



Prescriptive, Performance and ERI; Expanding opportunities for Raters in Energy Code Compliance

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SPEER

REEO for Texas and Oklahoma
Not for Profit
45 Members
Since 2011





Let's get on the same page

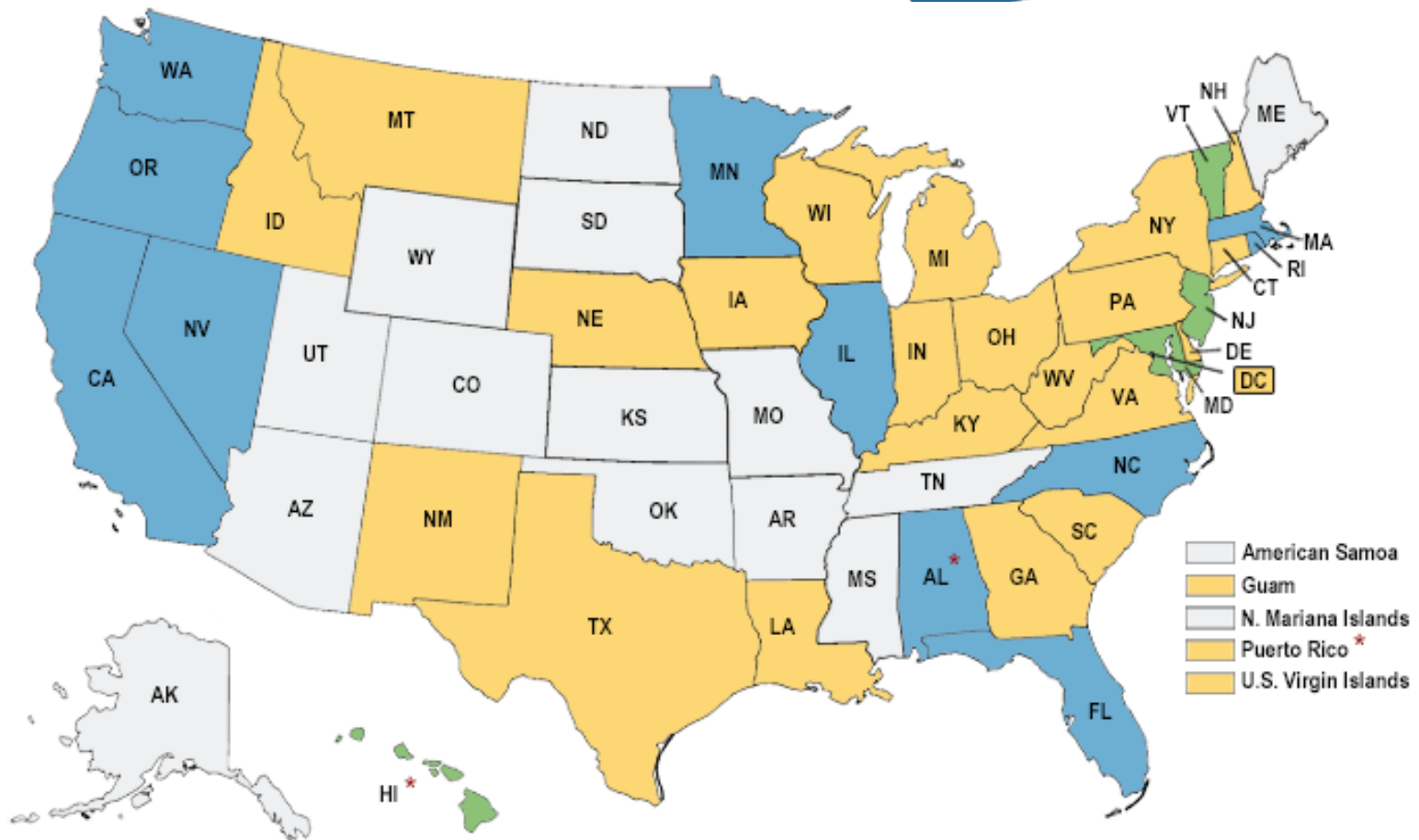
- **DOE BECP** = Department of Energy Building Energy Codes Program
- **PNNL** = Pacific Northwest National Lab
- **REEO** = Regional Energy Efficiency Organization
- **SEEA** = Southeast Energy Efficiency Alliance
- **SPEER** = South-central Partnership for Energy Efficiency as a Resource
- **SWEEP** = Southwest Energy Efficiency Project





Raise Your Hand

- If your work is at least 50% code compliance.
- If you work in a state that has adopted the 2015 IECC/IRC, or will adopt it within a year.
- If you know the name of the Code Official in the city where you do most of your work.
- If you have had a conversation with him or her about their work
- If you work mostly or exclusively in CZ 2.



4 IECC 2015, equivalent, or more energy efficient	11 IECC 2012, equivalent, or more energy efficient
25 IECC 2009, equivalent, or more energy efficient	16 Older or less energy efficient than IECC 2009, or no statewide code

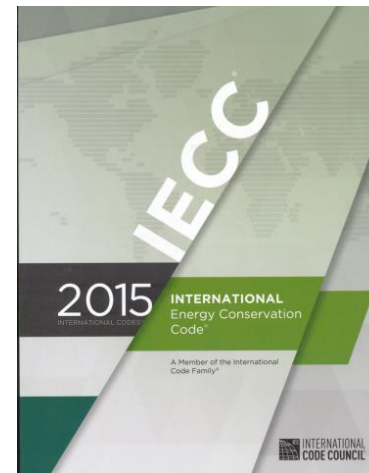
* Adopted new Code to be effective at a later date

As of February 2016



Energy Rating Index

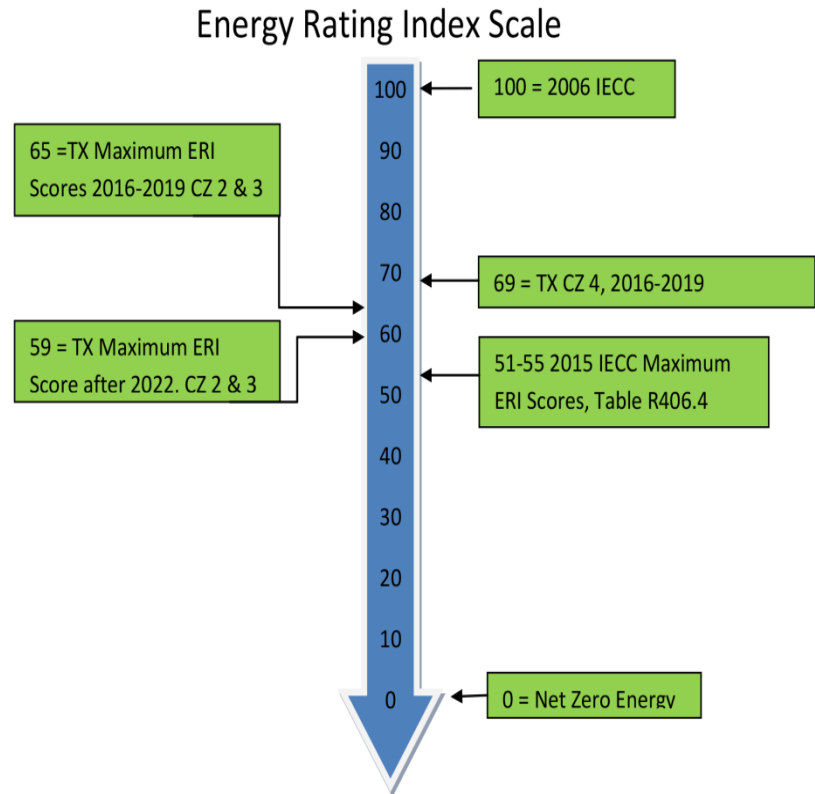
- Since 2009 IECC Performance Path has excluded HVAC and SHW
- ERI is intended to create a more flexible Performance Path
- ERI does not mention HERS or Standard 301-2014





ERI in the 2015 IECC

- ERI is a scale – 100 = 2006 IECC
- 0 = A (Net) Zero Energy Building
- Compares energy use of Rated Design to Reference Design
- Annual Normalized Modified Loads
- Requires Code Official to verify software compliance





ERI Basics

- More flexible performance path using ERI scale instead of direct comparison of cost, energy use
- Allows use of 2009 Insulation and window tables instead of 2015 tables
- Energy lost thru less stringent envelope is made up with HVAC, SHW, appliances or other efficiency measures



Basics

- All Mandatory measures must be met
 - Envelope leakage rate is mandatory
 - Duct leakage rate is prescriptive
- Rated home checklist must be inspected
- Solar or other on-site power production is not included in ERI



Maximum Energy Rating Index

Maximum ERI scores established to recognize that HVAC & appliances have a useful life of ~ 15 years while windows and insulation last much longer

Larger houses also have an advantage in ERI

Table R406.4,
Maximum Energy Rating Index

Climate Zone	Max ERI
1	52
2	52
3	51
4	54
5	55
6	54
7	53
8	53



Climate Zone	Fenestration U-Factor	SHGC	Ceiling R	Wall R
2	0.40	0.25	38	13
3	0.35	0.25	38	20 or 13 + 5
4	0.35	0.40	49	20 or 13 + 5
5	0.32	NR	49	20 or 13 + 5
6	0.32	NR	49	20 + 5 or 13 + 10



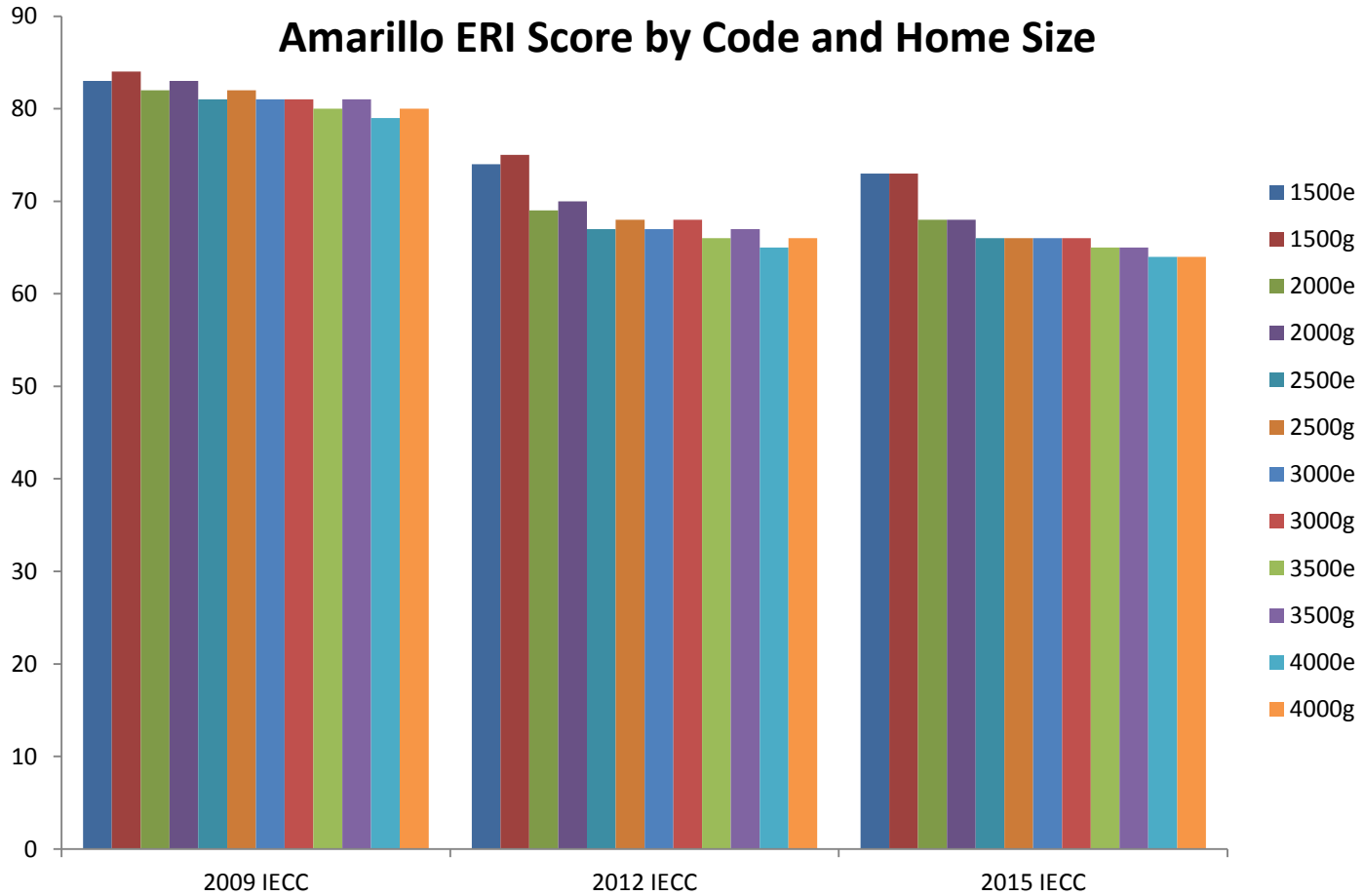
ERI Adoption

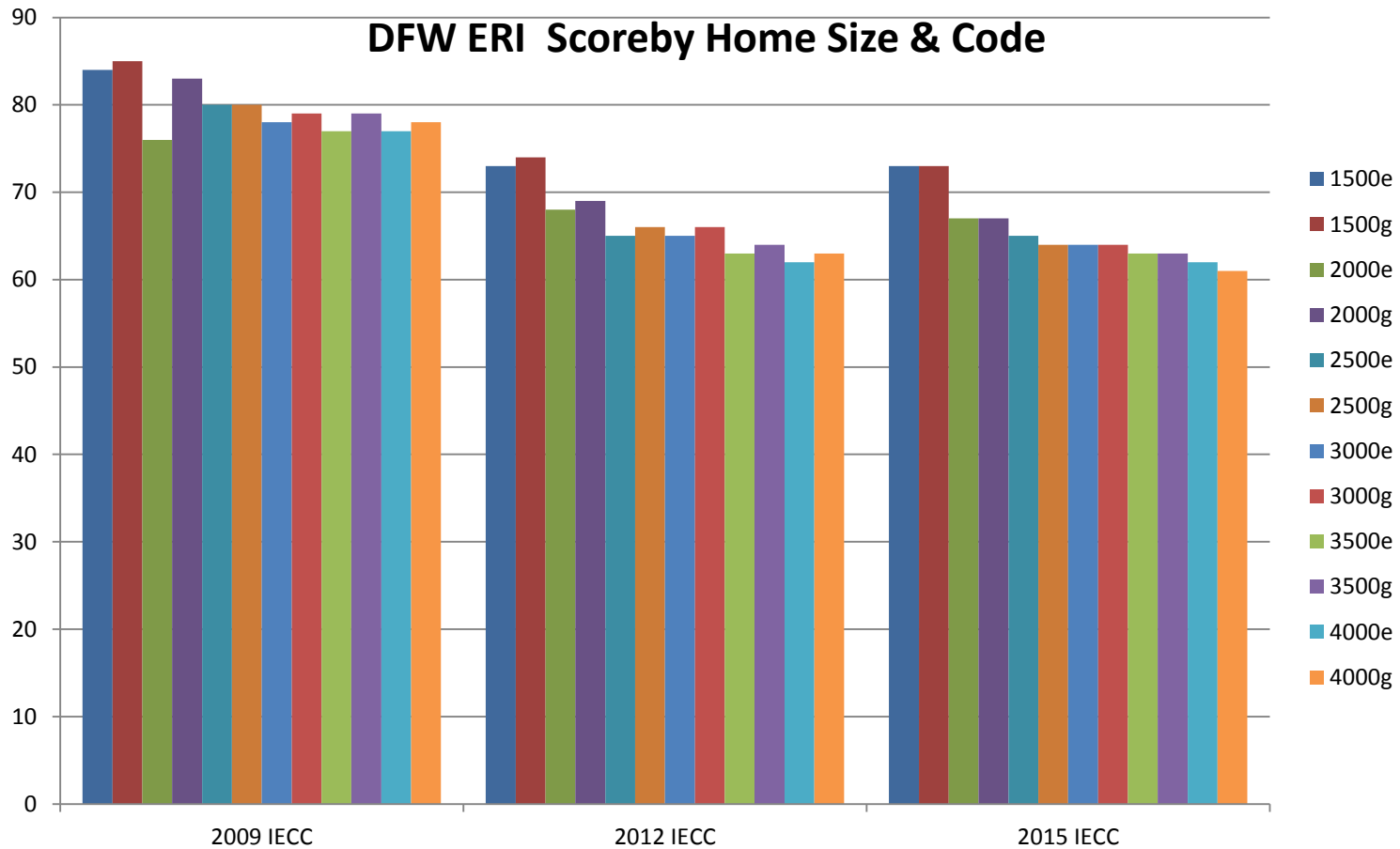
- VT – Max ERI 65 or 60 w/solar
- TX – CZ 2 & 3 - 65 & CZ 4 – 69 (no solar)
- IL – As published
- MD – As published
- NJ – As published



But, My Job is the Rating

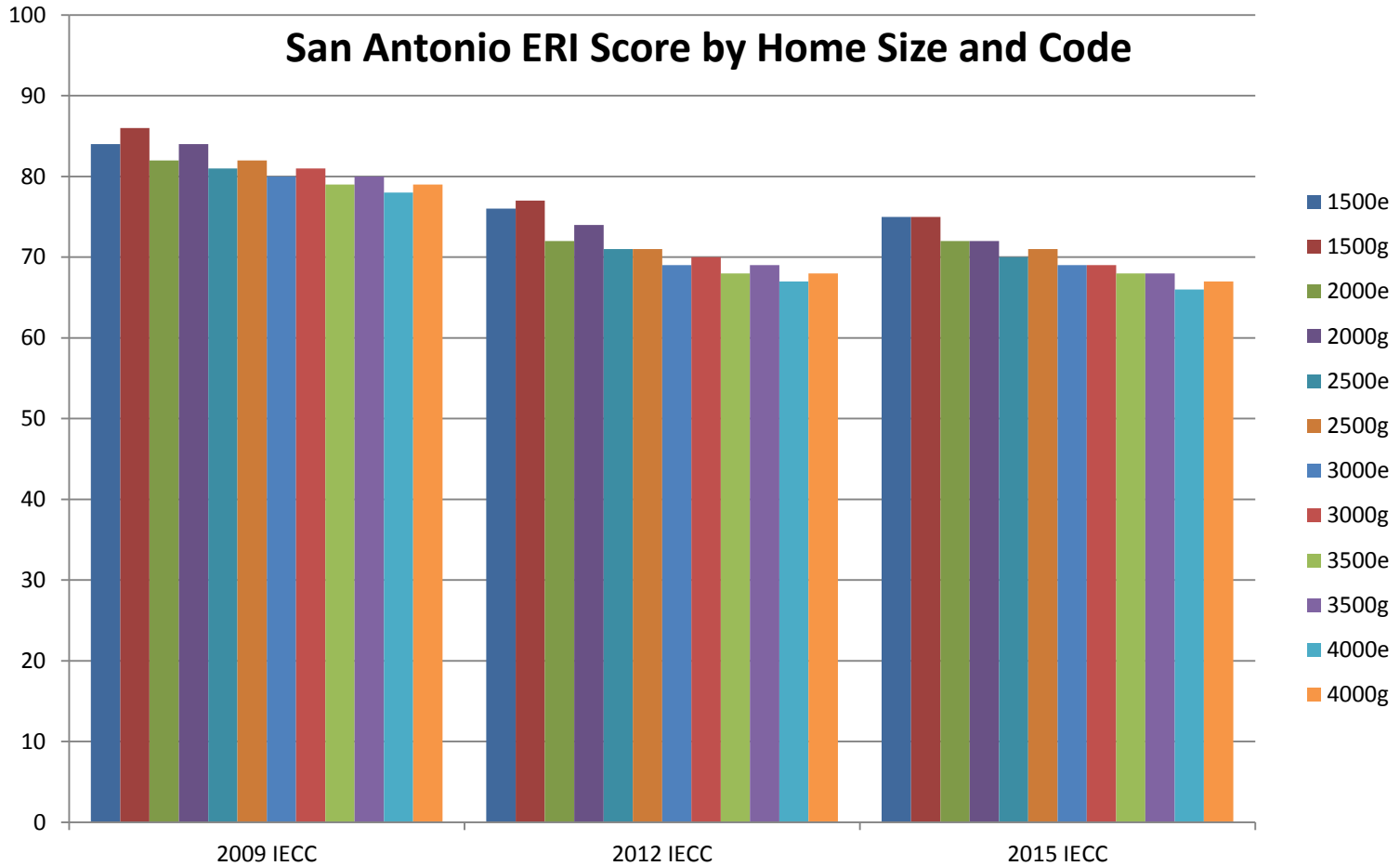
- REM/Rate, Energy Gauge but Beopt, IC3 and potentially others
- Third Party Agency certification
- Rated Design checklist
- What does an ERI score mean







San Antonio ERI Score by Home Size and Code





Eepartnership.org

Questions

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