Marshall Fire Rebuild
Codes and Program Compliance

Presented By Robby Schwarz

Thinking ZERO to 360°
Thank You
# Colorado Electrification Leadership Summit

## Agenda

**Thursday, October 27, 2022**

### Morning Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 AM</td>
<td>Registration / Breakfast / Exhibits / Networking</td>
</tr>
</tbody>
</table>
| 9:00 AM| Welcome
Duane Highley, CEO, Tri-State Generation and Transmission Association |
| 9:05 AM| Moderator’s Opening Remarks
Neil Kelway, BEL-CEO Director, SWEEP Building Electrification Specialist |
| 9:15 AM| Funding through Federal Infrastructure and Inflation Reduction Acts
- Incentives for New and Existing Homes
- Other Electrification Opportunities
Keith Dennis, President, Beneficial Electrification League (BEL) |
| 10:00 AM| Colorado Building Electrification Policy Highlights
- New State-wide Building Codes Requirements
- Other Updates
Will Toor, Executive Director, Colorado Energy Office |
| 10:40 AM| Break                                                                      |
| 11:00 AM| Case Studies: Successes with Heat Pump Adoption for New and Existing Homes |
| 11:45 AM| Discussion – Collaborating to Optimize Our Impacts                        |
| Noon   | Lunch / Networking
Induction Cooking Demonstration                                           |

### Afternoon Session

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
</table>
| 1:00 PM| Keynote: Business Case for Building Electric New Homes
Nick Jacobs, President, Diverge Homes                                   |
| 1:30 PM| Show Me the Money! Highlights of Federal, State, and Local/Utility Funding for Electric New Construction; State and Local Building Code Updates |
| 2:15 PM| Panel and Attendee Discussion: Challenges/Opportunities of Building Healthy, Efficient and Electric New Homes
- Not Ready for All-Electric? Why Even Installing a Heat Pump Instead of A/C Matters
- Hot Water Solutions |
| 3:30 PM| Adjourn                                                                   |
Denver’s Inaugural BS* & Beers

*Building Science

Come, see CI Live’s experience center, talk building science, have a beer, and help determine how we make this a monthly event

October 25th
5:30 – 8:30pm
Construction Instruction Experience Center
6850 Argonne St, Unit 100,
Denver, Colorado 80249
Our Plan Ahead

- Introduction
- Rebuilding Better Website
  - Xcel and State Incentives
  - Preregistration forms
  - Material Discounts
- Energy Code Compliance
  - Louisville, Superior, UCBC
- Energy Code Requirements common to all jurisdictions
- Lunch
- EnergyStar V3.2
- NextGen
- DOE Zero Energy Ready Homes
- Maximizing incentives
Why New Versions?
Why New Codes/Program? Why Now?

- New residential construction matters
- 2021 IECC a reaction to our times
- HERS ERI trending towards greater efficiency
- Technology innovations and Cost Effectiveness
- Emitted and Embodies Carbon
- Increasing demand for Net Zero Energy homes
- Increasing demand for climate resilient construction
- Increased demand for better construction
- Increased demand for a clean energy economy
U.S. Residential Buildings

- 95% of U.S. buildings
- 70% of U.S. building stock square footage
- 50% of peak demand on electricity grids
- 20% of greenhouse gas emissions in the U.S.
- 21% of U.S. energy use
- 6% Increase in electricity use associated with COVID pandemic
Buildings are Big Contributors


Global CO₂ Emissions by Sector

- Energy sector: 15%
- Building Operations: 21%
- Building Materials and Construction: 11%
- Industry: 30%
- Transportation: 22%
- Agriculture and forestry: 2%
- Other: 9%

Sources of Seattle’s Climate Emissions

- https://www.seia.org/initiatives/climate-change
- https://www.patheos.com/blogs/reasonadvocates/2017/05/05/orwellian-legislative-duplicity-hb-1485/

©2022

https://www.buildtank.com
HERS Trends - Lower Scores & More Ratings

![HERS Score and number of ratings chart]

- **Number of Ratings**
  - 2015: 54
  - 2016: 55
  - 2017: 56
  - 2018: 57
  - 2019: 58
  - 2020: 59

- **HERS Score**
  - 2015: 54
  - 2016: 56
  - 2017: 58
  - 2018: 60
  - 2019: 58
  - 2020: 63

- **Ratings/Year**
  - 2015: 100,000
  - 2016: 150,000
  - 2017: 200,000
  - 2018: 250,000
  - 2019: 300,000
  - 2020: 350,000
How Times Have Changed?

Ten people building a balloon frame house in 1877 Nebraska

300 people building a modern-day house in 2020 (NAHB Research)
Labor & Material Issues

5 strategies to retain construction workers in a competitive labor market
Times and Expectations Have Changed

1900’s housing vs. 2019 housing
Risk #1: Moisture Damage

Colder Surface

More Efficient Enclosure

Thermal/Air Flow

Cold Side

Warm Side

Less Efficient Enclosure

Thermal/Air Flow

More Wetting, Less Drying

Less Wetting, More Drying
What Is Building Science?

- Building science applies what we know about physics and other sciences to buildings
- Focused on the flow of:
  - Heat / Thermal
  - Air
  - Moisture
  - Pressure dynamics
  - Biology

https://www.greenbuilt.org/the-importance-of-building-science/
What is High Performance Building

- Applied Building Science
- Focus on the Enclosure Control Layers
  - Water Control
  - Air Control
  - Thermal Control
  - Moisture Control
- Focus on People
  - Comfort
  - Efficiency
  - Durability/resiliency
  - Safety

https://newenergyworks.com/blog/high-efficiency-enclosure-a-prefabricated-wall-system
Integrated Design Process

https://www.youtube.com/watch?v=5eYKNX37ik
Integrated Design Process

- Change is hard / Change is good
- Start Early
- Opportunity Costs
- What does integration mean?
  - Applied Building Science
  - Systems Thinking
    - Air control
    - Thermal Control
    - Moisture Control
  - Program Requirements

https://caddiscp.com/our-integrated-design-process/
Define the project

- Zero Energy Ready Home
  - Integration of four programs
- Share responsibility
  - Bring the right team together
  - Architect, Builder, Trade Partners, Energy Rater
- Viewing things Holistically at one time
- Information sharing
  - Research materials, building practices
- Integration
  - Structure, Systems, Enclosure, Climate, Occupant

Integrated Design Process (Howell, 2008).
3rd Party Verification

- Provide third-party verification that homes meet DOE Zero Energy Ready Home National Program Requirements
- Program requirement
- Adds value to the process and legitimacy to the label
  - Independence
  - Government back label / Proof of compliance

https://sunridgegroup.ca/home-owners/home-energy-audits.php
Verification by approved agency

- Verification of compliance with Energy Code may be completed by an approved third party
- Often this party is also a RESNET Energy Rater
- Partnered with the DOE Zero Energy Ready Home Program
3rd Party Services

- Consulting and participation in Intergrade Design Process
  - Knowledgeable about:
    - Program requirements
    - Applied building science
    - Assemblies and materials
    - Construction Schedule impacts
- Proposed and Confirmed Energy Modeling
- Field Inspection
  - Verification
  - Quality Assurance
- Trade Partner recommendation
- Possible other services
  - HVAC Design or consulting
  - Control layer management
  - Material specification recommendations

https://homesmsp.com/2019/01/should-home-inspectors-trample-insulation-no.html
RESNET Quality Assurance

- Quality of standard creation and maintenance
- Rating Providers employ Q.A.D.’s to perform QA on their certified raters
  - 10% of all building software file inputs review
  - 1% of each certified Raters’ homes are recreated and reviewed for accuracy
- RESNET performs QA on Rating Providers
  - Annual quality assurance report and review
  - RESNET enhanced quality assurance
    - 50% of all rating providers each year receive either online reviews and/or in-field site visits
- Tracking QA reviews in real time in the RESNET Registry

https://www.resnet.us
https://rebuildingbetter.org/

- Rebuilding Better Website
- Xcel and State Incentives
- Preregistration forms
- Material Discounts
## 2021 IECC R-value Table: Prescriptive Compliance

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<tr>
<th>CZ</th>
<th>Ceiling</th>
<th>Wood-framed Wall</th>
<th>Mass Wall</th>
<th>Floor</th>
<th>Basement</th>
<th>Slab</th>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>49</td>
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<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>3</td>
<td>49</td>
<td>20 or 13+5 or 0+15</td>
<td>8/13</td>
<td>19</td>
<td>5/13</td>
<td>10, 2ft</td>
<td>5/13</td>
</tr>
<tr>
<td>4</td>
<td>60</td>
<td>20+5 or 13+10 or 0+15</td>
<td>8/13</td>
<td>19</td>
<td>10/13</td>
<td>10, 4ft</td>
<td>10/13</td>
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<td>13/17</td>
<td>30</td>
<td>15/19 or 13+5</td>
<td>10, 4ft</td>
<td>15/19 or 13+5</td>
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<td>6</td>
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<td>20+5 or 13+10 or 0+20</td>
<td>15/20</td>
<td>30</td>
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<td>10, 4ft</td>
<td>15/19 or 13+5</td>
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<td>7/8</td>
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<td>19/21</td>
<td>38</td>
<td>15/19 or 13+5</td>
<td>10, 4ft</td>
<td>15/19 or 13+5</td>
</tr>
</tbody>
</table>
IECC Compliance for MF Rebuild #1

2018 Prescriptive Energy Code Path
- 90% Furnaces/ Boilers, 14 SEER AC
- R-49 Ceiling
- R-21 Walla
- R-19 Basement walls
- R-3 Hot water
- R-38 Under Floors
IECC Compliance for MF Rebuild #2

- 2021 Prescriptive Energy Path
- 96% Furnaces, 90% Boilers, 14 SEER AC
- R-60 Ceiling
- R-21 all walls
- R-5 hot water lines
- R-38 Under Floors
- Electrical to all gas appliances
  - 2 EV charging stations, furnace, water heater, dryer, oven, range
IECC Compliance for MF Rebuild #3

2021 IECC using a HERS of 50 with Electrical to all gas fire Appliances
- 2 EV charging stations, furnace, water heater, dryer, oven, range
IECC Compliance for MF Rebuild #4

2021 IECC with Appendix RB and RC

- **RB** – SOLAR-READY PROVISIONS—DETACHED ONE- AND TWOFAMILY DWELLINGS AND TOWNHOUSES
- **RC** – ZERO ENERGY RESIDENTIAL BUILDING PROVISIONS

- HERS of 47 Before onsite power production
- HERS Zero with onsite power production
  - With Combination of Community Renewable Energy facilities
  - Renewable Energy Purchase Contract

https://www.intermtnwindandsolar.com/residential-solar-energy-system-key-components/
Passive Home (Fire Rebuild)

- Project Certification
  - PHIUS Core
    - The Legacy Certification optimizing in passive and active conservation
  - PHIUS Core Prescriptive
    - Prescriptive standard takes a hybrid approach for both envelope and mechanical and allows some trade offs
  - PHIUS ZERO
    - Net source energy target of ZERO, does not allow fossil-fueled combustion on site and allows both on and off-site renewable energy options to get zero
  - PHI Low Energy
    - Slightly reduced energy consumption and performance requirements
  - PHI Classic
Electrification
Electrification
The 2021 IECC is the adopted code in Superior

Exception:

- The 2018 IECC, as amended, may be used within the Town of Superior impacted by the 2021 Marshall Fire

- The intent is to allow the owner of a residential property impacted by the 2021 Marshall Fire to "opt out" of the 2021 IECC
  - If the residential property is still owned by the record owner(s) of the residential property as of December 30, 2021.
  - Subsequent owners of the residential property ARE NOT eligible to "opt out" of the 2021 IECC.

https://wildfreetoday.com/2022/01/05/photos-before-and-after-the-marshall-fire-in-boulder-county-colorado/
2018 IECC Not Amended
2021 IECC Amendments

Choose to build:

- All Electric or with Gas mechanical equipment

Section R401.2. - Application.

- Residential buildings **shall be all-electric buildings unless the fuel gas options of R403. 7 and the additional electric infrastructure requirements of R404.5 are met.**
2021 IECC Amendments

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 in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies........

- In addition to R403.7, New and replacement electrical heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

- New gas heating equipment shall comply with the following efficiencies:
  - Gas furnaces 96% AFUE
  - Gas Boilers 90%AFUE
  - Tankless water heaters 92% AFUE
  - Storage water heater dependent on draw patterns 0.64 – 0.80 UEF
R404.5 Additional Electric Infrastructure

- R404.5.1 Combustion Equipment and end use:
  - Shall be prewired for a comparable electric appliance with labeled reserved circuit breaker

- Wiring within 6 feet of existing mechanical equipment

- Both ends of the conductor or conduit shall be labeled “For Future Eclectic Equipment”

- Necessitates electric panel capacity
Section R404.1.1. Fuel gas lighting equipment

- Fuel gas pilot lighting systems are prohibited
  - Gas stoves/oven, fireplace, outdoor fire pit etc.

https://www.designerappliances.com/blog/best-induction-ranges/
2021 IECC Amendments

- Appendix RB **Solar-Ready Provisions** for Detached One- and Two-Family Dwellings and Townhouses
- Appendix RD **Electric Vehicle Readiness**
The purpose of this Article is to create a Green Building Program to promote and encourage high-performing sustainable development and redevelopment within the Town through education, regulations and incentives.

This Article is intended to promote cost-effective, energy-efficient structures that reduce the production of greenhouse gases from residential buildings, structures and commercial multi-family structures, to conserve and protect water and other natural resources and to limit the amount of material sent to landfills.
Residential structures shall comply with Section R401.2.5 and the compliance, reporting and documentation requirements of Sections R401.2.1, R401.2.2, or R401.2.3 of the 2021 IECC.

R401.2.5 Additional energy efficiency

R401.2.1 Prescriptive Compliance Option
- The Prescriptive Compliance Option requires compliance with Sections R401 through R404.

R401.2.2 Total Building Performance Option
- The Total Building Performance Option requires compliance with Section R405.

R401.2.3 Energy Rating Index Option
- The Energy Rating Index (ERI) Option requires compliance with Section R406.
An applicant for a building permit for construction of a new residential structure shall demonstrate that a minimum of 50% of construction waste is recycled.

Waste diversion calculations and tracking spreadsheet forms must be provided to the Town at project completion to demonstrate that the minimum recycling requirements have been met.
# Green Points

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Square Footage</th>
<th>Point Requirements</th>
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</thead>
<tbody>
<tr>
<td>New construction of single-family dwelling units</td>
<td>1,501-3,000</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>3,001-5,000</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>5,001 and up</td>
<td>60</td>
</tr>
</tbody>
</table>
Green Points

- Energy Rating Index: one (1) green point is awarded for each HERS ERI rating score that the residential structure scores below the HERS index is less than the ERI rating requirement.
- Site development
- Waste management
- Energy Efficiency
- Solar
- Water Efficiency
- Material Efficient Framing & Structure
- Sustainable products
- Indoor air Quality
- Electric Vehicle Charging
- Homeowner education
- Innovation credit

<table>
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<tr>
<th>Climate Zone</th>
<th>2021 IECC Energy Rating Index</th>
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</thead>
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<tr>
<td>0-1</td>
<td>52</td>
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<td>2</td>
<td>52</td>
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<td>3</td>
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<td>6</td>
<td>54</td>
</tr>
<tr>
<td>7</td>
<td>53</td>
</tr>
<tr>
<td>8</td>
<td>53</td>
</tr>
</tbody>
</table>
N1101.13 Compliance.

Projects shall comply based on house size:

N1101.13.1 New Buildings.

- New buildings shall comply with the requirements of Figure N1101.13.1, “Options for New Buildings”.

- Buildings with glazing to floor area ratios that exceed 18% may not use the prescriptive path.

  **Exception:** Passive solar designs in which 50% or more of the total glazing faces south.

- The energy efficiency requirements of BuildSmart are deemed to be met by buildings with an annual space conditioning requirement of less than 5kBtu/sqft/year.

- When unconditioned floor area is being converted to conditioned floor area (except for basement finishes), the project is to meet the requirements for an addition.

- All “sqft” numbers refer to conditioned floor area (“CFA”) in square feet as defined in Section N1101.6.
Homes up to 3500 sqft

Four Prescriptive Compliance Options

Footnote a.

- Buildings with glazing to floor area ratios that exceed 18% may not use the prescriptive path.
- **Exception**: Passive solar designs in which 50% or more of the total glazing faces south.
### N1102.1.2 Insulation & Fenestration Criteria

- The *building thermal envelope* shall meet the requirements of Table N1102.1.2 based on the climate zone specified in Section N1101.7.

**This is an assembly R-value approach**

<table>
<thead>
<tr>
<th>CLIMATE ZONE</th>
<th>FENESTRATION U-FACTOR&lt;sup&gt;b&lt;/sup&gt;</th>
<th>SKYLIGHT&lt;sup&gt;a&lt;/sup&gt; U-FACTOR</th>
<th>GLAZED FENESTRATION SHGC&lt;sup&gt;c&lt;/sup&gt;,&lt;sup&gt;f&lt;/sup&gt;</th>
<th>CEILING R-VALUE</th>
<th>WOOD FRAME WALL R-VALUE</th>
<th>MASS WALL R-VALUE&lt;sup&gt;l&lt;/sup&gt;</th>
<th>FLOOR R-VALUE</th>
<th>BASEMENT&lt;sup&gt;c&lt;/sup&gt; WALL R-VALUE</th>
<th>SLAB&lt;sup&gt;d&lt;/sup&gt; R-VALUE &amp; DEPTH</th>
<th>CRAWL SPACE&lt;sup&gt;e&lt;/sup&gt; WALL R-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulder County (modified 5 &amp; Marine 4)</td>
<td>0.30</td>
<td>0.43</td>
<td>NR</td>
<td>54</td>
<td>19 + 5&lt;sup&gt;k&lt;/sup&gt;</td>
<td>18/24</td>
<td>42&lt;sup&gt;g&lt;/sup&gt;</td>
<td>15/20</td>
<td>15, 3 ft</td>
<td>15/20</td>
</tr>
</tbody>
</table>

*Uncompressed R-54 over the top plate*
NH1102.1.3 R-Value Computation

This is a cavity R-value approach

- Insulation material used in layers, such as framing cavity insulation, or continuous insulation shall be summed to compute the corresponding component R-value.
- The manufacturer’s settled R-value shall be used for blown insulation.
- Computed R-values shall not include an R-value for other building materials or air films.
- Where insulated siding is used for the purpose of complying with the continuous insulation requirements of Table N1102.1.2, the manufacturer’s labeled R-value for insulated siding shall be reduced by R-0.6 unless typical installation includes air gaps between siding and substrate. If such gaps exist, R-value shall be reduced by 60% or R-0.6 (whichever is greater).

https://raycore.com/compare-insulation-r-values/
This is a cavity U-Factor approach

- An assembly with a $U$-factor equal to or less than that specified in Table N1102.1.4 shall be permitted as an alternative to the $R$-value in Table N1102.1.2.

### TABLE N1102.1.4
**EQUIVALENT U-FACTORS**

<table>
<thead>
<tr>
<th>CLIMATE ZONE</th>
<th>FENESTRATION $U$-FACTOR</th>
<th>SKYLIGHT $U$-FACTOR</th>
<th>CEILING $U$-FACTOR</th>
<th>FRAME WALL $U$-FACTOR</th>
<th>MASS WALL $U$-FACTOR</th>
<th>FLOOR $U$-FACTOR</th>
<th>BASEMENT WALL $U$-FACTOR</th>
<th>CRAWL SPACE WALL $U$-FACTOR</th>
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<tbody>
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<td>Boulder County</td>
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<td>0.020</td>
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<td>0.026</td>
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<td>(modified 5 &amp; Marine 4)</td>
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</table>
N1102.1.5 Total UA Alternative

This is a UA trade off approach

- If the total building thermal envelope UA (sum of U-factor times assembly area) is less than or equal to the total UA resulting from using the U-factors in Table N1102.1.4 (multiplied by the same assembly area as in the proposed building), the building shall be considered in compliance with Table N1102.1.2.

- The UA calculation shall be done using a method consistent with the ASHRAE Handbook of Fundamentals and shall include the thermal bridging effects of framing materials.

Problem:
Boulder County does not allow REScheck
There is no Software so this must be done by hand
Homes up to 3500 sqft

One Performance Compliance Option

Section N1106

- Energy Rating Index Compliance Alternative
- Boulder County is using a HERS ERI
  - Creation of the ERI based on the 2015 IECC
FIGURE N1106.4 MAXIMUM ENERGY RATING INDEX (HERS INDEX), GRAPHICAL

- HERS REQUIREMENT vs. TOTAL CONDITIONED FLOOR AREA

- Graph showing the relationship between HERS Requirement and Total Conditioned Floor Area.

- The line on the graph decreases as the Total Conditioned Floor Area increases, indicating a lower HERS Requirement for larger floor areas.
### TABLE N1106.4
MAXIMUM ENERGY RATING INDEX, TABULAR

<table>
<thead>
<tr>
<th>CFA, SQ FT</th>
<th>MAXIMUM ERI</th>
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<td>1500 or below</td>
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<td>59</td>
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<td>1700</td>
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<table>
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<td>4300</td>
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<td>4500</td>
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<td>12</td>
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<td>4800</td>
<td>8</td>
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<td>4900</td>
<td>4</td>
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<tr>
<td>5000 and above</td>
<td>0</td>
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</tbody>
</table>

*a Conditioned Floor Area ("CFA") is to be rounded to the nearest 100 square feet.*
Homes over 3500 sqft (CHOOSE 2)

- Performance Compliance option
  - Same as for home under 3500 sqft

- EnergyStar
  - Marshall Fire rebuilds EnergyStar v3.2

- Passive House
  - Passive house software calculations accepted

- LEED Platinum

- Living Building Challenge
Homes over 3500 sqft (CHOOSE 2)

- Performance Compliance option
  - Same as for home under 3500 sqft
  - Must report ERI with and without PV

- DOE Zero Energy Ready Homes
  - For Marshall Fire rebuilds v2

- Passive House
  - Passive house software calculations accepted

- LEED Platinum

- Living Building Challenge
N1106.16 Construction Waste

N1101.16 Construction jobsite waste reduction and recycling (Mandatory).

- All construction jobsite waste must be recycled including wood, scrap metal, cardboard, and concrete.
- Labeled containers must be provided at the construction-site for use in capturing recyclable material.
- A mixed load container may be used if that container is being sent to a waste/recycling center that will verify the weight of recycled material recovered from that mixed load.
N101.1.16.2 Verification

- **Field inspection** will be made by the Boulder County Building Division during the construction process to assure that recycling containers have been placed on-site.

- Prior to the final inspection, **documentation must be provided** to the Building Division office by the owner or waste/recycling contractor indicating the weight or volume of materials diverted from the waste stream.

- Materials that **must be recycled include**:
  - appliances, concrete, metals, cardboard, and wood (except pressure treated or painted wood), and thermostats and other devices containing mercury.
  - Other materials which are accepted by the waste/recycling contractor must also be recycled.
New and replacement bathroom sink faucets, shower heads, toilets, and urinals must be labeled as meeting EPA Water Sense (www.epa.gov/WaterSense/) criteria.

- **Exceptions:**
  - Showerheads with a maximum flow of 2.0 gallons per minute (gpm).
  - Urinals with a maximum flush rate of 0.5
Exterior Energy use Systems

- N1103.9 Snow melt system controls (Mandatory)
- N1103.9.2 Design criteria for supporting on-site renewable energy equipment (Mandatory).
- N1103.10 Pools energy consumption (Mandatory).
- N1103.11 Portable spas (Mandatory).
- N1103.14 Other exterior energy uses.
  - Exterior energy uses, with the exception of cooking appliances, must be offset with on-site renewable energy production.
  - For purposes of calculating renewable energy offset requirements, the minimum usage of exterior, fossil-fuel-consuming, fireplaces and firepits shall be considered to be 50 hours per year, and exterior space heating devices shall be assumed to operate a minimum of 150 hours per year.
Planning and Zoning

Article 19

- Exempts Marshall fire rebuilds from Site Plan Review by allowing prescribed changes that can be reviewed concurrently as part of the review for the building permit.
- Provides flexibility for rebuilding by providing allowances for changes to preexisting Structures:
  - Increase in floor area
  - Change in location on building site
  - Change in height of structure
  - Mitigation of the risk or wildfire

Questions: contact Hannah Hippely

- Community Planning and Permitting / CPP PZD Planning Zoning
- hhippely@bouldercounty.org
- 720-564-2298
Conclusion

Compliance
- Louisville
- Superior
- Unincorporated Boulder County

Next
- Common IECC Requirements
Thank you!
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