State and Local Codes Adoption

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SIERRA CLUB

SIERRA CLUB

EXPLORE, ENJOY, PROTECT

- Largest grassroots environmental advocacy organization in the U.S.
- 3.5 million members/ supporters nationwide
- Focus: protect clean air, clean water, state parks, wild spaces and environmental justice

SIERRA CLUB

WHY BUILDING CODES?

- Buildings account for 40% of greenhouse gases, 40% energy used nationwide
- Energy efficiency is cost efficient way to reduce fossil fuel usage
- Low income communities and communities of color are more impacted by coal usage, more likely to live near coal fired power plants
- Benefits: combat climate change, improve water/ air quality, saves lives, benefit communities of color and low income communities*

*NAACP Reports: Coal Blooded and Just Energy Policies

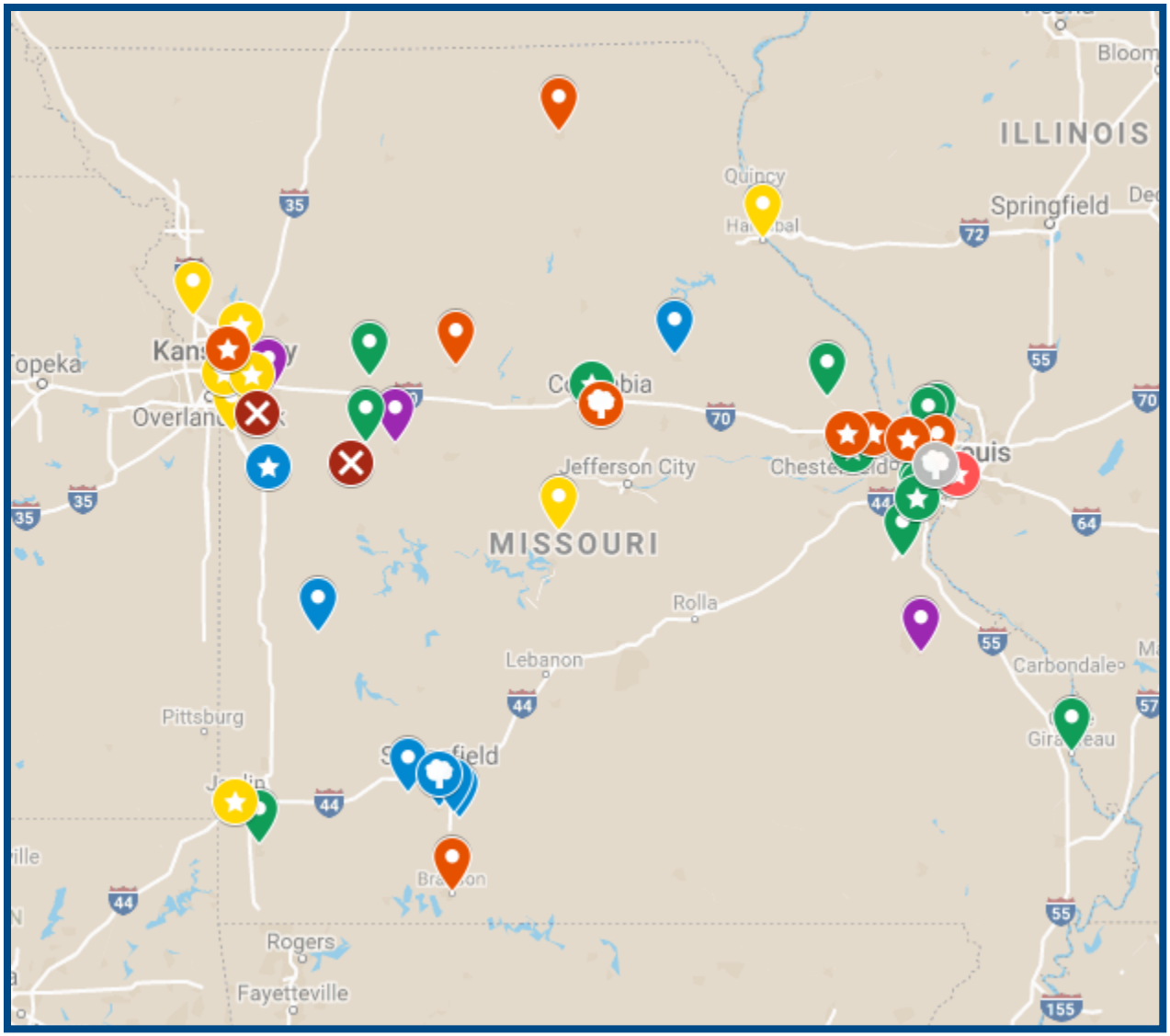
SIERRA CLUB

BUILDING OUR TABLE

- Architects
- Energy Auditors
- Builders
- Community Leaders
- Green product manufacturers
- Environmental advocates
- Progressive advocates
- Low income housing advocates
- Neighborhood associations

BUILDING CODES IN MISSOURI

THE PATCHWORK QUILT METHOD



Legend:

- 2003 IECC
- 2006 IECC
- 2009 IECC
- 2012 IECC
- 2015 IECC
- 2018 IECC
- Green Code
- As Written
- Weakened
- Enhanced
- Deleted

*Data from MEEA

A TALE OF TWO CITIES

ST. LOUIS COUNTY

- Background:
  - St. Louis County adopts new codes every other cycle
  - Home Builders Association is very involved in the process

- Process:
  - Building Codes Review Committee
  - Building Commission
  - St. Louis County Council
  - St. Louis County Executive

A TALE OF TWO CITIES

ST. LOUIS COUNTY

- The Home Builder's Association suggested hundreds of pages of amendments. BCRC accepted the vast majority as written

2015 IECC	BCRC/ BC Approved
Save 44.4 MMBTU/yr	Cost 12 MMBTU/ yr
Save $436/ yr in utility bills	Cost $152/ yr in utility bills
Net positive cash <1 year	
Simple payback 4-5 years	
County wide gain: $361,880/ in 1st year (or 36,852 MMBTU)	County wide loss: $126,160/ in 1st yr (or 9,960 MMBTU)

A TALE OF TWO CITIES

ST. LOUIS COUNTY AMENDMENTS

	2015 IECC	BCRC version
Fenestration U-Factor	.35	.40
Wood Frame Wall R-value	R-20 or R-13+5	R-13
Air Barrier and Insulation Table	Table 402.4.1.1	Deleted
Programmable Thermostat	Required	Deleted
Duct Testing	Post Construction: Total leakage: 4cfm/100 ft^2 Exception: not required if all ducts located entirely within building	Deleted (roll back)
Mechanical Ventilation	Requirement that meets IRS or IMC	Deleted
Lighting	75% minimum HEL	Deleted (rollback)
Building Thermal Envelope Sealing	Shall be constructed to limit air leakage in accordance to the requirements of sections R402.4.1 through R402.4.4	Optional (roll back)
Thermal envelope testing	Must follow table R402.4.1.1 and ALSO use blower door test to confirm air leakage of less than 3ACH50.	Optional

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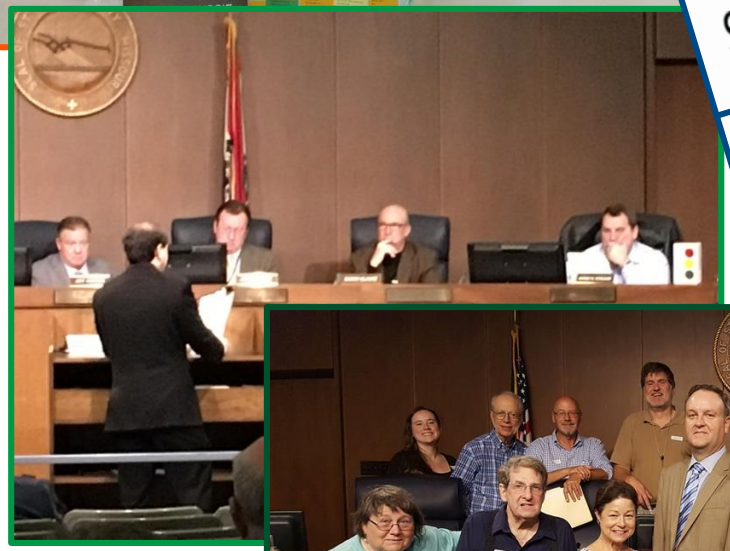
ST. LOUIS COUNTY

- ✓ BCRC
- ✓ Building Commission
- ✗ St. Louis County Council



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St. Louis County officials approve disputed residential building code

FEB 8, 2017

A TALE OF TWO CITIES

ST. LOUIS CITY

- Background:
  - St. Louis City has historically adopted the same code as St. Louis County
  - Supportive new Mayor, Building Division, and friendly Board of Aldermen
- Process:
  - Building Division
  - Public Safety Committee
  - Final Vote

A TALE OF TWO CITIES

ST. LOUIS CITY

- 2018 IECC would:
  - Reduce energy use by 27%
  - Save $580/ year in utility bills
  - Simple payback: 5.5 years
  - Net positive cash flow: 11 months
  - Life-cycle cost savings: $7,555
  - City wide savings: $75,400 in first year

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ST. LOUIS CITY AMENDMENTS

- Amendments were minimal and a compromise between the Sierra Club and Home Builder's Association.

Code Change Proposal Form

Code: *2018 International Residential Code*
Code Section: Table N1102.1.2 Insulation and Fenestration Requirements by Component
Proponent: Home Builders Association of St. Louis and Eastern Missouri

Revise as follows:

Table N1102.1.2 (R402.1.2)
Insulation and Fenestration Requirements by Component[a]

Climate Zone	Fenestration *U*-Factor[b]	Skylight[b] *U*-Factor	Glazed Fenestration SHGC[b,e]	Ceiling *R*-Value	Wood Frame Wall *R*-Value	Mass Wall *R*-Value[i]	Floor *R*-Value	Basement[c] Wall *R*-Value	Slab[d] *R*-Value & Depth	Crawl Space[c] Wall *R*-Value
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	~~0.40~~	0.65	0.25	38	~~13~~	4/6	13	0	0	0
3	~~0.32~~	0.55	0.25	38	~~20 or 13 + 5[h]~~	8/13	19	~~5/13~~[f]	0	5/13
4 except Marine	~~0.32~~ 0.35	0.55	~~0.40~~ NR	~~49~~ 38	~~20 or 13 + 5[h]~~ 13	8/13	19	~~10/13~~ 0[j]	10, 2 ft	10/13
5 and	0.30	0.55	NR	49	20 or 13 + 5[h]	13/17	30[g]	15/19	10, 2 ft	15/19

A TALE OF TWO CITIES

ST. LOUIS CITY

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St. Louis adopts building codes designed to boost energy efficiency in new homes

By CHAD DAVIS • JUL 6, 2018

WHAT DID WE LEARN?

BEST PRACTICES

- Engage a broad audience
- Work with a variety of businesses and organizations
- The media cares!
- Utilize the experts at MEEA
- Elected officials should be your allies

WHAT DID WE LEARN?

MESSAGING

- Use trusted messengers
- Messaging that is people-focused and accessible
  - Avoid jargon and acronyms
  - Messages that work: savings, health impacts, justice
  - Let people speak for themselves
  - You don't need to be a building scientist to care about energy efficient homes!
- Environmental messaging:
  - Focus on resilience, climate change, moving away from fossil fuels

Thank you!

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