

Moving Forward Rebates

Presented By Robby Schwarz

©2022

Thinking ZERO to

BUILDTank^{inc.}

Our Plan

- Efficiency Rebates
 - Xcel Energy
 - State of Colorado
- Registration or claim forms
- DOLA Fire resiliency
- What is not included in the Fire resiliency



Xcel Rebates

Home Certification Standard	Rebuilding Homeowner Incentive	New Homeowner Incentive
2021 IECC* / BUILDSmart *International Energy Conservation Code	\$7,500	\$0
ENERGY STAR® v3.2	\$10,000	\$1,250
Zero Energy Ready Homes v2	\$12,500	\$2,500
ENERGY STAR® v3.2 plus NextGen Electrification	\$17,500	\$5,000
Passive House (PHI/PHIUS)	\$37,500	\$15,000

Xcel Registration Form

- Submit around building permitting
- Account information
- Project information
- Builder information

Marshall Fire Reconstruction Rebates Registration

Account information

Account holder name (as shown on your utility bill prior to the fire) _____

Address of lost home _____ City _____ State _____ ZIP _____

Email address _____

Phone _____

Account holder's current mailing address _____ County _____

Account holder signature _____ Date _____

Project information

Home type: Single family Townhome Other (please specify) _____

Registration is not required to qualify for rebates, but strongly encouraged.
Homes that meet a different than indicated at preregistration are eligible for the performance met at project completion.

Preferred documents at registration		
IECC 2021	None	<input type="checkbox"/>
ENERGY STAR® version 3.2	Rater Design Review Checklist	<input type="checkbox"/>
DOE Zero Energy Ready Home version 2.0	ENERGY STAR Rater design review checklist Confirm required elements are specified in the design: <ul style="list-style-type: none"> • Envelope • Water heating efficiency • Cooking • Duct system • Lighting & appliances • Electric vehicle charging infrastructure 	<input type="checkbox"/>
ENERGY STAR NexGen Program	ENERGY STAR Rater design review checklist Confirm required elements are specified in the design: <ul style="list-style-type: none"> • Dwelling unit space heating • Cooking • Dwelling unit water heating • Electric vehicle charging infrastructure 	<input type="checkbox"/>
Phius	Link to the registration on the Phius website	<input type="checkbox"/>
PHI	Provide a copy of an executed contract with a Passive House Certifier	<input type="checkbox"/>

Builder information

Builder name _____

Primary builder contact _____ Phone _____

Mailing address _____ City _____ State _____ ZIP _____

Primary builder contact email _____

Contractor signature _____ Date _____



Registration: Page 2

- Program Rebate Application info
 - Received by 12/31/2026
 - 2 years to complete construction
- Program Rebate Payment
 - AS Built Home must meet all program requirements
 - Active Xcel account/customer
 - Only paid out to completed and verified/inspected home

Registration terms and conditions

Xcel Energy has created a rebate program for homeowners whose homes were destroyed in the Marshall Fire in Boulder County, December 30, 2021, through January 1, 2022, and listed as destroyed on Boulder County's Marshall Fire Damage Assessment List (<https://assets.bouldercounty.gov/wp-content/uploads/2022/01/marshall-fire-damage-assessment-list.pdf>).

Xcel Energy has created this registration form to make an initial assessment of the prospective rebate claims for the Marshall Fire Recovery Reconstruction Program.

These registration terms and conditions govern the registration for the Marshall Fire Recovery Reconstruction Program (the "Program") of Public Service Company of Colorado, a Colorado corporation doing business as "Xcel Energy" and set out the prospective terms for the upcoming Program rebate application.

1. Program registration:

This registration form is not used to apply for Program rebates. A separate Program rebate application must be submitted in order to qualify for any Program rebates.

2. Program Rebate Application:

The Program rebate application must be received by, and all home reconstruction must be completed and ready for inspection by Xcel Energy or its agents, by 12/31/2026. Home reconstruction must be completed and ready for inspection within two years of registration acceptance by Xcel Energy to be eligible for Program rebates. Program rebate applicants may not apply for any additional Xcel Energy rebate programs for the same home reconstruction. Builders are eligible for Energy Star New Homes program rebates. Once home reconstruction is complete and ready for inspection, documentation is required to support the achieved performance tier and must be submitted within 90 days of final inspection. For Home Energy Rating System (HERS) rated homes, an electronic energy modeling file must be submitted to Xcel Energy after final inspection. Program requirements may be updated and can be found at "2022 Marshall Fire Recovery Construction Program Requirements and Submission Checklist," available upon request from Xcel Energy Customer Service.

3. Program rebate payments:

The payment of Program rebates will be contingent upon the "as-built" home being constructed with all of the energy saving characteristics, materials, and equipment required to meet the achieved performance standard indicated on the claim form submitted after final inspection. Rebates are subject to change at any time without notice.

Payments require an active account with an active premise at the time of submission. If the account or premise is inactive at the time of submission, payment will be made to the customer whose account is tied to the premise once the premise is active. Only one payment will be issued per customer.

Xcel Energy issues rebates in the form of checks. Xcel Energy is not responsible for any inaccurate information regarding the Program provided by customer's contractors, including inaccurate information regarding rebates or equipment eligibility.

Rebates will be paid on a completed and inspected as-built home. The Program may be cancelled or modified with thirty days' notice. Xcel Energy reserves the right to refuse rebate payments and participation if the customer or its contractor violates Program rules and procedures. Please allow eight weeks for the rebate to arrive.

Xcel Energy will not provide or pay directly for the services of a HERS rater.

4. Program limitations:

Xcel Energy is not liable for customer's contractor's misrepresentations regarding the Program. Xcel Energy will not expressly or implicitly warrant the performance of the as-built home.

5. Program governing law:

The Program, its related forms and any Program terms and conditions, are governed by the laws of the State of Colorado.

6. Program questions

If you have questions regarding this form or any other forms related to the Program, please contact Xcel Energy Customer Service at 800-895-4999, or by email at ResidentialRebates@xcelenergy.com or CustomerService@xcelenergy.com.

7. Mailing Instructions:

Xcel Energy Rebate Operations, P.O. Box 829, Minneapolis, MN 55440-0829

Email registration to: ResidentialRebates@xcelenergy.com

Subject line of e-mail should be: "Marshall Fire Recovery" and the future address of the home.

Xcel Claim Form

- Submit after C.O. and program certification
- Account information
- Project information
- Builder information
- Achieved Performance Tier

Account information

Account holder name (as shown on your utility bill prior to the fire) _____
 Address of lost home _____ City _____ State _____ ZIP _____
 Email address _____
 Phone _____
 Account holder's current mailing address _____
 Account holder signature _____ Date _____

Project information

Rebates will be paid via a check and will be mailed.
 Parcel number of completed home _____ Address of completed home _____
 Home type: Single family Townhome Other (please specify) _____

Builder information

Builder legal entity name _____
 Primary builder contact _____ Phone _____
 Mailing address _____ City _____ State _____ ZIP _____
 Primary builder contact email _____
 Builder signature _____ Date _____

Achieved performance tier

High performance building standard	Rebate Amounts		
	Rebuilding Customer	New Resident	
IECC 2021	\$7,500	N/A	<input type="checkbox"/>
ENERGY STAR® version 3.2	\$10,000	\$1,250	<input type="checkbox"/>
Department of Energy Zero Energy Ready Home	\$12,500	\$2,500	<input type="checkbox"/>
ENERGY STAR NextGen	\$17,500	\$5,000	<input type="checkbox"/>
Phius	\$37,500	\$15,000	<input type="checkbox"/>
PHI	\$37,500	\$15,000	<input type="checkbox"/>

Required documentation in the next table



Claim Page 2

■ Required information

Required documentation	
IECC 2021 <ul style="list-style-type: none"><input type="checkbox"/> Energy code compliance certification from the local building department OR <ul style="list-style-type: none"><input type="checkbox"/> Report from HERS rater showing IECC 2021 compliance	ENERGY STAR version 3.2 <ul style="list-style-type: none"><input type="checkbox"/> ENERGY STAR Single-Family New Homes National Rater Field Checklist AND<input type="checkbox"/> ENERGY STAR v3.1 compliance report<input type="checkbox"/> Report showing an Energy Rating Index (ERI) without PV ≤ 50<input type="checkbox"/> Report showing a UA $\leq 105\%$ of IECC 2021
US Department of Energy Zero Energy Ready Homes (ZERH) version 2.0 <ul style="list-style-type: none"><input type="checkbox"/> All ENERGY STAR v3.2 documentation above AND<input type="checkbox"/> US DOE Zero Energy Ready Homes National Program Requirements checklist<input type="checkbox"/> DOE Zero Energy Ready Home PV-Ready Checklist Version 2	ENERGY STAR NextGen <ul style="list-style-type: none"><input type="checkbox"/> All ENERGY STAR v3.2 documentation above AND<input type="checkbox"/> ENERGY STAR NextGen Program National Rater Field Checklist<input type="checkbox"/> Document the air-source heat pump is listed as ENERGY STAR certified on the NEEP Cold Climate Air Source Heat Pump Product List, with Capacity Maintenance (Max 5°F/Rated 47°F) of at least 70%<input type="checkbox"/> Show the Equipment's AHRI Certified Reference Number listed on CEE Directory of Efficient Equipment as CEE Tier 1, Tier 2, or Tier 3<input type="checkbox"/> Show the heat pump water heater listed as NEEA Advanced Water Heater Specification on the Qualified Products List as Tier 3 or Tier 4<input type="checkbox"/> Demonstrate the heat pump water heater has an ANSI/CTA-2045 compliant modular communications interface
Phius <ul style="list-style-type: none"><input type="checkbox"/> Verify air infiltration performance:<ul style="list-style-type: none"><input type="checkbox"/> 0.040 cfm50/ft2 for the prescriptive path<input type="checkbox"/> 0.060 cfm50/ft2 for the performance path<input type="checkbox"/> Photographic evidence that the roof/ceiling, walls and foundation match the insulation types and insulation levels match the assemblies outlined during Design Certification. Photographic evidence must include a measurement standard (e.g., tape measure or ruler) verifying insulation depths<input type="checkbox"/> Photographic evidence that windows meet both the U-factor and SHGC outlined during Design Certification. The NFRC sticker or a purchase order containing the information is required<input type="checkbox"/> The measured exhaust rates from the kitchen and bathroom should meet the minimum requirements specified by Phius.<ul style="list-style-type: none"><input type="checkbox"/> ≥ 25 cfm for kitchens<input type="checkbox"/> ≥ 20 cfm for full bathrooms	PHI <ul style="list-style-type: none"><input type="checkbox"/> As-build PHPP energy model & plans<input type="checkbox"/> Executed Builder Assurance Certificate<input type="checkbox"/> Photo documentation per PHI certification protocols<input type="checkbox"/> Blower door test results per PHI certification protocols<input type="checkbox"/> Ventilation system commissioning report per PHI certification protocols

Claim Page 3

- Listed as destroyed on Boulder County's Marshall Fire Damage Assessment List
- Form must be received by, and inspection by 12/31/2026
- Documentation

1. Introduction:

Xcel Energy has created a rebate program for homeowners whose homes were destroyed in the Marshall Fire in Boulder County, December 30, 2021, through January 1, 2022, and listed as destroyed on Boulder County's Marshall Fire Damage Assessment List (<https://assets.bouldercounty.gov/wp-content/uploads/2022/01/marshall-fire-damage-assessment-list.pdf>). Rebates are available to rebuilding customers and to new residents.

Rebuilding customers are defined as customers who lived in a home listed as destroyed in the fire, and who have moved into a new home on a parcel that had a destroyed home.

New residents are defined as customers who did not live in a home listed as destroyed in the fire, and who have moved into a new home on a parcel that had a destroyed home.

This Rebate Claim Form (the "Form") is an application for rebates as part of the Marshall Fire Recovery Reconstruction Program.

These Form terms and conditions govern the rebate claims for the Marshall Fire Recovery Reconstruction Program (the "Program") of Public Service Company of Colorado, a Colorado corporation doing business as "Xcel Energy."

The Program is subject to change without notice.

2. Program Rebate Application:

The Form must be received by, and all home reconstruction must be completed and ready for inspection by Xcel Energy or its agents, by 12/31/2026. Home reconstruction must be completed and ready for inspection within two years of registration acceptance by Xcel Energy to be eligible for Program rebates. Account holders may not apply for any additional Xcel Energy rebate programs for the same home reconstruction. Builders are eligible for Energy Star New Homes program rebates. Once home reconstruction is complete and ready for inspection, documentation is required to support the achieved performance tier and must be submitted within ninety (90) days of final inspection. For Home Energy Rating System (HERS) rated homes, an electronic energy modeling file must be submitted to Xcel Energy after final inspection.

3. Program rebate payments:

The payment of Program rebates will be contingent upon the "as-built" home being constructed with all of the energy saving characteristics, materials, and equipment required to meet the achieved performance standard indicated on the Form submitted after final inspection.

Payments require an active account with an active premise at the time of submission. If the account or premise is inactive at the time of submission, payment will be made to the customer whose account is tied to the premise once the premise is active. Only one payment will be issued per premise.

Xcel Energy issues rebates in the form of checks. Xcel Energy is not responsible for any inaccurate information regarding the Program provided by customer's contractors, including inaccurate information regarding rebates or equipment eligibility.

Rebates will be paid on a completed and inspected as-built home. The Program may be cancelled or modified with thirty days' notice. Xcel Energy reserves the right to refuse rebate payments and participation if the customer or its contractor violates Program rules and procedures. Please allow eight weeks for the rebate to arrive.

Xcel Energy will not provide or pay directly for the services of a HERS rater.

4. Program limitations:

Xcel Energy is not liable for customer's contractor's misrepresentations regarding the Program. Xcel Energy will not expressly or implicitly warrant the performance of the as-built home.

5. Program governing law:

The Program, its related forms and any Program terms and conditions, are governed by the laws of the State of Colorado.

6. Program questions

If you have questions regarding this form or any other forms related to the Program, please contact Xcel Energy Customer Service at 800-895-4999, or by email at ResidentialRebates@xcelenergy.com or CustomerService@xcelenergy.com.

7. Mailing Instructions:

Xcel Energy Rebate Operations, P.O. Box 829, Minneapolis, MN 55440-0829

Email application to: ResidentialRebates@xcelenergy.com. Subject line of e-mail should be: "Marshall Fire Recovery" and the future address of the home.

HERS Raters can submit the Form and supporting documents through HouseRate

CEO Electrification Rebate



COLORADO
Energy Office

Rebate Options

Option #1:

- **Electrification using air source heat pump** - Rebate \$10,000, or

Option #2:

- **Electrification using ground source heat pump** - Rebate \$20,000, or

Option #3:

- **Rebate for only ground source heat pump** of \$10,000



Colorado Energy Office Electrification Rebate Claim Form

Option #1: Electrification Rebate

Built to the 2021 IECC

Heat Pump

- NEEP Cold Climate Certified

Cooking

- Electric resistance or Induction cook top

Water Heat

- NEEA's Advanced Water Heating Specification Qualified Products List

Option 1: Electrification Rebate - \$10,000

APPLICANTS FOR OPTION #1 ELECTRIFICATION REBATE MUST INSTALL EACH OF THE FOLLOWING:

- **Certified Cold climate air source heat pump** (Air source heat pump must be [NEEP Cold Climate Certified](#) or ENERGY STAR Cold Climate Certified (coming 2023))

Make (Brand) and Model Serial Number *

AHRI Certification Reference Number *

- **Electric Resistant -OR- Induction Stove**

Make (Brand) and Model Serial Number *

- **Heat Pump Water Heater** - (Heat pump water heaters listed on [NEEA's Advanced Water Heating Specification Qualified Products List](#) in Tier 3 or 4 and the second to last column (CTA-2045 Compliant Communications Port) must be checked.)

Make (Brand) and Model Serial Number *

Colorado Energy Office Electrification Rebate Claim Form

Option #2: GSHP + other electrification

GSHP

- supplies at least **80% of the total annual heating for the building**

Cooking

- Electric resistance or Induction cook top

Water Heat

- NEEA's Advanced Water Heating Specification Qualified Products List

Option 2: Electrification Rebate - \$20,000

APPLICANTS FOR OPTION #2 ELECTRIFICATION REBATE MUST INSTALL EACH OF THE FOLLOWING:

Certified ground source (geothermal) heat pump

- The ground-source heat pump system must meet the criteria defined [C.R.S. 39-26-732\(2\)\(b\)](#), including being designed to supply at least eighty percent of total annual heating for the building. Additionally, the installing contractor of the loop system must be accredited by the International Ground Source Heat Pump Association (IGSHPA)

Make (Brand) and Model Serial Number

AHRI Certification Reference Number 2

- Electric Resistant -OR- Induction Stove*

Make (Brand) and Model Serial Number

- Heat Pump Water Heater - (Heat pump water heaters listed on [NEEA's Advanced Water Heating Specification Qualified Products List](#) in Tier 3 or 4 and the second to last column (CTA-2045 Compliant Communications Port) must be checked.)*

Make (Brand) and Model Serial Number



Colorado Energy Office Electrification Rebate Claim Form

Option #3 GSHP only

- I certify that that geothermal heat pump installation will supply at least **80% of the total annual heating for the building**

Option 3: Ground Source Geothermal Heat Pump Only - \$10,000 Rebate

The ground-source heat pump system must meet the criteria defined [C.R.S. 39-26-732\(2\)\(b\)](#), including being designed to supply at least eighty percent of total annual heating for the building. Additionally, the installing contractor of the loop system must be accredited by the International Ground Source Heat Pump Association (IGSHPA)

APPLICANTS FOR OPTION #3 REBATE MUST INSTALL THE FOLLOWING:

- Certified grounds source (geothermal) heat pump***

Make (Brand) and Model Serial Number

AHRI Certification Reference Number



Marshall Fire

- Wind, Embers, and Smoke



DOLA Mitigation program

Fire Resiliency program

<https://dlg.colorado.gov/housing-recovery-program>

- Two **Separate** funding options:
 1. Up to \$25,000 **forgivable or traditional loan**, dependent on income and rebuilding gap)
 2. Up to \$5,000 **grant only** (not dependent on income or a rebuilding gap) – Total

- Maximum Award Amounts: The maximum award amount is \$30,000
 - Up to a **\$5,000 grant**, and up to a **\$25,000 forgivable or traditional loan**
 - The mitigation awards **are in addition to** any Housing Recovery Program award and would be added to any forgivable or traditional awards

DOLA Mitigation program

Fire Resiliency program

<https://dlg.colorado.gov/housing-recovery-program>

\$5,000 Grant:

- **Complete** a short Wind and Wildfire Protection Mitigation Program **application** and **upload paid invoices and receipts** detailing the mitigation items completed.

<https://share.hsforms.com/1ZudejVqcTlerNHot7Yu2hQ8nqki>



DOLA Mitigation program

Fire Resiliency program

<https://dlg.colorado.gov/housing-recovery-program>

Eligible Wind and Wildfire Measures

- Fire-resistant or **ember-resistant siding**
- **Fire-resistant windows: Triple-pane** window with metal-clad or fiberglass frames
- **Fire-resistant windows: Dual-pane** glass windows with metal-clad or fiberglass frames
- In-home **sprinkler system**
- Non-combustible **Class A decking** attached to a residential structure e.g. PVC, composite, concrete, fire retardant treated wood, etc.
- **Gutter guards**
- **Ember-resistant and flame-resistant venting**



Fire Wise Homes

NFPA

- <https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Preparing-homes-for-wildfire>



National Fire Protection Association
The authority on fire, electrical, and building safety

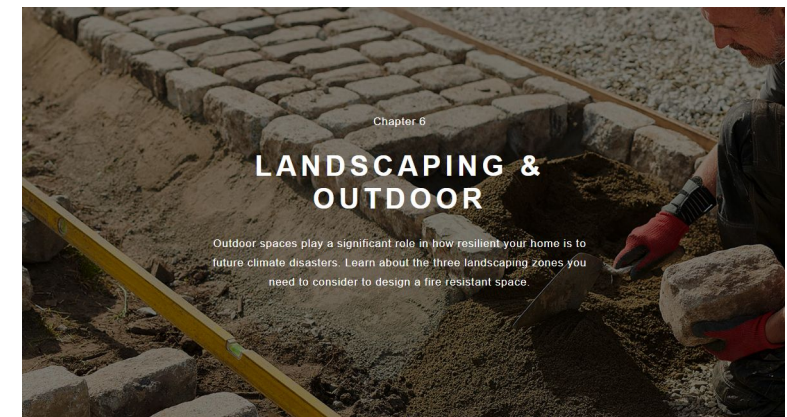
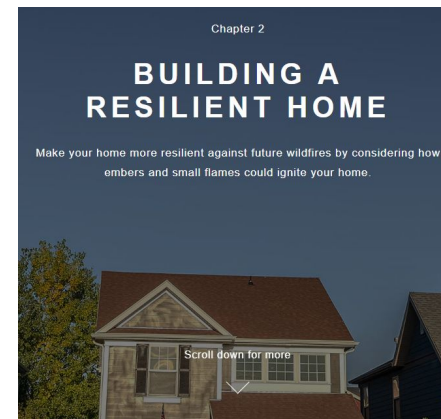
IBHS Wildfire Prepared Home Program

- <https://wildfireprepared.org/>



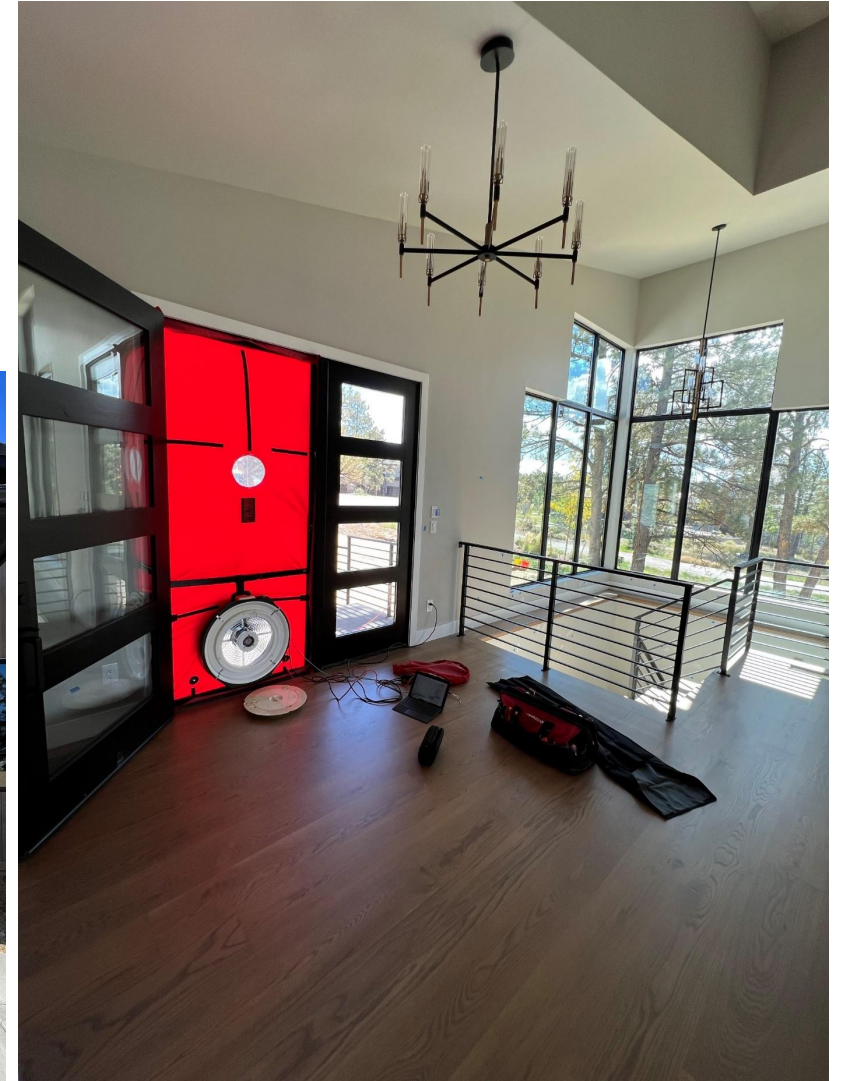
www.Rebuildingbetter.org

- Chapter 2 Resilient Homes
- Chapter 6 Landscaping



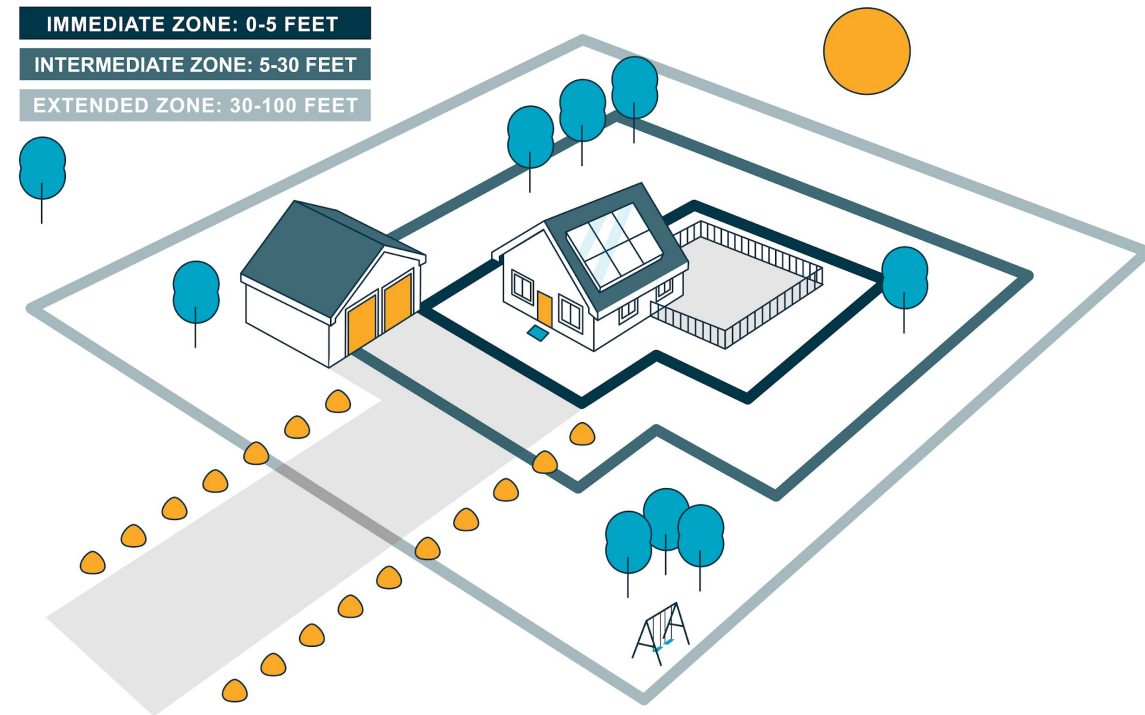
Airtight Homes

- Wind, Embers, and Smoke
- Energy
 - Conduction
 - Convection
- Moisture
 - Diffusion
 - Air flow
- Building Science
 - Control and predictability



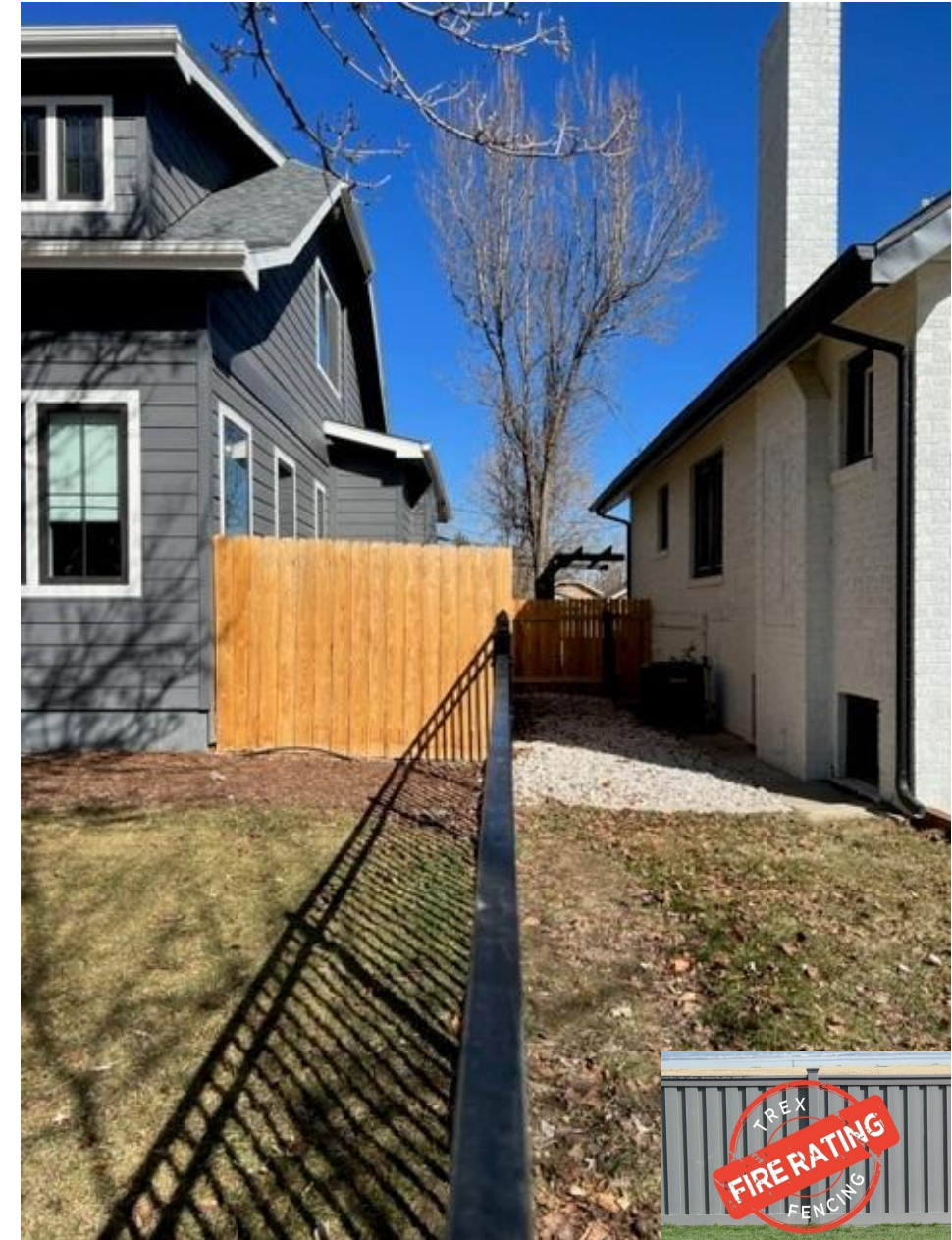
Fire Wise Landscape

- **Immediate Zone 0-5' from house**
 - Noncombustible zone
 - i.e.. Gravel no planting
- Intermediate Zone 5-30' from house
 - Create landscape with less fuel
 - i.e. paver patio, plant choices
- Extended Zone 30-100' from house
 - Landscape to interrupt fire's path
 - Space trees farther apart the closer to the house



Fencing

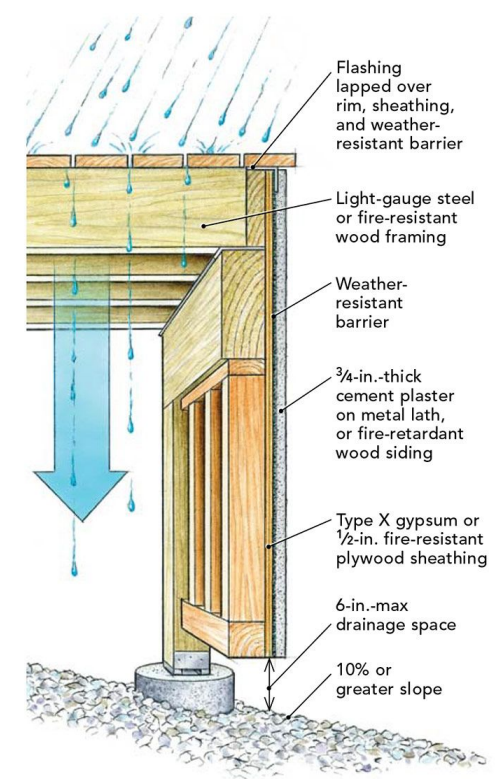
- Use a **noncombustible fence section** when it's attached to a building
- Keep **debris away from the base of the fence**
 - e.g., grass clippings, pine needles, leaf litter and small twigs
 - Avoid placement of combustible mulch near the fence
- “Privacy fencing is the most vulnerable
- The **more air flow** through the fence **the better**
 - Reduce ability for wind-blown embers to accumulate at plank, or lattice panel to horizontal support locations.
- Fence built from lattice that's applied to both sides of the support posts may be desired for privacy but should be avoided in wildfire-prone areas.
- Vinyl fencing is **not vulnerable to ember exposures** but does burn or deform when subjected to flaming or radiant heat



Decking

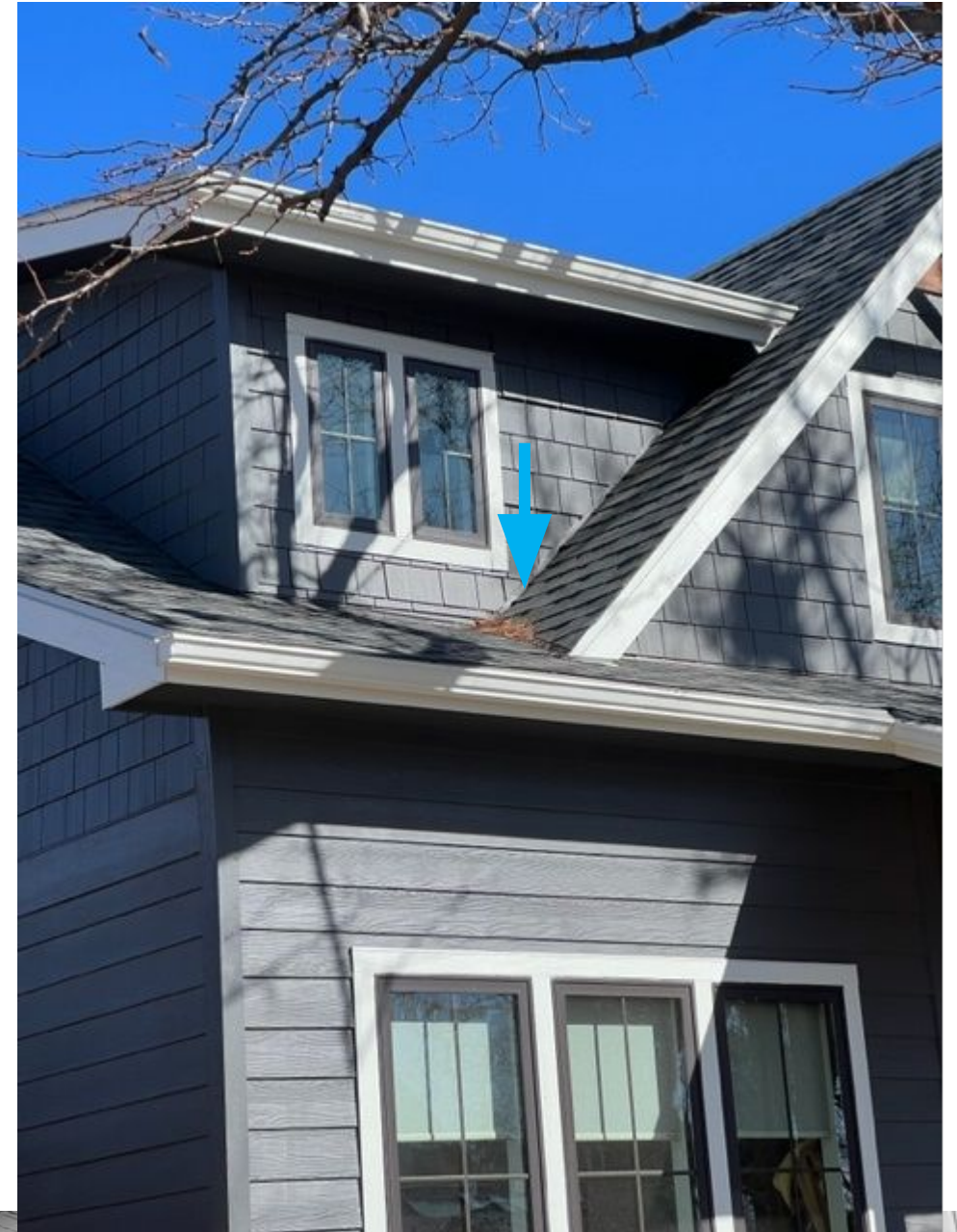
- Consider Fire Rated treated decking material
 - California Building Code requirements
- Enclose under decks so embers do not fly under and collect
- Maintenance
 - Clear of debris at base of the deck and under the deck.
 - (e.g., pine needles, leaf litter and small twigs)
- Avoid placement of combustible
 - Mulch
 - Propane

<https://www.finehomebuilding.com/project-guides/decks/decks-that-stand-up-to-wildfire>



Fire Wise House Form

- House form
- Maintenance
- Roof Pitch
- e.g., grass clippings, pine needles, leaf litter and small twigs



Construction Materials

- Class A Fire-rated roofing
 - Asphalt Composite Shingle
 - Metal
 - Tile
- Siding / Cladding
 - Cementous
 - Brick
 - Stone
- Insulation choices
 - Fiberglass
 - Cellulose
 - Rock Wool

5 FIRE-RETARDANT BUILDING MATERIALS
for your home

DUAL PANE WINDOWS double the time for fire to enter through a window.

CONCRETE is considered noncombustible due to its good thermal properties.

FIRE RETARDANT WOOD is pressure treated with a chemical that remains stable under high temperatures, creating a fire resistant barrier.

FIRE RATED DOORS can withstand a fire from 20 minutes to 90 minutes.

DRYWALL TYPE X doubles a wall's fire rating compared to standard ½-inch drywall.

8 FIRE-RETARDANT BUILDING MATERIALS

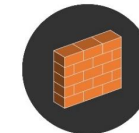
— For Your Home —



Fire-Rated Glass is tempered to minimize the spread of flames and smoke from spreading



Dual Pane Windows double the time for a fire to enter through a window



Concrete is considered noncombustible due to its good thermal properties



Fire Bricks are heat-resistant and built to repeatedly withstand high temperatures



Treated Fibers like wool and cotton, can be chemically treated to reduce flammability



Fire Retardant Wood is pressure treated with a chemical that remains stable under high temperatures, creating a fire resistant barrier



Drywall Type X doubles a wall's fire rating compared to standard ½ inch drywall



Fire Rated Doors can withstand a fire from 20 minutes to 90 minutes

RWC
WINDOWS, DOORS & MORE
KITCHENS • BATHS

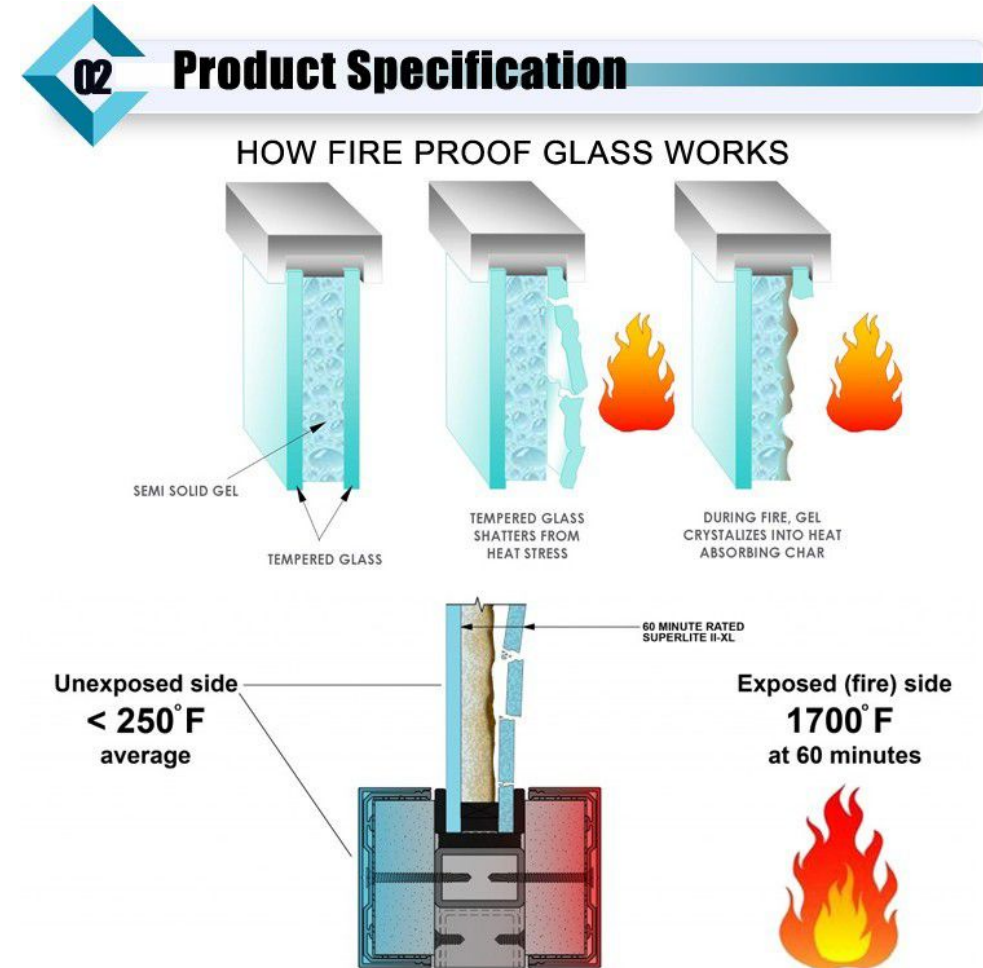
www.rwcnj.com | 973-227-7123

RWC
WINDOWS, DOORS & MORE
KITCHENS • BATHS

BUILD Tank *inc.*

Windows and Doors from a Fire and Energy Perspective

- Reality if the fire is close enough **windows are a weak link** (radiant heat flow)
 - Windows and glass doors can blow out due to heat
- **Limit window openings for fire and energy**
 - Inoperable windows vs. operable
 - Double or triple pane windows
 - Tempered glass on the outside surface/resistant to heat
 - Aluminum clad
- Avoid skylights
- Metal insulated doors



<https://buildingcci.com/articles/glass-glazings-and-fire-ratings/>

Conclusion

- Embers are burning pieces of airborne wood and/or vegetation that can be carried more than a mile by the wind
- Boulder County is in a high wind corridor
- Embers leading cause of ignition
- Build tight
- Choose fire wise materials and building techniques
- Maintenance



Thank you!

Robby Schwarz

robby@btankinc.com

303-927-0025

@ buildtankinc

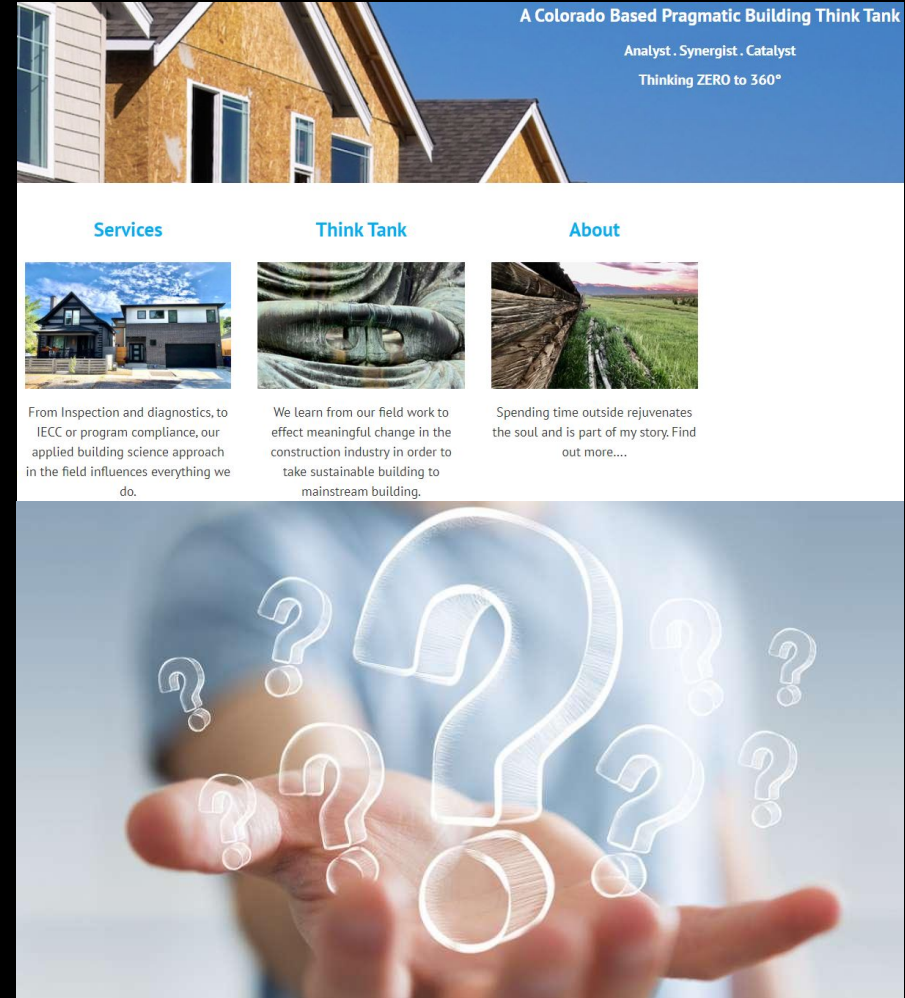


buildCAST



On your favorite podcast platform

www.btankinc.com



Thinking **ZERO** to 360°

All slides in this presentation © 2022

BUILD Tank inc.