

DOCKETED

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Update on AFFORDABLE Net Zero Energy ADUs NOW

Can you email me your projected timeframe for EPIC 5 award decisions?

Would it be useful or possible to discuss our proposal with staff?

Update: The Chico home using the V1.0 windows and envelopes produces 2 million more watthours than it consumes per year with just 7 solar panels totaling 2.8kw, and has been built at an affordable hard cost of \$172,000.

V2.0 designs for ADUs have California CBECCs energy code calculations of .41 KBtu/sf/yr compared to the code-compliant Standard Model at 38 KBtu/sf/yr Net Energy Use Intensity...at comparable or LESS first cost.

EPIC support gets us tested, certified and California Net Zero Energy ADU prototypes built and monitored.

Additional submitted attachment is included below.

AFFORDABLE Net Zero Energy NOW

Design Optimization of New Homes & Buildings with Low Embodied Energy

Cold & hot climate V2.0 pilot demonstrations sought for immediate design, construction, & monitoring.



Chico, CA 672sf home + 140sf porch, the first building with V1.0 window-integrated envelopes.

Producing 2 million watt-hours more than consumed per year with just 7 solar panels & a small 500 kwh battery.

\$172,000 hard construction cost: \$256/sf

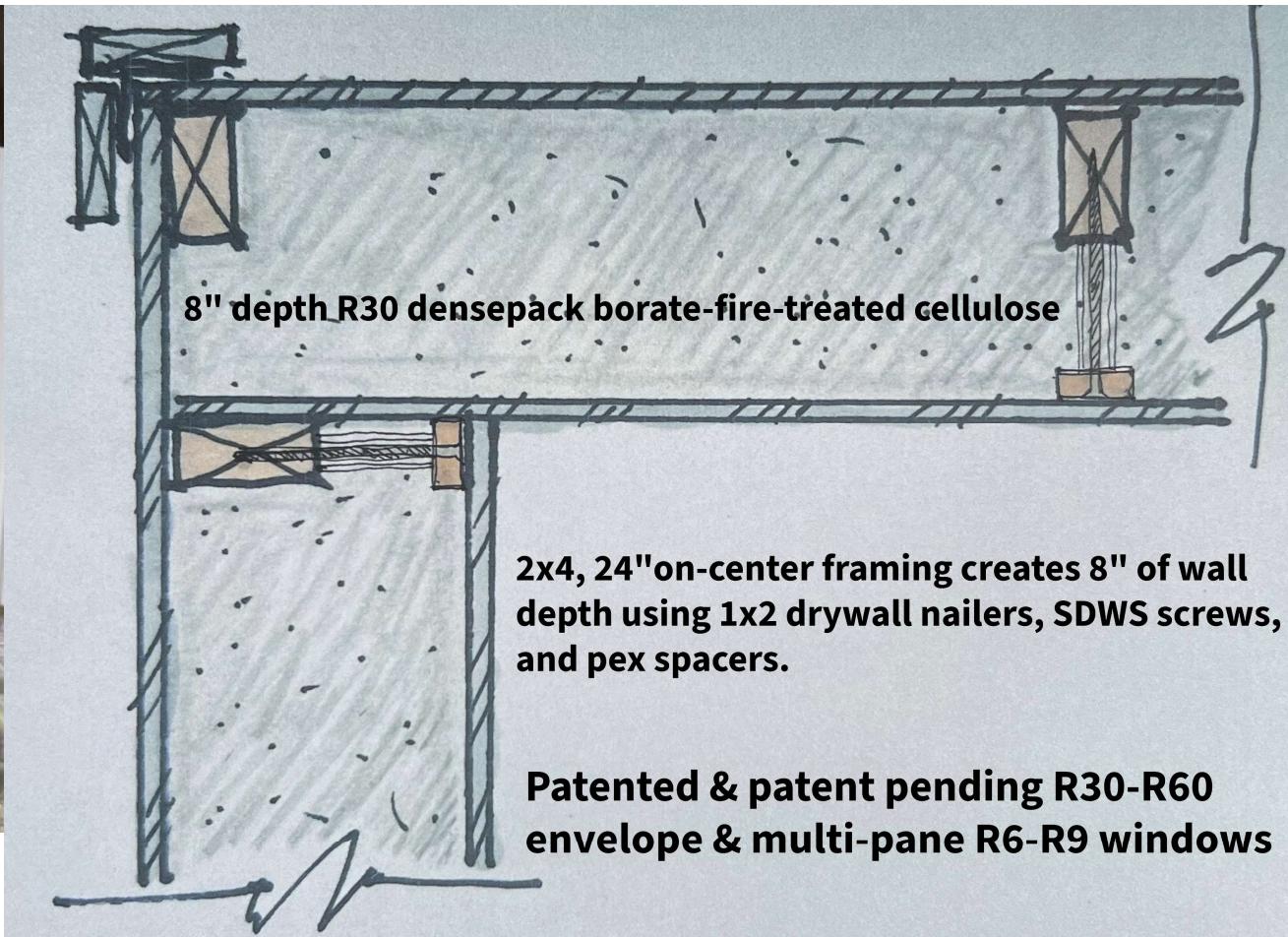
Owner maintains comfort without AC until outdoor temp hits 99 degrees F.

Core Technology Innovations



Early stage prototype going into R6.6 fixed window.
Latest version has white foam clean edges, caulked at the
glazing perimeter to provide a water-&air-tight seal. Low
tech delivers AFFORDABLE high performance

Patented & patent pending R30-R60 envelope &
multi-pane R6-R9 windows tailored to climate
zone & solar orientation, V2.0 now at TRL 4



Plus: ground contact treated wood foundation replaces concrete²

Problem & Impact

4.7 million unit “severe housing shortage.”

Half the nation cannot afford a \$250,000 home.

US Chamber of Commerce

got back yard?

Solve the housing & climate crises together.

AFFORDABLE Net Energy Producing

Accessory Dwelling Units built in 82 million US backyards or tiny home villages.

Non-combustible versions for commercial construction also available.



Market Opportunity

**200-250,000 ADUs per year in US
= \$25 billion @ \$100,000 each**

**Implies bigger market & possibly
higher growth rate than chart
shows**



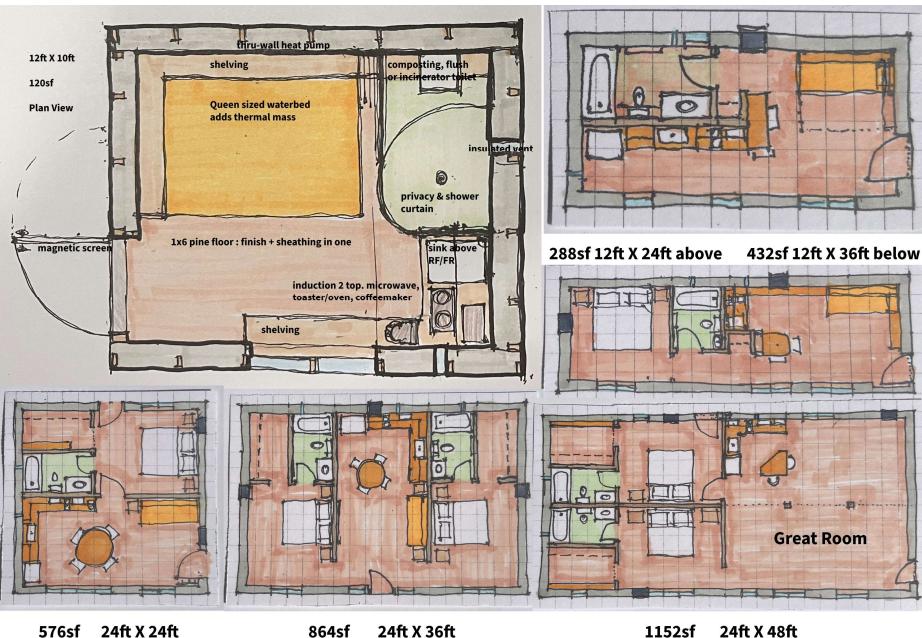
4.7-million-unit shortage @ \$100,000 each = \$470 billion market
if capital formation keeps up

The Company sells plan sets, & information packages in \$450 bundles per ADU, with those revenues bootstrapping model home construction to build local production pipelines. Expand to the rest of the 1.14 million-unit per year new home and commercial building wood frame market.

Competitive Landscape

Cosmic's 380sf Net Zero Energy Studio costs \$279,000, at right.
570sf 1BR costs \$359,000.

Deluxe finishes at deluxe prices.



Our 288sf Net Energy Producing Studio targets \$78,000, at left.

432sf 1BR for \$118,000

576sf 1-2 BR for \$158,000.

864sf 2-3 BR for \$228,000.

Low-embodied-carbon finishes.
AFFORDABLE prices.

Business Model for Growth



Sell construction plan sets, material quantity take-offs & cost estimates, code compliance energy models, and step-by-step how-to for 6 Net Energy Producing ADU models from 120sf to 1152sf.

Earn affiliate sales fees for each ADU materials package purchased.

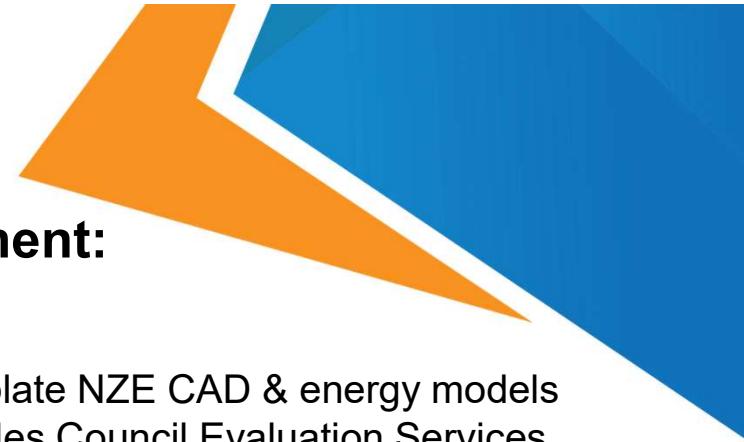
Expand to Net Zero Energy Green Template multifamily, 4-story hotels, etc.

Build Net Energy Producing ADUs in targeted markets.

Develop tiny home & multifamily communities.



Getting it Done!



\$1.2 million in SBIR grants, CRADAs, & family investment:

- Built \$172,000 hard construction cost Net Energy Producing 672sf home
- CalTestBed validation installation & modeling at Berkeley Labs' FLEXLAB
- Oak Ridge National Labs & Mississippi State University yield Green Template NZE CAD & energy models
- USDA SBIRs test windows V1.0 to national standards & International Codes Council Evaluation Services QA/QC review & published listings

\$600,000 will provide 2 years of runway to:

- Test V2.0 windows and walls to national standards
- Build 120sf no-building-permit-required microhomes in cold and hot climates to verify cost & Net Energy Production
- Document on You Tube, engage beach head markets, & build a pipeline of first revenue projects & scaling revenue for plan sets, take-offs and estimates, code-required energy calculations, & step-by-step how-to

\$1-5 million bootstrap or investment builds future:

- Sales models & construction capability in targeted markets
- Become the “Tuff-Shed” of ADU design & construction
- Expand to multi-family, hotels, & other wood frame buildings

Vision



21st century Net Zero Energy load-balanced new homes & buildings everywhere.

Homelessness & housing crisis solved.

Build the 21st century update to Sears & Roebuck's early 20th century pre-cut home kits in a range of sizes & styles, originally delivered by railroad & horse-drawn wagon.

Now Lowes, Home Depot, & Menard's delivers to your backyard site as we become the "Tuff-Shed" of ADUs.

Exit by IPO, sale to our big box home store partners, or a combination of Autodesk, Bentley, & national home builders.

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