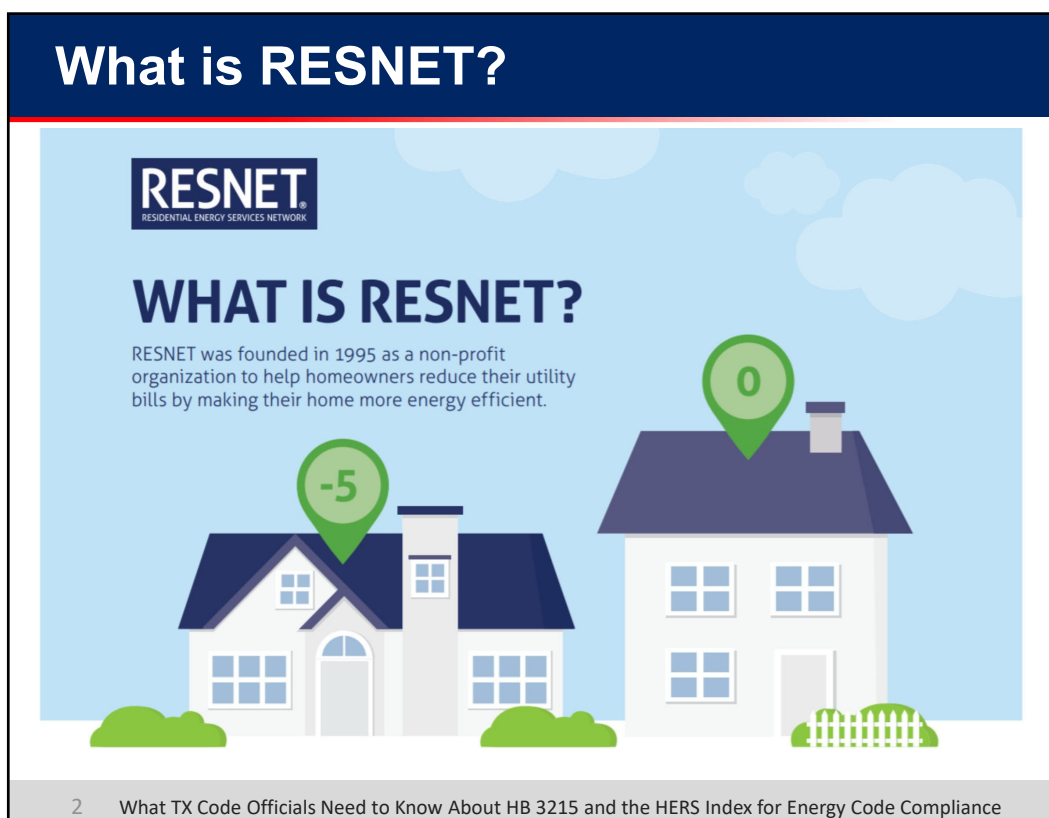


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What is the HERS Index?

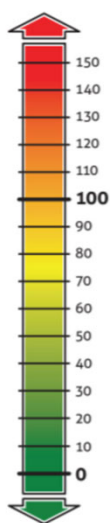


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What TX Code Officials Need to Know About HB 3215 and the HERS Index for Energy Code Compliance

3

What is the HERS Index?

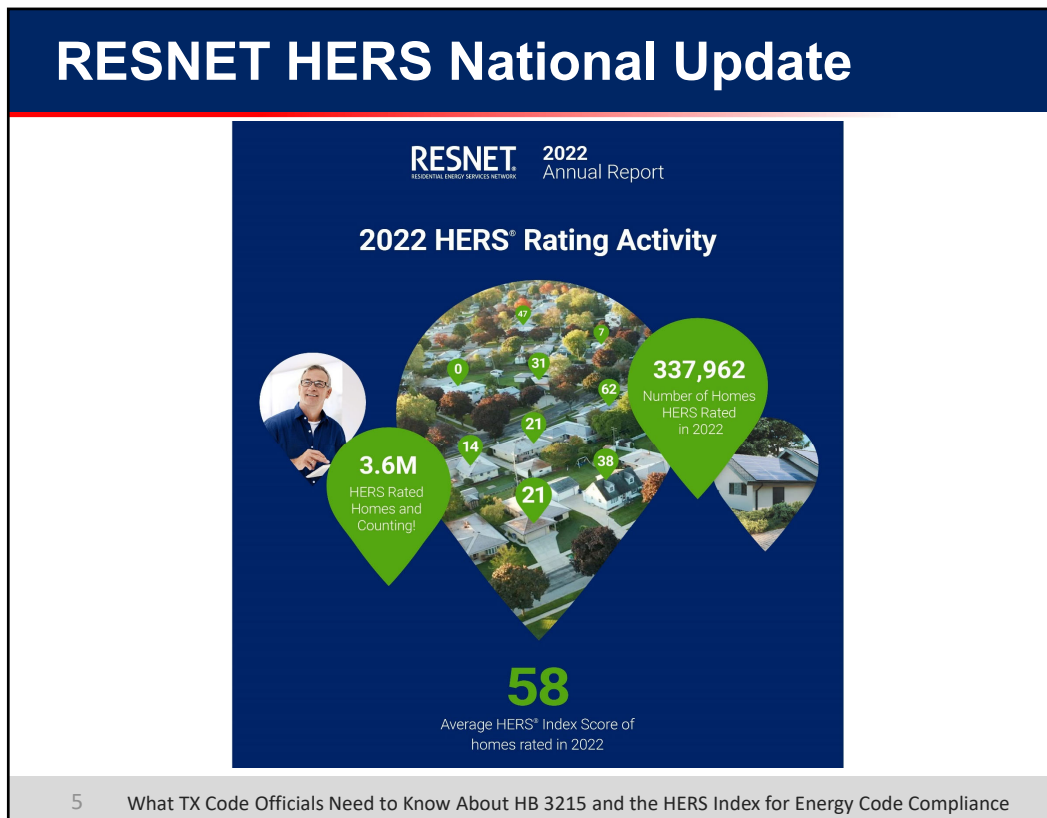


- The national standard by which a home's energy efficiency is inspected, tested and rated.
- A simple, easy to understand system to compare the energy performance of homes.
- A lower HERS Index Score means a home uses less energy.
- A typical home built to 2006 energy efficiency standards scores 100 on the HERS Index.
- A 1-Point change in the HERS Index represents a 1% change in energy use.

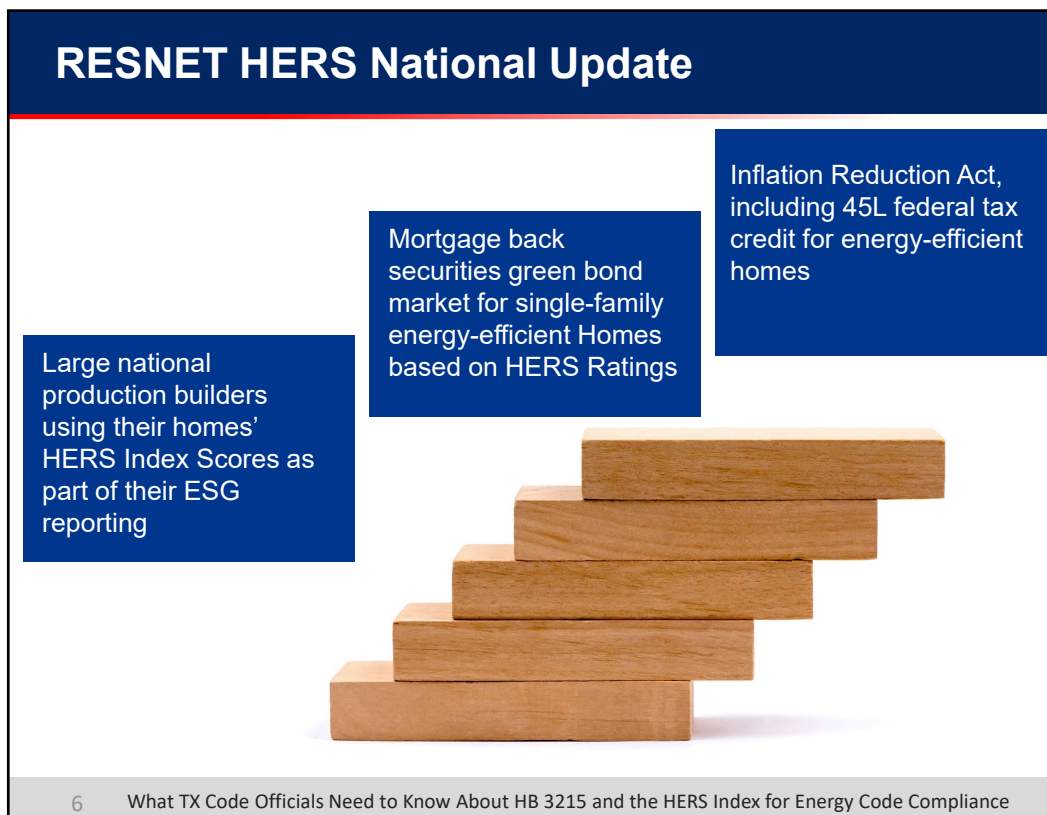
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What TX Code Officials Need to Know About HB 3215 and the HERS Index for Energy Code Compliance

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RESNET National Update



Fannie Mae®



7 What TX Code Officials Need to Know About HB 3215 and the HERS Index for Energy Code Compliance

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Texas Climate Zones and Energy Codes

Facts About the HERS Industry in Texas

50%

of all new homes
received a HERS
Rating in 2022

59

The average HERS
Index Score in 2022*

494k+

homes have been
HERS Rated since
2013

674+

Texas Certified RESNET
HERS Raters and Rating
Field Inspectors

*Current average Texas HERS Score includes many above energy code program certified homes such as ENERGY STAR, NGBS, Green Built Texas, etc.

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IECC ICC HERS Compliance Specialist

How do individuals obtain this designation?

**RESNET HERS Rater
- OR - RESNET RFI**

1

Individuals must first be certified by the Residential Energy Services Network (RESNET) as a Home Energy Rater (HERS Rater) or a Rating Field Inspector (RFI).

**ICC Residential Energy
Inspector/Plans Examiner**

2

Certified HERS Raters and RFIs must then obtain the International Code Council (ICC) Residential Energy Inspector/Plans Examiner Certification.

**IECC/HERS Compliance
Specialist**

3

ICC issues the designation.



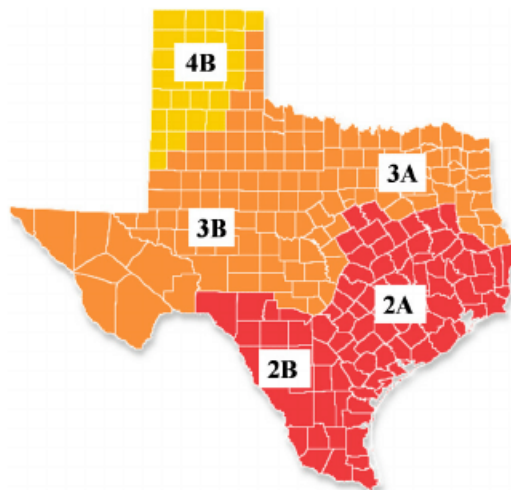
VERIFY 3rd Party Inspectors Credentials Here:

<https://www.iccsafe.org/search-for-certified-professionals/>

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Texas Climate Zones and Energy Codes



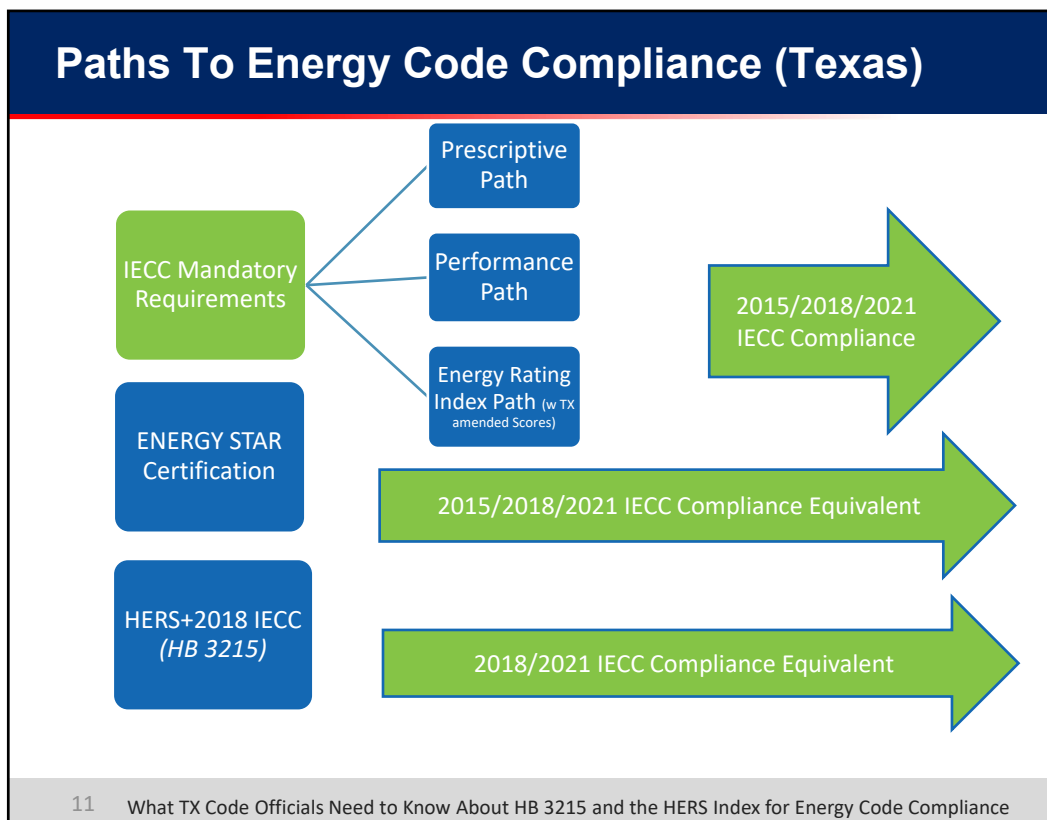
Currently Texas has 3 state codes:
2015, 2018 and 2021

Simply put, HB 3215 is money back for production builders and regional builders in Texas because they can build a consistent model across all municipalities

For all builders (including custom) HB 3215 is a plan they can follow for 10 years and not have to be concerned with code changes

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HERS Index + 2018 IECC (HB 3215)

House Bill 3215 was signed into law by the Governor on June 14, 2021, as part of the 87th Regular session. Codified in Chapter 388, Texas Building Energy Performance Standards: §388.003.

As a new law on the books, the State will now recognize **Home Energy Rating System (HERS) Index scores** as a standalone compliance pathway and untangle it from the current ICC/IRC versions of the energy rating index (ERI) pathway.

The previous law leans only the IRC's version of the ERI. House Bill 3215 separates this pathway from IRC exclusivity and puts it under the ANSI/RESNET 301-2019 Standard (ex: HERS Index).

This independent HERS (and any other ANSI 301 pathways) will be on a 10-year plan until it is required to be revisited at the State level again. This means that once passed, every city shall recognize this independent HERS Index option regardless of what IECC version they have adopted locally (identical to how ENERGY STAR is hard coded into law).

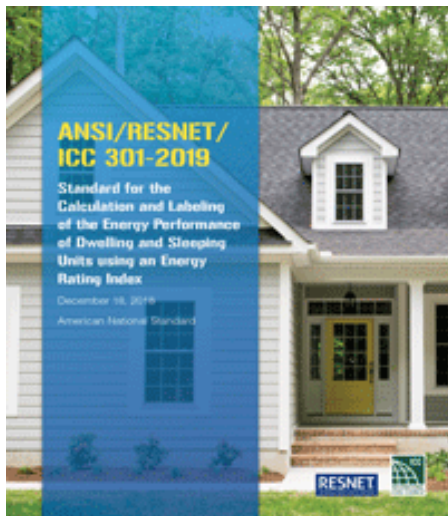
HERS Index Target Score

Climate Zone	9/1/22-8/31/25	9/1/25-8/31/28	On or After 9/1/28
2	59	57	55
3	59	57	55
4	63	61	59

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HERS Index + 2018 IECC (HB 3215)



A Home Energy Rating System Index utilizing Standard 301 of the American National Standard for the Calculation and Labeling of the Energy Performance of Dwelling and Sleeping Units using an Energy Rating Index, commonly cited as ANSI/RESNET/ICC 301, as it existed on January 1, 2021, as described by Subsection (j) shall be considered in compliance provided that:

1. *The home includes compliance with the Mandatory requirements of 2018 IECC Section R406.2.*
2. *The home includes compliance with Building thermal envelope provisions of Table R402.1.2 or Table R402.1.4 of the 2018 IECC*

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2018 IECC Mandatories (R406.2)

R406.2 – Compliance with this section requires that provisions identified in **Sections R401 through R404 indicated as “Mandatory” and Section R403.5.3 be met.**

“Mandatory” Section	Code Language	Notes
R401.3 – Certificates	A permanent certificate shall be completed and posted on-site.	Electric Service Panel, most common location
R402.4.1 – Air Leakage	The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5	Insulation and Air Barrier Checklist (Table R402.4.1.1) and Blower Door Testing required.
R403.1 – Controls	Not less than one thermostat shall be provided for each separate HVAC system.	Programmable T-stat installed for each HVAC unit in the home.
R403.1.2 – Heat Pump Supplementary Heat	Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when heat pump compressor can meet the load.	Additional controls needed on a heat pump system to prevent unnecessary use of electric resistance (inefficient) heat. Standard on all heat pump units
R403.3.2 – Duct Sealing	Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with either IMC or IRC, as applicable.	Seal all joints, seams, and breaks in HVAC equipment with mastic, or other approved sealant.
R403.3.3 – Duct Testing	Duct shall be pressure tested for leakage by either rough-in test or post construction test.	4% total leakage is often the target leakage. Ducts in conditioned space are exempt.
R403.3.5 – Building Cavities	Building framing cavities shall not be used as ducts or plenums.	Wall cavities cannot be used as ducts or plenums.
R403.4 – Mechanical system piping insulation	Mechanical system piping capable of carrying fluids greater than 105° or less than 55° shall be insulated to R3.	Ex: Refrigerant lines insulated to R3 minimum.

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2018 IECC Mandatories (R406.2) – Cont.

R406.2 – Compliance with this section requires that provisions identified in **Sections R401 through R404 indicated as “Mandatory” and Section R403.5.3 be met.**

“Mandatory” Section	Code Language	Notes
R403.5.1 – Heated water circulation and temperature maintenance	Heated water circulation systems shall be in accordance with Sec. R403.5.1.1.	Standard circulation systems found in tanked and tankless DHW. This is NOT a recirc system.
R403.5.3 – Hot Water Pipe Insulation	Insulation for hot water piping of R3 minimum.	Most common applicable areas - 1.) ¾” diameter or larger lines. 2.) outside of cond. space. 3.) piping from DHW to manifold.
R403.6 – Mechanical ventilation	The building shall be provided with ventilation that complies with the requirements of the IMC or IRC, as applicable.	If home is 5ACH or tighter, then whole house mech ventilation compliant with Table R403.6.1 is required.
R403.7 – Equipment sizing and efficiency rating	Heating and Cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated with ACCA Manual J. HVAC efficiencies should be equal to or greater than federal minimum standards for geographic location.	HVAC designs should have Manual J calculations, and Manual S sizing so that HVAC matchups/efficiencies can be AHRI certified.
R403.8 – Systems serving multiple dwelling units	Systems serving multiple dwelling units shall comply with C403 and C404 of IECC.	Treated as commercial HVAC installs.
R403.9 – Snow melt and ice system controls	Snow and Ice-melting systems ...shall include specific automatic controls...	Very rare in our region of the country on residential homes.
R403.10 – Pools and permanent spa energy consumption	The energy consumption of pools and spas shall be in accordance with Sec. R403.10.1 – 403.10.3	Time switches and vapor retardant covers. Only applicable if pool is part of new build.
R403.11 – Portable Spas	...controlled by the requirements of APSP 14	
R404.1 – Lighting equipment	90% of permanently installed fixtures shall contain only high efficacy lamps.	High efficacy = LED, CFL, Pin based fluorescent bulbs.
R404.1.1 – Lighting equipment (Fuel Gas)	Fuel gas lighting systems shall not have continuously burning pilot lights.	(ex: front porch gas lamps)

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2018 IECC Building Thermal Envelope Provisions (Table R402.1.2 or Table R402.1.4)

2018 IECC Table R402.1.2 (CZ 2-4)

Climate Zone	Fenestration U-Factor	Fenestration SHGC	Ceiling R-Value	Wood Framed Wall R-Value	Floor R-Value	Slab R-Value & Depth	Crawl Space Wall R-Value
2	.40	.25	R38	R13	R13	0	0
3	.32	.25	R38	R20 or R13+5ci	R19	0	5ci or 13
4	.32	.40	R49	R20 or R13+5ci	R19	10, 2ft	10ci or 13

2018 IECC Table R402.1.4 (CZ 2-4)

Climate Zone	Fenestration U-Factor	Ceiling U-Factor	Framed Wall U-Factor	Floor U-Factor	Crawl Space Wall U-Factor
2	.40	0.030	0.084	0.064	0.477
3	.32	0.030	0.060	0.047	0.136
4	.32	0.026	0.060	0.047	0.065

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Sample City Field Verification Form(s)

Insert City Seal

City of _____
Residential Energy Testing Compliance Certificate
Energy Code Requirements of the 2021 IECC (IRC) as amended
Provide this form at building completion prior to final inspections

Project Address: _____ Permit Number: _____

BUILDING THERMAL ENVELOPE TESTING VERIFICATION

Building Thermal Envelope Leakage Testing (R402.4.1.2):
☐ _____ ACH50 ☐ _____ CFM per SF of dwelling unit enclosure*

I certify that I have conducted an air leakage test and it has passed the requirements of the 2021 International Energy Conservation Code, as amended locally. I further certify the testing was conducted in accordance with ANSI/RESNET/ICC 380, ASTM E770, or ASTM E1827 and that I am a third party as approved by the building official.

Agency and Certification Number: _____
 Signature of Responsible Party: _____
 Printed Name and Title of Responsible Party: _____

DUCT LEAKAGE TESTING VERIFICATION

☐ Rough-In Test Option (R403.3.1) ☐ Post Construction Test Option (R403.3.2)

System #1 - _____ CFM25 System #2 - _____ CFM25 System #3 - _____ CFM25
 System #4 - _____ CFM25 System #5 - _____ CFM25 System #6 - _____ CFM25

I certify that I have conducted a total duct leakage test and it has passed the requirements of the 2021 International Energy Conservation Code, as amended locally. I further certify that the testing was conducted in accordance with ANSI/RESNET/ICC 380 or ASTM E1554.

Agency and Certification Number: _____
 Signature of Responsible Party: _____
 Printed Name and Title of Responsible Party: _____

MECHANICAL VENTILATION AIRFLOW TESTING VERIFICATION

Whole house System #1 - _____ CFM Whole house System #2 - _____ CFM
 Exhaust System #1 - _____ CFM Exhaust System #2 - _____ CFM Exhaust System #3 - _____ CFM
 Exhaust System #4 - _____ CFM Exhaust System #5 - _____ CFM Exhaust System #6 - _____ CFM

I certify that I have conducted whole-dwelling mechanical ventilation airflow and exhaust ventilation airflow tests and they have passed the requirements of the 2021 International Residential Code or International Mechanical Code as applicable and as amended locally. I further certify that I am a third party as approved by the building official.

Agency and Certification Number: _____
 Signature of Responsible Party: _____
 Printed Name and Title of Responsible Party: _____

Prepared June 2022, by the Energy and Green Advisory Board of the Regional Codes Coordinating Committee, a committee of the North Central Texas Council of Governments (NCTCOG). <https://www.nctcog.org/energy/energy-building-codes/amendments>.

* Per R402.4.1.2 and R402.4.1.3: The maximum infiltration rate for Option 1 Prescriptive Path is 5 ACH in Climate Zone 2 or 3 ACH in Climate Zone 3. The maximum infiltration rate for all other compliance paths and climate zones is 5 ACH or 0.28 CFM per SF of dwelling unit enclosure.

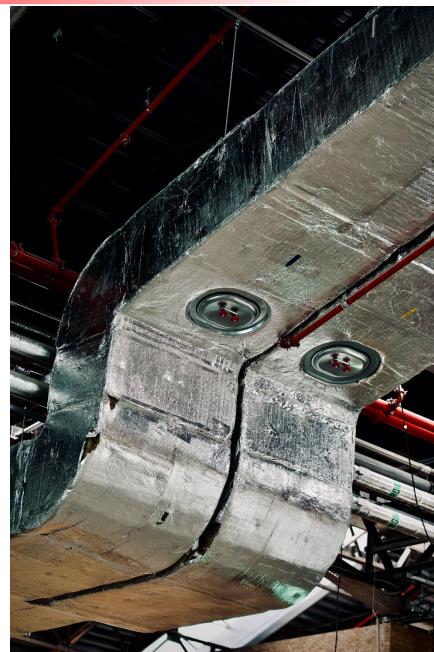
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Real World Scenario(s)

Example:

Supply Chain Shortage –
R8 Ducts



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Side-by-Side Comparison HB 3215 v. 2021 IECC

Component	HB 3215	2021 IECC
Building Envelope	Prescriptive (UA)	Prescriptive, Performance, ERI
Blower Door Maximum ACH	3 ACH ⁵⁰ (CZ3-4) 5 ACH ⁵⁰ (CZ2)	5ACH ⁵⁰ ALL Climate Zones
Duct Leakage Testing Required on ALL units?	YES	YES
Whole-House Mechanical Ventilation Testing Required?	YES	YES
High Efficacy Lighting	90%	100%
Minimum HVAC Duct R-Value (Outside Cond. Space)	R6	R8
Mandatory Quality Control Reviews	1% Field/10% File QA (submitted quarterly)	???

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Next Steps and Questions

- Builders and Raters Connect to Get Started
- Questions? Contact info@resnet.us
- Visit <https://www.resnet.us/builders/hb3215/>
- Search for HERS Rating Providers:
<https://www.resnet.us/providers/accredited-providers/accredited-rating-providers/>
- Search for HERS Rating Companies:
<https://www.hersindex.com/find-a-hers-rater/>

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**What Texas Code Officials Need to Know About HB 3215 and the
HERS Index for Energy Code Compliance**

Thank You!

23 What TX Code Officials Need to Know About HB 3215 and the HERS Index for Energy Code Compliance