Vamsi Kumar Kotla | Co-Founder & CEO

Making All-Electric, Resilient Homes Affordable Using Prefab Home Technology

What We'll Cover Today

REMO HOMES

- Who We Are & Our Purpose
- Smarter Design & Engineering
- Resilience & Safety First
- Demonstrated Impact
- Pilots & Future Funding Needs

About Me

Vamsi “Kumar” Kotla

Co-Founder & CEO

Over two decades of experience in residential construction and AI/ML; Voted best startup CEO in Los Angeles by the Los Angeles Business Journal.

ReMo's Background & Mission

A California solution for a California crisis.

ReMo is a modular home manufacturer building ***all-electric, net-zero, and climate-resilient housing***. Our homes are *engineered specifically for California's unique challenges*—seismic activity, wildfires, high winds, and temperature extremes.

Our mission is to deliver standardized, scalable housing that meets California's affordability, climate, and resilience goals.

WITH A TEAM FROM

SPACEX · NASA · BERKELEY LAB · HERMEUS · Loyola Marymount University · USC · BASF · Berkeley

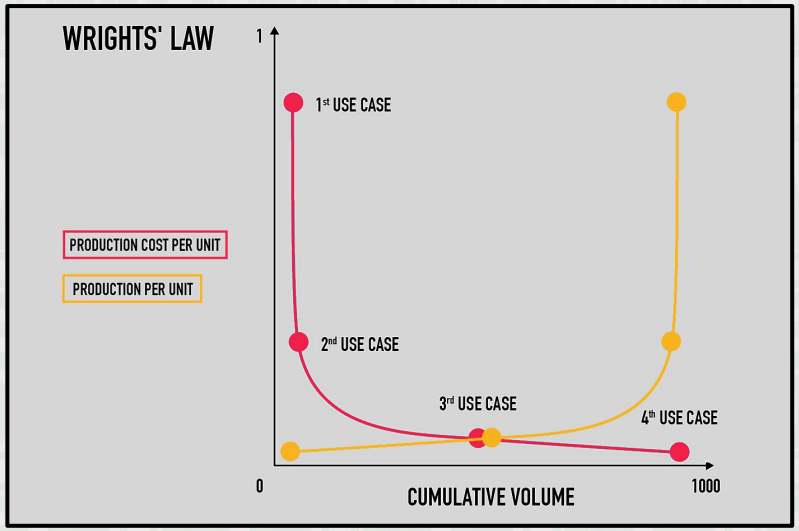
WITH SUPPORT FROM

Panasonic · MITSUBISHI · U.S. DEPARTMENT OF ENERGY · NREL · Schneider Electric · PPG · NVIDIA INCEPTION PROGRAM

Design Philosophy & CEC (CA Energy Commission) Support ($3M)

Climate zone-versatile by design

- Engineered to meet code and achieve zero- or near-zero-carbon performance across all **16 California climate zones and all 4 home orientations***
- Slightly over engineered to reduce lower soft costs and **achieve manufacturing economies of scale** through standardization



As production volume goes up, cost goes down for standardized products.

The role of the CEC

- Most of the sector delivers project-based homes that just meet minimum code—we're engineering for "stretch codes" energy performance
- The support from the **California Energy Commission** was **INDISPENSABLE** to getting us to this point
- We also received in-kind contributions and support letters from **SCE, Panasonic, Mitsubishi Electric**, **Schneider Electric, PPG** and other organizations

**We feel that zero-carbon goal is achievable in most CZs at typical EUI.*

Deployments & Demonstrations

HUD's Innovative Housing Showcase

Built in 10 days and shipped back and forth from Los Angeles to the National Mall in Washington D.C.

MiniMo™

Assembled in 1 hour (250 SF All-Electric ADU with R-38 Roof and R-30 walls)

SupreMo™

Our goal is to assemble in 1 hour by 2030 — fully assembled, plumbed, and wired

MaxiMo™

2023 2024 2025 2026 2027

Introducing SupReMo™ Starter Home (Net-Zero & Resilient & Affordable)

- ★ 3 bedrooms
- ★ 2 bathrooms
- ★ 1,352 SF

Metric	Traditional Builders	Other Prefab	SupReMo™
Installation Speed	6-12 months	2 months	**<1 Month**
Average Cost to Build (California)	$250/SF	$240/SF	**$160*/SF**
Fire Code Compliance (Fire Rating)	30 Mins.	30 Mins.	**90-120 Mins.**

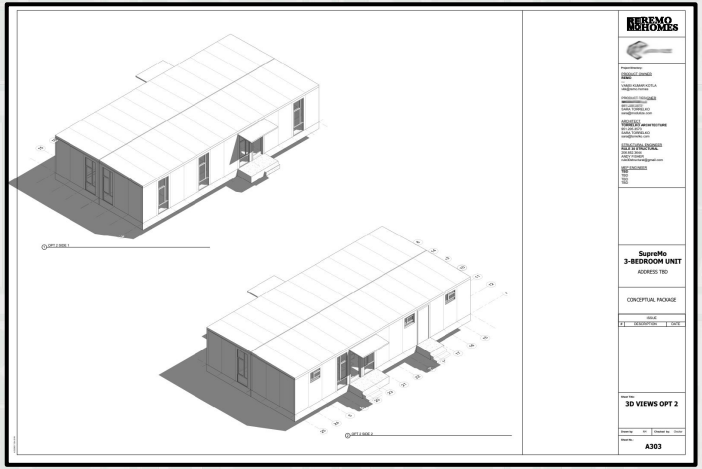
Product Configurations

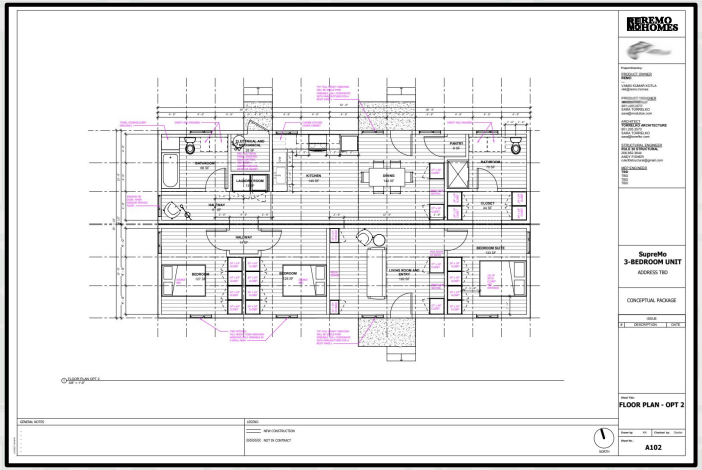
SupReMo™ product line

- Modular designs adaptable to a wide range of site constraints, including narrow and wide lots, multiple orientations, and varied configurations

Approach to standardization

- Uniform floor plans and elevations across models
- Flexible options for glazing, appliances, and finishes
- All models include FISS and FIAll integrations





Designed for Safety: Wildfire-Resilient Features in the SupreMo™

Fire and structural resilience (going beyond IBHS WPH+ standard)

- Class A foam, steel skin, non-combustible flooring
- Rectangular footprint and clean lines eliminate eaves and minimize thermal bridging
- Tempered double-pane windows, fire-rated doors, and intumescent coatings achieve best-in-class resilience

Additional fire measures post-wildfires

- Metal roofs and steel framing
- Fire blocking and suppression for LFP batteries
- Enhanced IAQ and filtration through passive house style envelope tightness and an ERV

Wildfire Resilient Technology

Coatings for >90 mins. fire rating

SupReMo™ (3 bed/2 bath)	Wildfire Prepared Home Plus
Ensure roof is Class A fire-rated	✓
Choose noncombustible gutters and downspouts	✓
Install ember-resistant vents	✓
Cover gutters	✓
Enclose underside of eaves	✓
Install metal dryer vent	✓
Install a noncombustible exterior wall cover	✓
Upgrade to fire-resistant windows	✓
Upgrade to non combustible exterior doors	✓

ASTM E84 or UL 723 Tunnel Test on Exposed Foam Insulation Panel

Photo No. 2
Pre-Test Exposed Side

Photo No. 3
Pre-Test Unexposed Side

Photo No. 4
Post-Test Unexposed Side

Photo No.5
Post-Test Exposed Side (First Section)

Photo No.6
Post-Test Exposed Side (Middle Section)

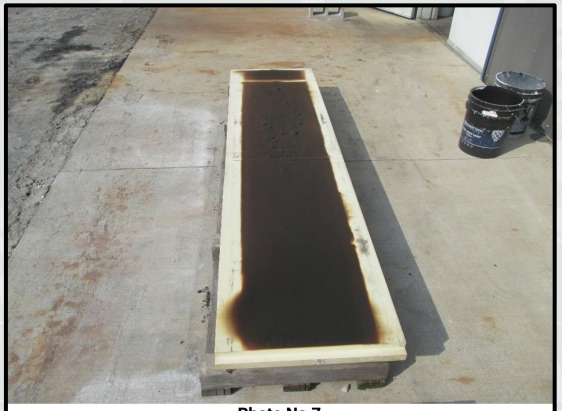
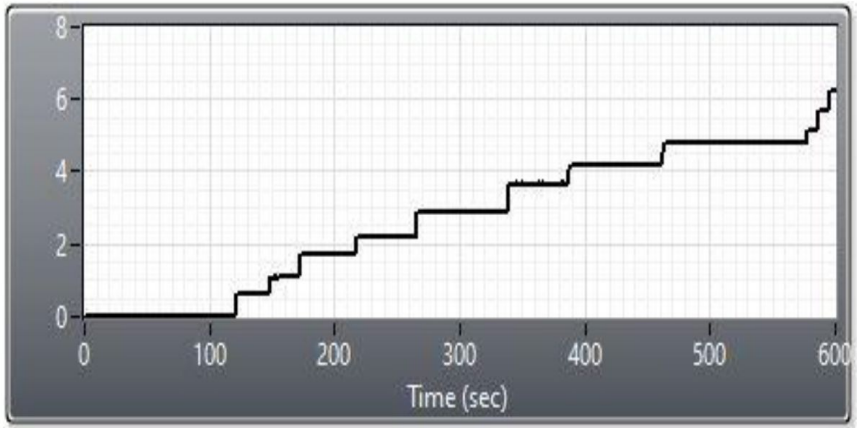


Photo No.7
Post-Test Exposed Side (Last Section)

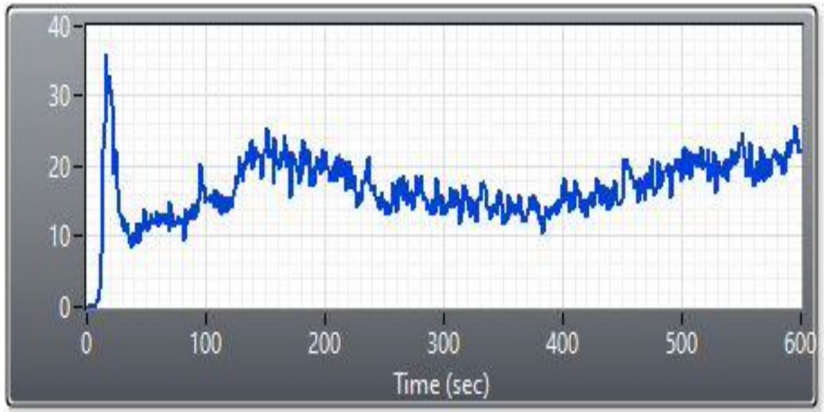
Insulation Foam Testing Results

REMO HOMES

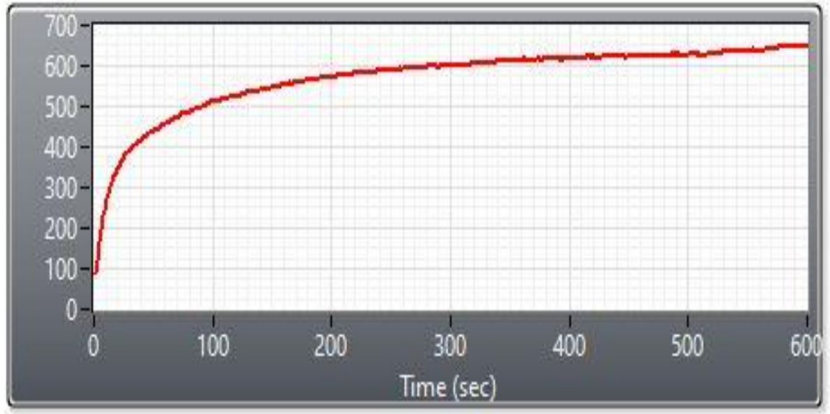
FLAME SPREAD



SMOKE (%A)

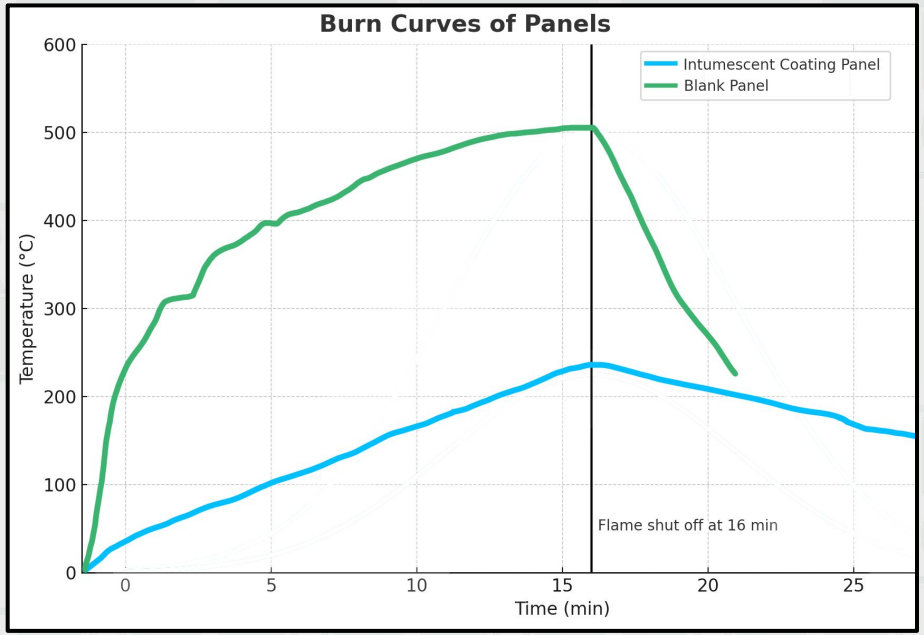


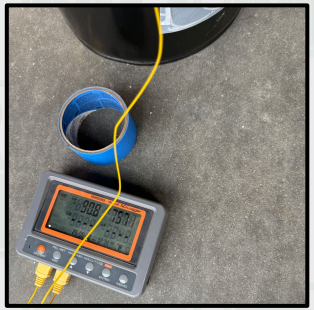
TEMPERATURE



Intumescent Coatings & Expanded Resilience Scope

- **Coating systems for cellulosic fires (<1200 degrees Fahrenheit)**
  - Exterior: 2-part coating with 200 SF per gallon coverage
  - Interior use under review due to chemical exposure concerns
  - Overcoat is allowed to give it an attractive finish and color
- **Alternate intumescent system for hydrocarbon fires (2000 degrees Fahrenheit) under consideration**



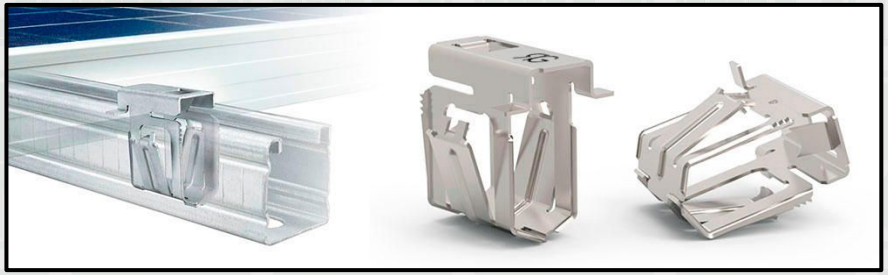


Proprietary Technology for Energy Efficiency & Lifetime Monitoring

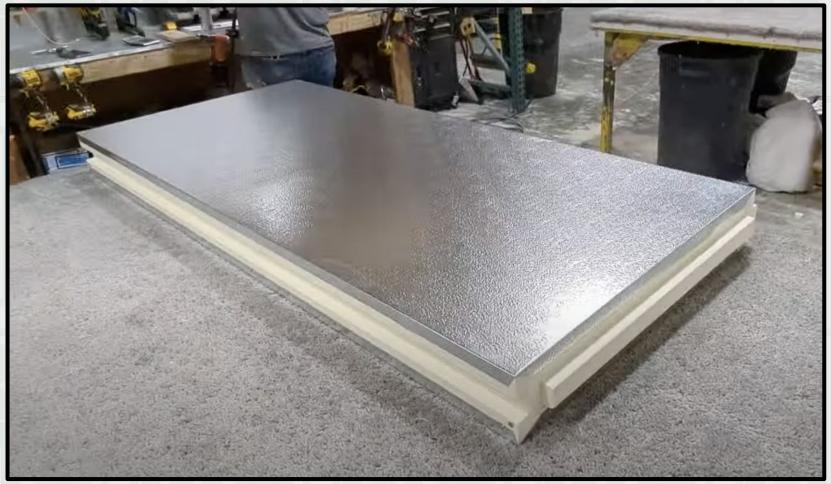
REMO HOMES

Proprietary systems

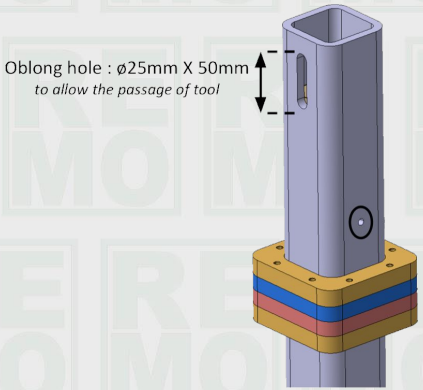
- Modular joinery system
- VIP panels (>R-100)
- Integrated MEP pod
- Configuration Management



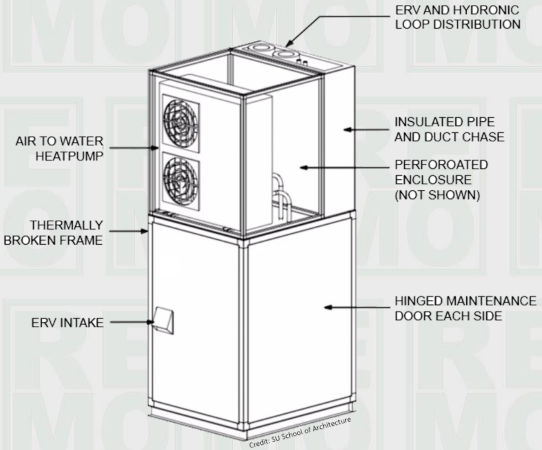
Panel Fasteners



Vacuum Insulation Panel (R-Value > 90)

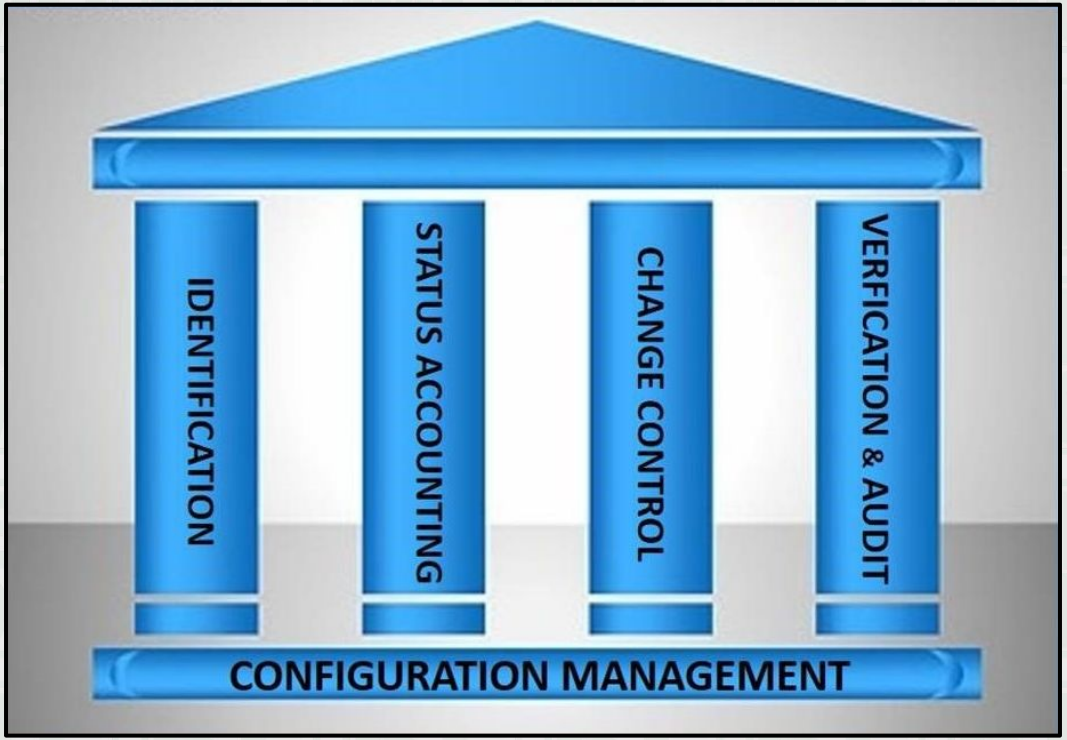


Module Interlocking System



Integrated MEP Pod (Inspired by NREL)

Aerospace-Style Configuration Management for Traceability & Monitoring



Treating your home like a car (VIN) or spaceship—with full traceability into every component: its origin, maintenance and replacement history, and performance.

Performance & Energy Goals

Performance metrics

- Targeting Passivehaus-style airtightness **(ACH50) of 0.6**
- Reduce energy use intensity **(EUI) by 50% (less than 5 kW/SF/yr)** through passive and active measures using RMI's Integrative Design principles

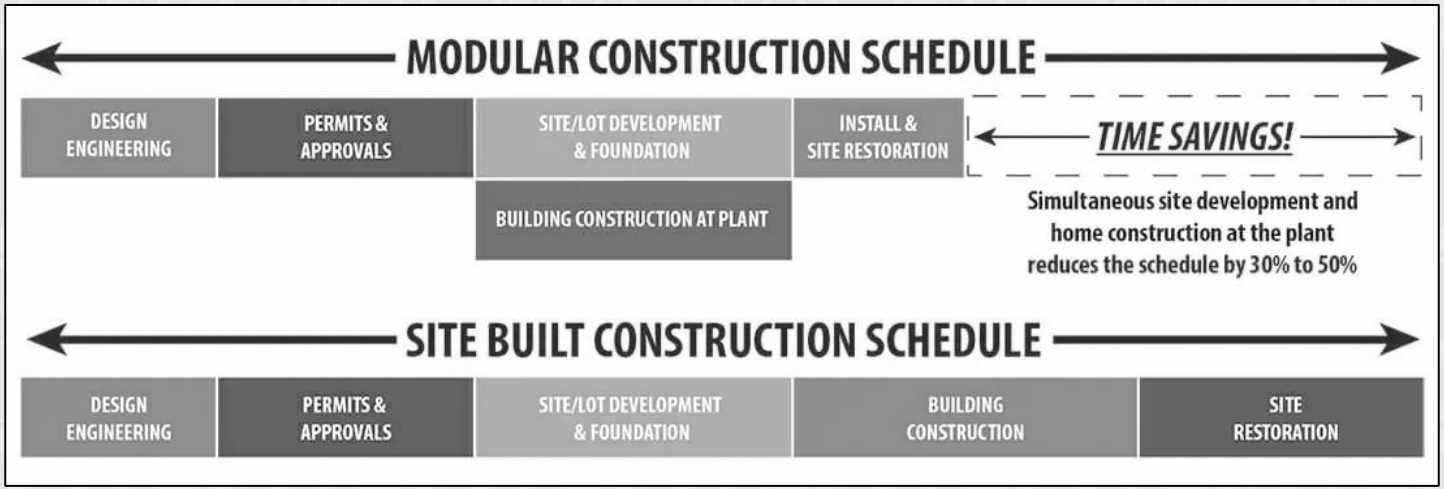
Component	ReMo (Exceed 2025 T24)
T-24 Compliant approach	Performance Option
Roof/Attic Assembly Conditions	No Attic
Insulation on Roof Deck and Ceiling	R-38
Roof Overall Insulation R-Value	R-38
External Wall	R30.2
Window-Wall-Ratio (WWR)	0.12
Duct Insulation	R10
Duct location	Unconditioned Floor Space
Radiant Barrier	N/A
Slab Floor	No
Door (R-Value)	R5
Vertical Fenestration U-Factor	0.25
Vertical Fenestration SHGC	0.23
Climate zone	1-16
Lighting Density [W/f2]	0.17
Electric Appliance (Fridge/Dishwasher/..)[W]	550
Ventilation (Whole Building Fan)	REQ
Infiltration (Air change per hours)	0.6
DX Cooling SEER	13.4
HPWH UEF	3.5
Natural Vent	Yes

Non-Energy Goals

Operational Cost Savings (Insurability & Lower Maintenance & Better Indoor Air Quality)

- Engineered to IBHS Wildfire Certified *(greater insurability)*
- Emissions Free with Superior IAQ
- 20-30% lower build costs*
- 40% lower operating costs:
  - *100% lower electricity costs***
  - *15% lower insurance*
  - *20% less maintenance*

** Target by 2030*
*** In majority of CA CZs under typical use and optimal orientation*



Minimizing Soft Costs for On-Site Generation/Storage

Factory installation of solar/storage/heat pumps for energy resilience can save costs up to 40% over site installation

Residential solar system costs include:

- **Hard costs** *(physical hardware like solar panels and batteries)*
- **Soft costs** *(administration, marketing, design, permits, and labor)*

Soft costs in rooftop solar installation typically account for about 64-68% of the total installed cost.

Factory installation of Net Zero Energy (NZE) equipment:

- Reduces the incremental costs of NZE by **38-40% due to labor and supply chain efficiency**
- **Unlocks up to 40% whole-home energy savings**, aligning with NREL's target for high-performance homes—without compromising comfort or reliability

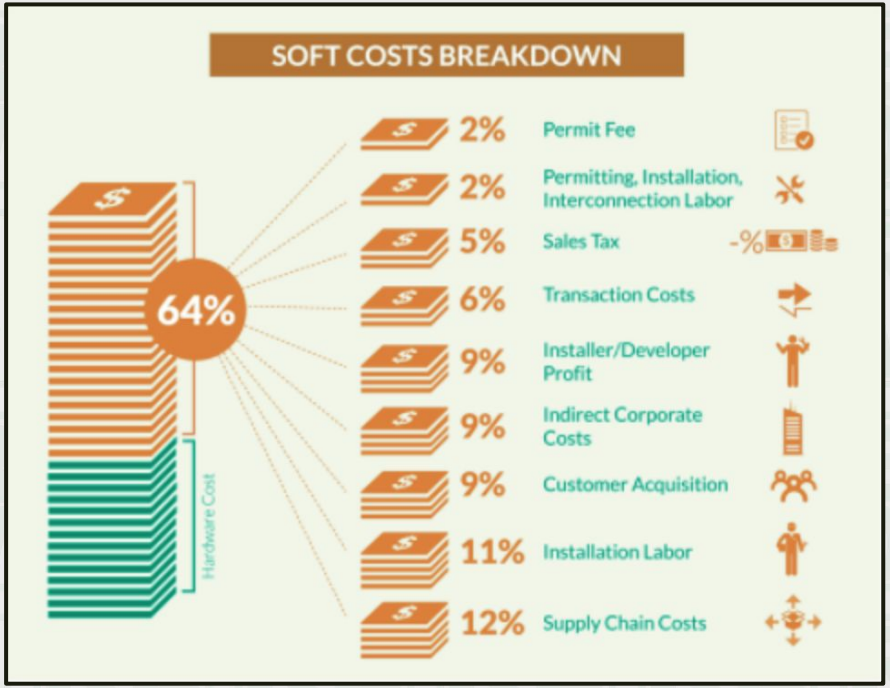


Image Courtesy: U.S. Department of Energy

NREL, Building America Puts Residential Research Results to Work, DOE/GO-102004-1902.

Pilots, Partnerships & Funding Needs

Pilot deployments

- Plan to deploy with the Pit River Tribe, Hoopa Valley Tribe, and as part of the Altadena rebuild effort

Ongoing research

- Collaborations with Dr. Michele Barbato (UC Davis) and WPI on performance and resiliency studies

What's next

- Securing funding to expand resilience engineering and testing, expanding pilot sites, and completing certification

PIT RIVER TRIBE

THE GREAT SEAL OF THE HOOPA VALLEY TRIBE

ALTADENA, CA

Certification & Validation

Third-party validation

- Received preliminary design and construction sign-off from IBHS
- Full approval anticipated following site demonstration
- M&V being conducted by NREL (Los Angeles)
- Targeting future certifications: LEED Platinum, CalGreen Tier 2, EPA Energy Star, and DOE Zero Energy Ready Homes (ZERH)

www.remo.homes

Scan to learn more & join ReMo's mission

Thank You!

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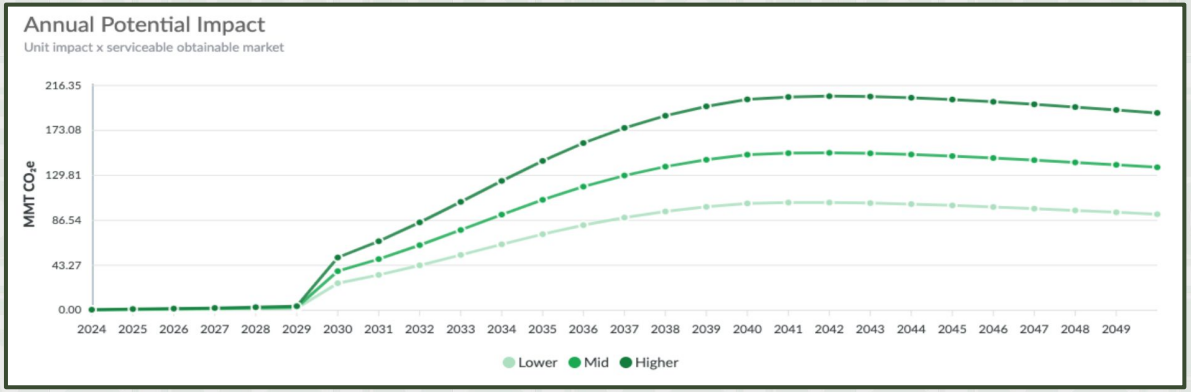
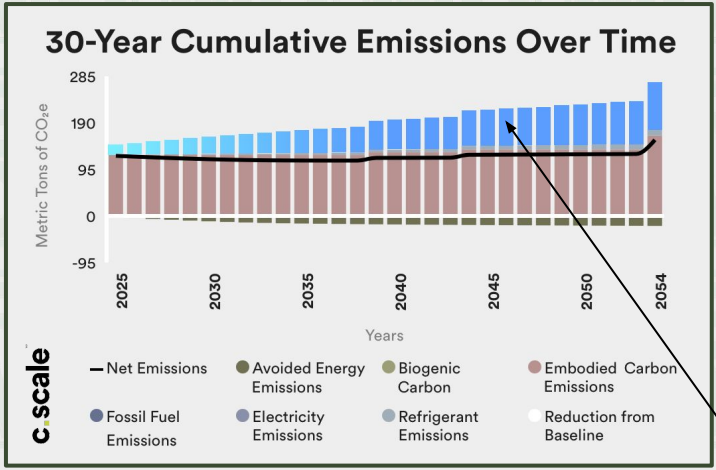
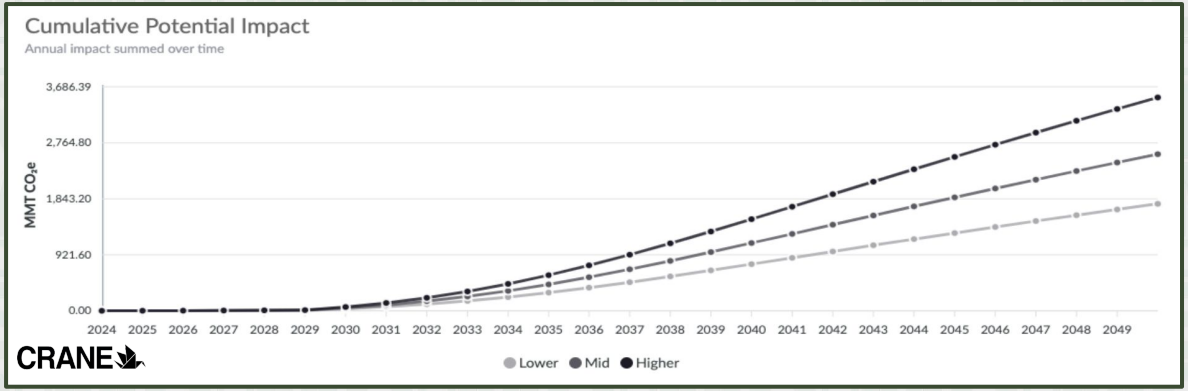
Greenhouse Gas Reductions



By 2050, 80% of the housing stock will consist of homes built before 2025, leaving only 20% as the ceiling for achieving zero-carbon goals through new construction alone.





The blue bars represent the relative CO_2 savings compared to a traditional home, with avoided emissions accumulating over the lifespan of a ReMo SupReMo Modular Home (1,200 SF, 3 bed/2 bath).