

# HUBe

## Behind Every Wall is a Door

“Behind every wall to a more affordable and sustainable Netzero energy and modular housing future is a door opened by people - turning bold ideas into action, advancing 21<sup>st</sup> Century clean electric energy and Ai technologies in dwelling, data center and resort energy HUBs by working side by side with communities, businesses, utilities and governments”.

*Phillip Roberts, CEO & Co-founder, NZE*



**Phillip Roberts**

Co-founder and CEO





# The Urgent Challenge: Homelessness Is In a State Of Emergency

Homelessness State Of Emergency Declaration In L.A. Confirmed By Board Of Supervisors; Mayor Bass Promises An "Urgent & Strategic Approach"

The world is now in the midst of a climate, energy, and housing crisis. There were over 580,000 people experiencing homelessness in the U.S. in 2022. According to the National Alliance to End Homelessness 400,000 were individuals and 175,000 were individuals in families with children. Nearly 70,000 homeless in LA County alone.

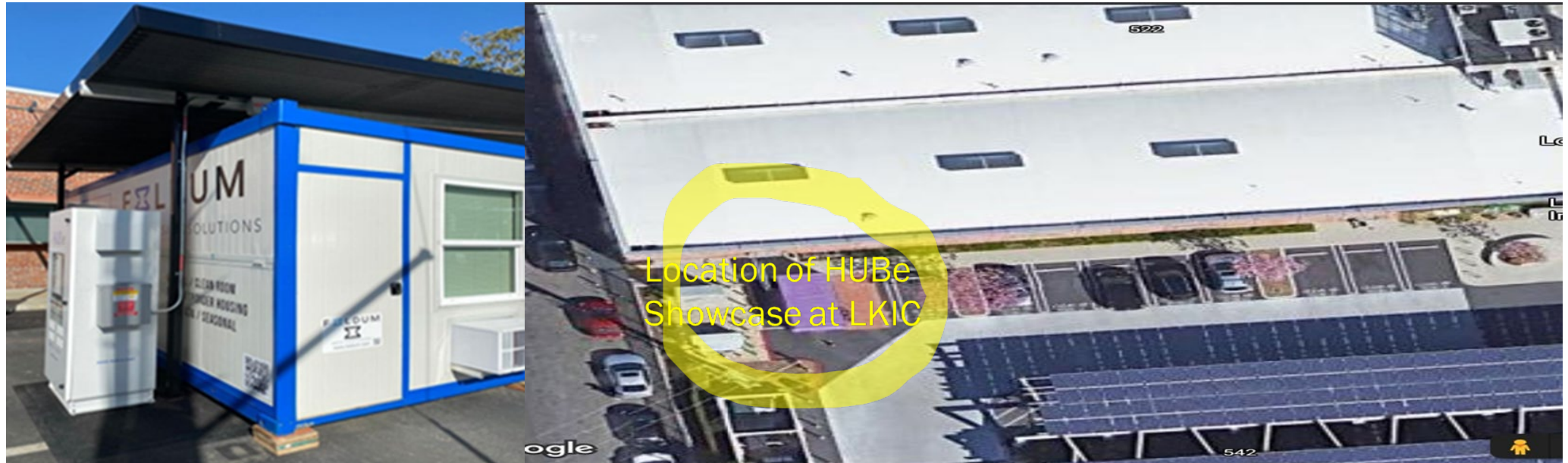




# NetZero Energy MicroShelter/ADU Exhibit

A collaboration between LKIC/LACI/NetZero Energy Systems

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# Advancing Net Zero

A World Green Building Council global project



## WorldGBC definition:

A net zero carbon building is highly energy efficient with all remaining energy from on-site and/or off-site renewable sources

**100% of buildings** must operate at net zero carbon

**2050**

**2030**

**All new buildings** must operate at net zero carbon

GOVERNMENT  
ENGAGEMENT

TRAINING &  
EDUCATION

CORPORATE  
ENGAGEMENT

CERTIFICATION

## Key Principles

### 1. Measure and disclose carbon

Carbon is the ultimate metric to track, and buildings must achieve an annual operational net zero carbon emissions balance based on metered data



### 2. Reduce energy demand

Prioritise energy efficiency to ensure that buildings are performing as efficiently as possible, and not wasting energy



### 3. Generate balance from renewables

Supply remaining demand from renewable energy sources, preferably on-site followed by off-site, or from offsets



### 4. Improve verification and rigour

Over time, progress to include embodied carbon and other impact areas such as zero water and zero waste

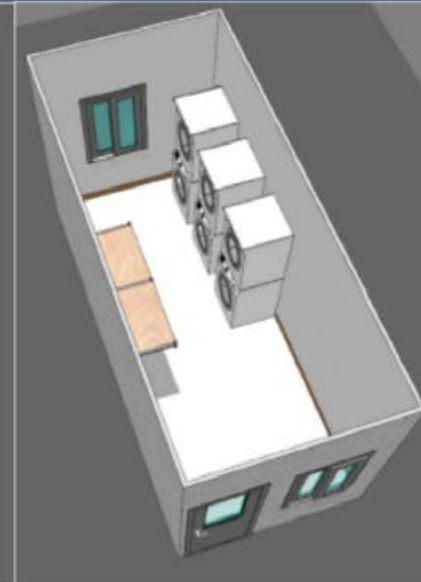
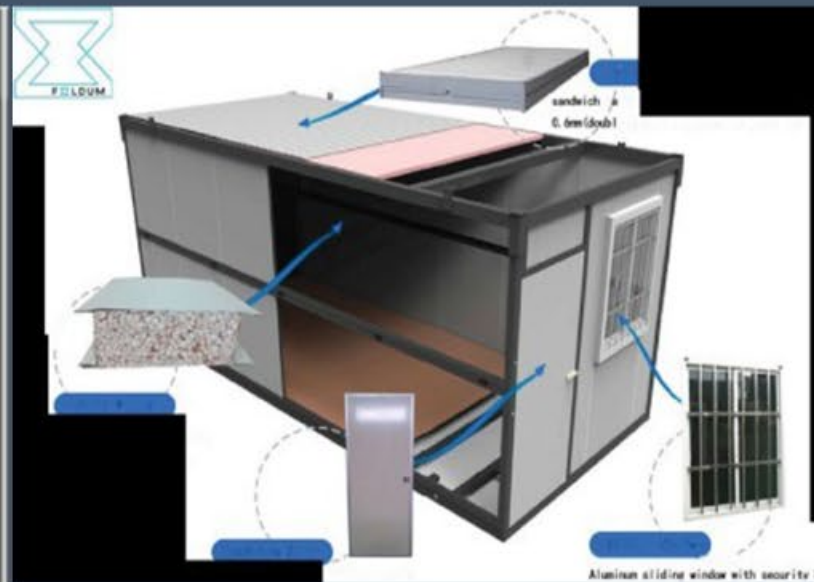




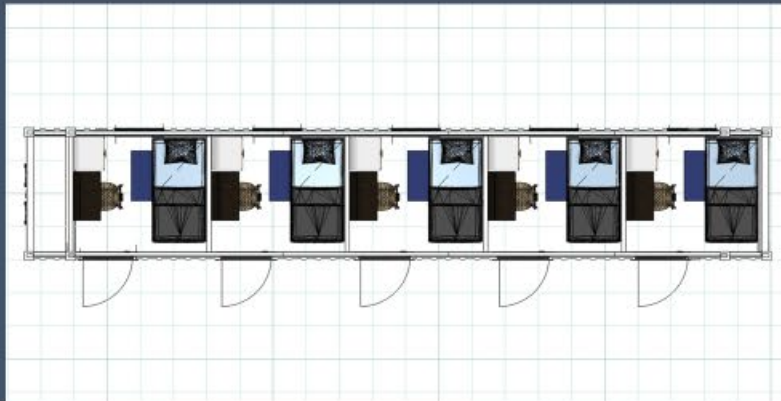
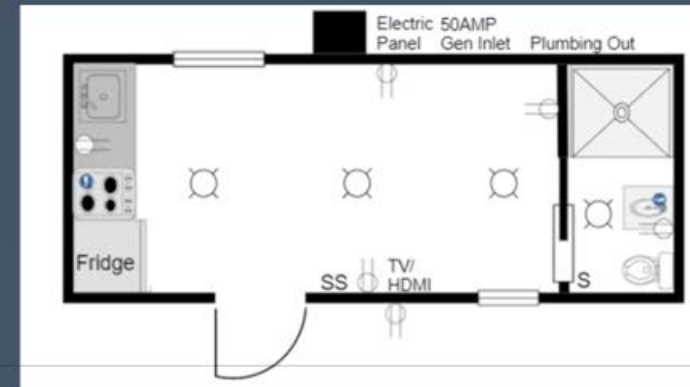
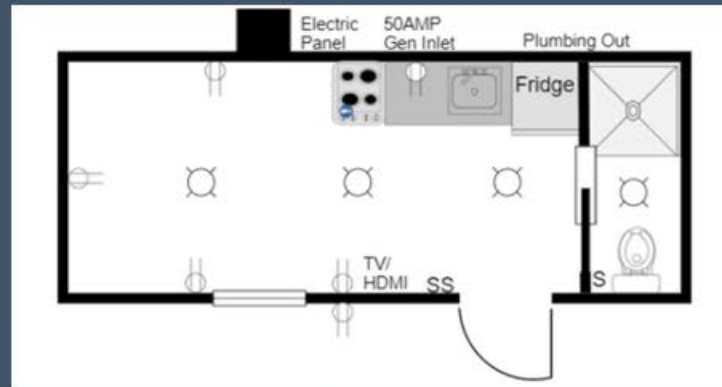
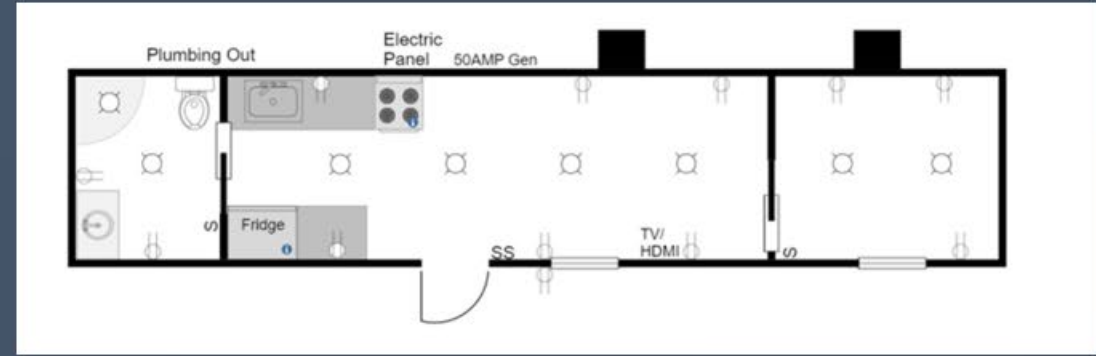
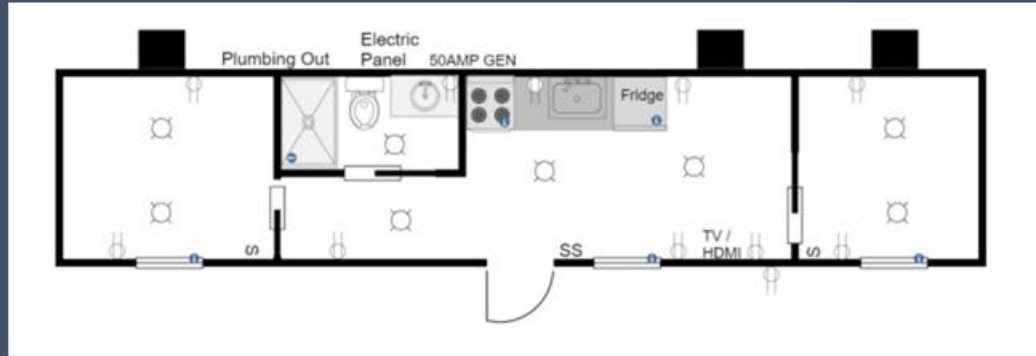
# Deploy NetZero Energy Micro Shelter and ADU Communities in SoCal/Los Angeles with Multiple Layout Options



- Micro units are 8' x 19.5' with 8' height ceilings
- Power via grid/solar+batteries (generator optional)
- 156sf or (2) 78sf living space(s) with door/window
- Various configurations: 1-5 bed options
- Units range from \$19,000 to \$85,000
- Structure placed on grade, blocks, jacks or concrete



## Phase II: Install NZE 20ft (studios) + 40ft (1-2 bed) + 5 Bed (Micro Shelters) in Safe Communities





## Container Home Features

|                                | 20' Standard  | 40' High Cube   |
|--------------------------------|---|---|
| Container Specs (L x W x H)    | 20' x 8' x 8'6" (160 SF)  | 40' x 8' x 9'6" (320 SF)  |
| Exterior Siding                | Painted   | Painted   |
| Exterior Door (36" Steel Door) | 1   | 1   |
| Windows (36" x 48")            | 1   | 2   |
| Wall Covering                  | Smart Siding, Nickel Gap Siding, or Pine Siding   | Smart Siding, Nickel Gap Siding, or Pine Siding   |
| Insulation                     | Closed cell 2lb spray foam interior and underside                                       | Closed cell 2lb spray foam interior and underside                                       |
| Electrical                     | 200AMP breaker panel w/interior and exterior lighting, switches, outlets, and HDMI runs | 200AMP breaker panel w/interior and exterior lighting, switches, outlets, and HDMI runs |
| AC                             | 1 - 18,500 BTU AC/Heating units   | 2 - 18,500 BTU AC/Heating units   |
| Kitchen                        | Kitchenette with black appliance package  | Full kitchen or kitchenette, with black appliance package                               |
| Bathroom                       | Full bathroom with shower, vanity, toilet, and tankless water heater                    | Full bathroom with shower, vanity, toilet, and tankless water heater                    |
| Flooring                       | Vinyl flooring  | Vinyl flooring  |

*Note: Incorporates Texas building codes, ISO standards, and certified trade codes / specifications into its quality standards.*



# HUB<sup>e</sup>

The HUB of Everything Sustainable Energy

Utilities around the country, like the LADWP, are employing new Demand Response (DR) strategies to meet and lead the transition to a near carbon free energy system. The NZE Micro Shelter/ADU exhibit at LKIC/LACI combines affordable transitional shelters and ADUs with on or off grid Netzero energy.



- HUB-e is a hybrid energy production, storage, EV charging and smartgrid system-controlled nanogrid (7kW) to microgrid (100MW+) on or off grid scalable platform that provides homeowners, data centers, businesses, and resorts 24/7 power.
- HUBe is optimized for utility to customer Demand Response (DR) Programs in peak demand periods, using cyber secure hardware and software systems to enhance resiliency and grid security.
- HUB-e platform solution will help advance LADWP's targets to supply 80% renewable energy by 2036; and 100% by 2045.



# HUBe

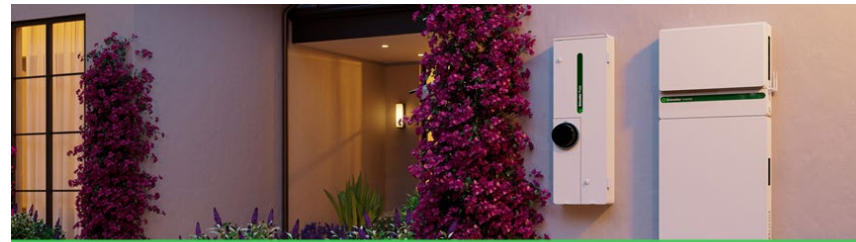
## New “SE Home”

Residential Energy Management System

Replacing the initial HUBe SE XWPro based MicroShelter EMS system, NZE introduces The Schneider Electric “Home” EMS, a LADBS approved “all-in-one” EMS.

- a LFP battery energy storage system
- a high-power solar inverter supports solar arrays sizes from 3 to 15 kW
- a smart 4 in 1 home electrical panel
- connected to home electric outlets
- controlled by the Schneider Home app

The SE Home solution allows homeowners to save by enrolling in utility Demand Response (DR) programs and qualifies for various CA state and federal tax incentives.



## Schneider Home

All-in-one home energy management for today and tomorrow

### Introducing the future-proofed, integrated, home energy management system

As homes become smarter, your customers need the intelligent energy infrastructure to easily upgrade their homes in the future to make them more efficient, resilient, and sustainable.

Now you can give your customers what they want with Schneider Home. It's the first-of-its-kind energy management system that is easy to install and upgrade. Help your customers easily add solar, backup battery, and EV charging — and manage it all through one easy-to-use app.

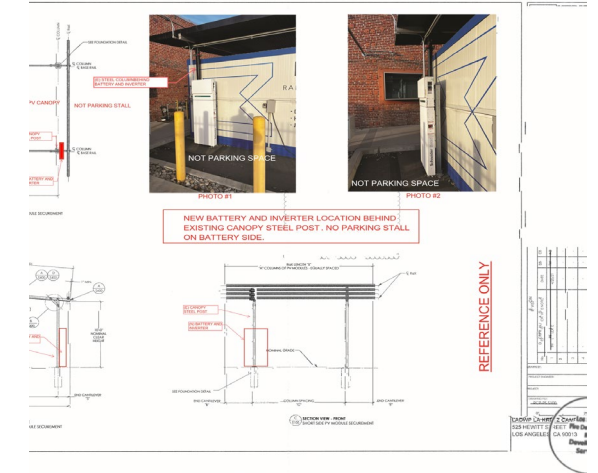
Winner of the CES Innovation Award and the Omdia Innovation Award, Schneider Home puts energy management control into your customers' hands.



### Simplifying home electrification for electrical contractors and builders

- Load-control ready to extend battery runtime and minimize the need for service upgrades
- Faster installation with fewer boxes and less conduit
- Scalable for flexibility to meet your customers' needs
- Remote service through a simple online dashboard
- Cleaner home exterior with sleek, modern hardware and fewer electrical enclosures
- Easier sourcing, operation, support, and warranty from one vendor

## Schneider Home Installed in 2025



## High Performance Battery

- 10 kWh capacity each, expandable to 30 kWh (3 batteries)
- 7.7 kW continuous power during a grid outage
- 15.4 kW surge rating for more reliable backup power



# HUBe Vehicle-to-Anything (V2X) Platform



Wallbox Quasar 2 bidirectional EV charger able to charge/discharge energy from a Made in the USA Kia EV9 vehicle

HUBe's V2X platform uses the Wallbox Quasar 2 (V2X) EV charger system to provide flexible bidirectional EV battery charging/discharging using Vehicle to Anything (V2X). With V2X the EV battery may be controlled remotely by a homeowner and/or utility, in cooperation with each other, and timed to charge and/or discharge energy in or out of the EV battery according to the real-time needs of the grid and homeowner. In the near-future V2X will provide utilities Demand Response (DR) options that enables both utilities, EV, and home/business owners to become partners in building and enabling the NextGen Smartgrid.



# About the NZE MicroShelter/ADU Technology Showcase Exhibition Partners

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- The LADWP's La Kretz Innovation Campus (LKIC)/Los Angeles Cleantech Incubator (LACI) is a space for cleantech entrepreneurs to grow and showcase working exhibits for customers, students, and visitors alike. [www.ladwp.com](http://www.ladwp.com)
- Schneider Electric is an industry leader in home energy management technology, providing state-of-the-art technology with products installed in 4 out of 10 U.S. homes. [www.se.com](http://www.se.com)
- Wallbox is empowering the transition to netzero by seamlessly integrating EV charging (including V2X) energy management, and grid-responsive technologies for homes, businesses, and communities. [www.wallbox.com](http://www.wallbox.com)
- NetZero Energy Systems (NZE) is a previous LACI portfolio netzero energy system spin-out company with its CA headquarters located at LKIC/LACI. [www.hub-e.com](http://www.hub-e.com)

# Special thanks to the NZE LKIC MicroShelter Project Managers

- ❖ **David Jacot**, LADWP Director of Distributed Energy Solutions, (David.Jacot@ladwp.com)
- ❖ **Amir Tabakh**, Manager of Efficiency Solutions Engineering and LADWP's LKIC Labs, (Amir.Tabakh@ladwp.com)
- ❖ **Phil Roberts**, CEO, NetZero Energy Systems, Inc ([phil@hub-e.com](mailto:phil@hub-e.com))
- ❖ All the great people from LACI, LKIC, LADWP, Schneider Electric, Wallbox and Ameresco

Spectrum news clip:

[Foldable tiny homes powered by solar to help house homeless](#)



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