructure
RED1-	77	<a href="#">Delete credit for mechanical equipment less stringent than 2021 IECC R408 thresholds (1239)</a>	Deletes credit for mechanical equipment less stringent than 2021 IECC Section R408	RE Econ, Model, Metric	Amy Boyce	AS	Eliminates an efficiency rollback; credit should not be given for commonly installed equipment

RED1-	78	<a href="#">Delete credit for appliances (1242)</a>	Deletes new R408 credit for Energy Star Appliances	RE Econ, Model, Metric	Amy Boyce	AS	Eliminates an efficiency rollback; appliance efficiency should not be traded against more permanent measures
RED1-	79	<a href="#">Add more options to R408 for Total UA improvement (1252)</a>	Modifies R408 options for Total UA improvement to include 5/15/30% UA improvement	RE Econ, Model, Metric	Amy Boyce	AS	Could support both RED1-79 and 83
RED1-	83	<a href="#">Add more options to R408 for Total UA improvement</a>	Modifies R408 options for Total UA improvement to include 10/15/20% UA improvement	RE Econ, Model, Metric	Jay Crandell	AS	Could support both RED1-79 and 83
RED1-	84	<a href="#">Revise R408 credits for fenestration improvements (1271)</a>	Revises R408 fenestration credit based on changes made to prescriptive fenestration U-factors	RE Econ, Model, Metric	Amy Boyce	AS	Provides credit for moderate improvement in all climate zones
RED1-	190	<a href="#">Envelope Heat Transfer Factor (UA) Definition (1187)</a>	Defines envelope heat transfer factor	RE Envelope	Robert Salcido	NR	RED1-190 and CED1-117 should be coordinated
RED1-	193	<a href="#">R402.3.1.1 Fenestration window to wall Ratio PC (1486)</a>	Establishes more stringent fenestration U-factors for prescriptive homes with >17% window-floor ratio	RE Envelope	Robert Schwarz	D	Complicates prescriptive path and adds inconsistent provisions
RED1-	196	<a href="#">R402.1 Clarification (1199)</a>	Revises Total UA approach	RE Envelope	Daniel Carroll	NR	
RED1-	197	<a href="#">Reverse ceiling insulation rollbacks (1231)</a>	Restores prescriptive ceiling insulation requirements to 2021 IECC levels	RE Envelope	Amy Boyce	AS	Maintains efficiency consistent with 2021 IECC
RED1-	198	<a href="#">CZ 7 fenestration U-factor (1088)</a>	Modifies fenestration U-factor for climate zone 7 and 8 from 0.27 to 0.28	RE Envelope	Greg Johnson	D	Reduces fenestration stringency
RED1-	200	<a href="#">Move R408.2.9 Opaque Walls Section to Table R402.1.2 footnote (1149)</a>	Moves wall insulation trade-off from R408 to prescriptive table footnote	RE Envelope	Gayathri Vijayakumar	D	Potential expansion of an inequal trade-off; creates confusion in compliance and enforcement

RED1-	201	<a href="#">Prescriptive ceiling insulation returned to 2021 IECC levels (1475)</a>	Restores prescriptive ceiling insulation requirements to 2021 IECC levels	RE Envelope	Robert Salcido	AS	Maintains efficiency consistent with 2021 IECC
RED1-	202	<a href="#">Slab and Slab Edge insulation installation Public Comment: (1328)</a>	Revises slab edge insulation requirements	RE Envelope	Robert Schwarz	D	Proposal introduces inconsistency
RED1-	203	<a href="#">Table R405.4.2(1) Slab-Edge Insulation exception for very heavy termite zone (998)</a>	Revises slab edge insulation requirements in heavy termite regions	RE Envelope	Jeremy Wright	D	Termite exception is unnecessary reduction in efficiency
RED1-	204	<a href="#">Table R402.1.2 footnote d corrected (1083)</a>	Revises prescriptive path footnote applicable to skylights	RE Envelope	Greg Johnson	NR	Footnote should be updated, but proposal contains errors
RED1-	205	<a href="#">Continuous insulation only option removed for floors (1084)</a>	Removes ci-only insulation option from prescriptive floor requirements	RE Envelope	Greg Johnson	D	This option is useful and should be retained
RED1-	206	<a href="#">Continuous insulation of floors thermal barrier footnote (1282)</a>	Requires thermal barriers for floors insulated with continuous insulation	RE Envelope	Greg Johnson	NR	Unnecessary change; building code already requires this
RED1-	208	<a href="#">R405.2.2 Envelope Requirements for Simulated Building Performance and R406.3 ERI (1307)</a>	Converts UA to Total Building Thermal Envelope Conductance	RE Envelope	Maston Stafford	D	Termite exception is unnecessary reduction in efficiency
RED1-	213	<a href="#">R402.2.3 Knee Walls (needs reason statement) (1128)</a>	Reduces knee wall insulation requirement	RE Envelope	Alex Smith	D	Unnecessary reduction in efficiency of knee walls
RED1-	217	<a href="#">Table R405.2 and Table R406.2 Basement Walls (1016)</a>	Removes basement wall insulation requirements from mandatory provisions	RE Envelope	Alex Smith	D	Eliminates key mandatory provisions; any issues should be addressed in the code language, not the mandatory tables
RED1-	242	<a href="#">Revise air tightness requirements (1236)</a>	Requires 4.0 ACH50 in cz 0-2 and 2.5 ACH50 in cz 3-8; sets matching performance path baseline.	RE Envelope	Amy Boyce	AS	Proposal should be coordinated with RED1-254



RED1-	222	<a href="#">R402 Air Leakage Revision (1165)</a>	Reorganizes air leakage testing requirements into prescriptive and performance	RE Envelope	Gayathri Vijayakumar	D	New exceptions could reduce stringency; introduces inconsistencies
RED1-	223 P1	<a href="#">Prescriptive Air Leakage Rate (1481)</a>	Reverts air leakage requirement back to 3.0 ACH50 for cz3-8	RE Envelope	Paul Demers	D	Unnecessary efficiency reduction
RED1-	223 P2	<a href="#">Prescriptive Air Leakage Rate Chapter 11 (1482)</a>	Reverts air leakage requirement back to 3.0 ACH50 for cz3-8	RE Envelope	Paul Demers	D	Unnecessary efficiency reduction
RED1-	236	<a href="#">Editorial fix for air leakage requirements (1193)</a>	Adjusts prescriptive air leakage rate to 4.0 ACH50, but sets baseline for performance and ERI at 5.0 ACH50	RE Envelope	Robert Salcido	D	Appears to remove key trade-off limits
RED1-	239	<a href="#">Reduced air leakage requirements for building envelope (1379)</a>	Improves air leakage testing limits to 3.0 in cz0-2 and 2.5 in cz3-8; modifies performance path to match; sets trade-off backstop at 3.0	RE Envelope	Anjana Agarwal	NR	Support improving air tightness, but proposal needs work
RED1-	240	<a href="#">R402.5.1.2 Air Leakage Testing PC (1034)</a>	Limits air leakage to 3.0 ACH50 for all climate zones, but does not change performance path assumptions	RE Envelope	Robert Schwarz	NR	Support improving air tightness, but proposal needs work
RED1-	241	<a href="#">Prescriptive Air Leakage Rate (1447)</a>	Resets air leakage requirement to 3.0 ACH50 in cz3-8; exempts non-ducted systems from HRV requirement	RE Envelope	Michele DeFrance	D	Unnecessary reduction in efficiency; also concerns with exceptions
RED1-	249	<a href="#">R405 Clarifications and Sampling in Group R-2 (1143)</a>	Allows sampling of performance path in multifamily buildings	RE Envelope	Gayathri Vijayakumar	D	Every dwelling unit should be inspected and verified; sampling is inappropriate in mandatory codes

RED1-	250	<a href="#">Tables R405.2 &amp; R406.2 basement walls &amp; slab-on-grade deleted (1076)</a>	Removes certain insulation provisions from mandatory requirements	RE Envelope	Greg Johnson	D	Eliminates key mandatory provisions; any issues should be addressed in the code language, not the mandatory tables
RED1-	251	<a href="#">Adding a cfm50/ft2 metric to R405 Standard Reference Design (1164)</a>	Moves small single-family and multi-family units into cfm50/ft2 air leakage metric	RE Envelope	Gayathri Vijayakumar	D	Concern with adding new exception for small buildings; introduces inconsistent leakage limits
RED1-	254	<a href="#">REPI-018 (1408)</a>	Deletes R408 credit for U-0.22 windows; revises fenestration credit to add U-0.25 option for climate zones 3-8	RE Envelope	Dynice Broadnax	NR	Proposal should be coordinated with RED1-242
RED1-	259	<a href="#">Reverse wall insulation trade-off (1233)</a>	Reverses wall insulation trade-off	RE Envelope	Amy Boyce	AS	Maintains efficiency consistent with 2021 IECC
RED1-	262	<a href="#">Roof (1393)</a>	Reverts <i>roof replacement</i> definition to 2021 form	RE Existing Bldg	Glen Clapper	D	Eliminates language improvements already approved
RED1-	263	<a href="#">Additional Efficiency Credits for Existing Buildings (1085)</a>	Adds definition of <i>substantial energy alteration</i> in place of bulleted list of qualifying changes; other editorial changes	RE Existing Bldg	Sean Denniston	NR	Some concern that lighting credits are not equivalent to other R408 options
RED1-	264	<a href="#">CHAPTER 5 [RE] EXISTING BUILDINGS Modifications (1276)</a>	Revises and reorganizes provisions related to alterations	RE Existing Bldg	Patricia Chawla	NR	Proposal needs additional work
RED1-	265	<a href="#">R502.1 modification (1356)</a>	Deletes requirements associated with change in space conditioning	RE Existing Bldg	Shane Hoeper	D	This language is important and should be retained
RED1-	267	<a href="#">Section R503 Alterations (1127)</a>	Modifies requirements for building envelope components in alterations	RE Existing Bldg	Lucyna de Barbaro	NR	Prefer RED1-268



RED1-	268	<a href="#">R503 Alterations - revisions and alignment with C503 (1210)</a>	Modifies requirements for building envelope components in alterations	RE Existing Bldg	Jay Crandell	AS	Adds important clarifications to alterations sections
RED1-	269	<a href="#">R503.1.1.2 Roof Alterations (978)</a>	Revises requirements applicable to roof alterations	RE Existing Bldg	Aaron Phillips	NR	Prefer RED1-268
RED1-	270	<a href="#">Roof Alterations Exception (1407)</a>	Removes reference to "approved source" as one who may present limiting conditions for insulation in roof replacement	RE Existing Bldg	Glen Clapper	NR	Issue is already resolved via RED1-268
RED1-	272	<a href="#">R503.1.1.3 modification (1358)</a>	Reduces insulation requirements for alterations to above-grade walls	RE Existing Bldg	Shane Hoeper	D	Unnecessary efficiency rollback
RED1-	274	<a href="#">R503 modification (1357)</a>	Deletes requirements associated with finished basements	RE Existing Bldg	Shane Hoeper	D	Unnecessary efficiency rollback
RED1-	275	<a href="#">Air Barrier Exemption (1450)</a>	Exempts roof replacement from air barrier requirement	RE Existing Bldg	Glen Clapper	D	Adds an unnecessary exception
RED1-	276	<a href="#">Air Barrier (1461)</a>	Deletes air barrier requirement for existing buildings	RE Existing Bldg	Glen Clapper	D	Adds an unnecessary exception
RED1-	278	<a href="#">Section R504 Repairs (1317)</a>	Clarifies that roof repairs are not "repairs" where whole roof is replaced	RE Existing Bldg	Lucyna de Barbaro	D	Adds unnecessary confusion into the code
RED1-	285	<a href="#">Duct System-Public Comment (1060)</a>	Revisions related to ducts and duct systems; adds duct test exception for smaller systems.	RE HVACR & WH	Gary Klein	NR	Impact of new exception is unclear
RED1-	301	<a href="#">Ducts in conditioned space as prescriptive requirement (1476)</a>	Requires homes built to prescriptive path to locate all ducts inside conditioned space	RE HVACR & WH	Robert Salcido	NR	Concern about pushing code users into performance path

RED1-	309	<a href="#">R403.3.6 Testing of ducts inside conditioned space (1042)</a>	Requires ducts inside conditioned space to be tested to 6cfm when air handler is not installed.	RE HVACR & WH	Alex Smith	AS	Consistent with other duct testing requirements
RED1-	319	<a href="#">Heat Recovery Equipment in Climate Zone 5</a>	Extends HRV/ERV requirement into climate zone 5	RE HVACR & WH	Shane Hoeper	AS	Adds sensible and cost-effective improvement to cz 5
RED1-	329	<a href="#">Systems Serving Multiple Dwelling Units</a>	Deletes requirement that mechanical and water heating systems serving multiple dwelling units comply with commercial provisions	RE HVACR & WH	Greg Johnson	D	Could create issues in multifamily buildings
RED1-	336	<a href="#">Model electric resistance DHW in R405 Standard Reference Design when Proposed Design is HPWH (1169)</a>	Awards additional trade-off credit for heat pump water heaters by setting standard reference as electric storage water heater	RE HVACR & WH	Gayathri Vijayakumar	D	Sets artificially low baseline for performance path credits
RED1-	338	<a href="#">Remove duct location trade-off (1343)</a>	Sets duct location "as proposed" for both standard reference and proposed design, eliminating trade-off credit	RE HVACR & WH	Amy Boyce	AS	Restores performance path assumption as it is in 2021 IECC
RED1-	339	<a href="#">Ducts in conditioned space in R405 standard reference design (1477)</a>	Sets duct location as "conditioned space" for standard reference design, improving efficiency in performance path	RE HVACR & WH	Robert Salcido	AS	Improves efficiency by requiring that inefficient duct design be offset
RED1-	341	<a href="#">Remove water heating trade-off (1344)</a>	Sets water heater efficiency "as proposed" for both standard reference and proposed design, eliminating trade-off credit	RE HVACR & WH	Amy Boyce	AS	Restores performance path baseline as it is in 2021 IECC

RED1-	351	<a href="#">R408.2.2-Update HVAC Efficiency Options to Further Align with Energy Star and CEE Levels (1244)</a>	Revises and expands efficiency requirements for HVAC equipment in R408	RE HVACR & WH	Mary Koban	D	Adds options below the efficiency level required in R408 of 2021 IECC
RED1-	360	<a href="#">Efficient Appliances Option in R408 Public Comment (1067)</a>	Replaces reference to Energy Star Appliances with Maximum Annual Energy Consumption	RE HVACR & WH	Mark Lyles	NR	Prefer RED1-341
IRCED1-	9	<a href="#">Roof Alterations Exception - Ch 11 (1459)</a>	Creates exception from air barrier requirement in roof replacements where remainder of building envelope is not altered	RE Existing Bldg	Glen Clapper	D	Reduces stringency of code; adds unnecessary exception
REIPC1-	1 P2	<a href="#">Duct Testing</a>	Allows sampling of duct testing	RE HVACR & WH	Aaron Gary	D	Sampling is inappropriate for code compliance
REIPC1-	1 Part 1	<a href="#">R403.6.3 Sampling of Mechanical Ventilation Testing (1047)</a>	Allows sampling of mechanical ventilation systems	RE HVACR & WH	Aaron Gary	D	Sampling is inappropriate for code compliance