

# Zero Energy Modular

A replacement for manufactured homes

John Scicchitano

Alison Donovan

May 23, 2018

# Vermont Energy Investment Corporation (VEIC)

- Non-profit 501 (c)(3)
- National Consulting
- Offices in Vermont,  
DC & Ohio

## Mission:

Our work will result in reducing 20 million tons of greenhouse gas emissions per year by 2027, twice the amount the entire state of Vermont produced in 2007.



# What's the difference?

## Mobile



- Factory built
- Pre 1976
- Steel chassis
- No HUD code

## Manufactured



- Factory built
- Post 1976
- Steel chassis
- HUD code

## Modular



- Factory built
- Delivered on flat bed
- Local codes





# Manufactured housing

ZEM LIFE 2018



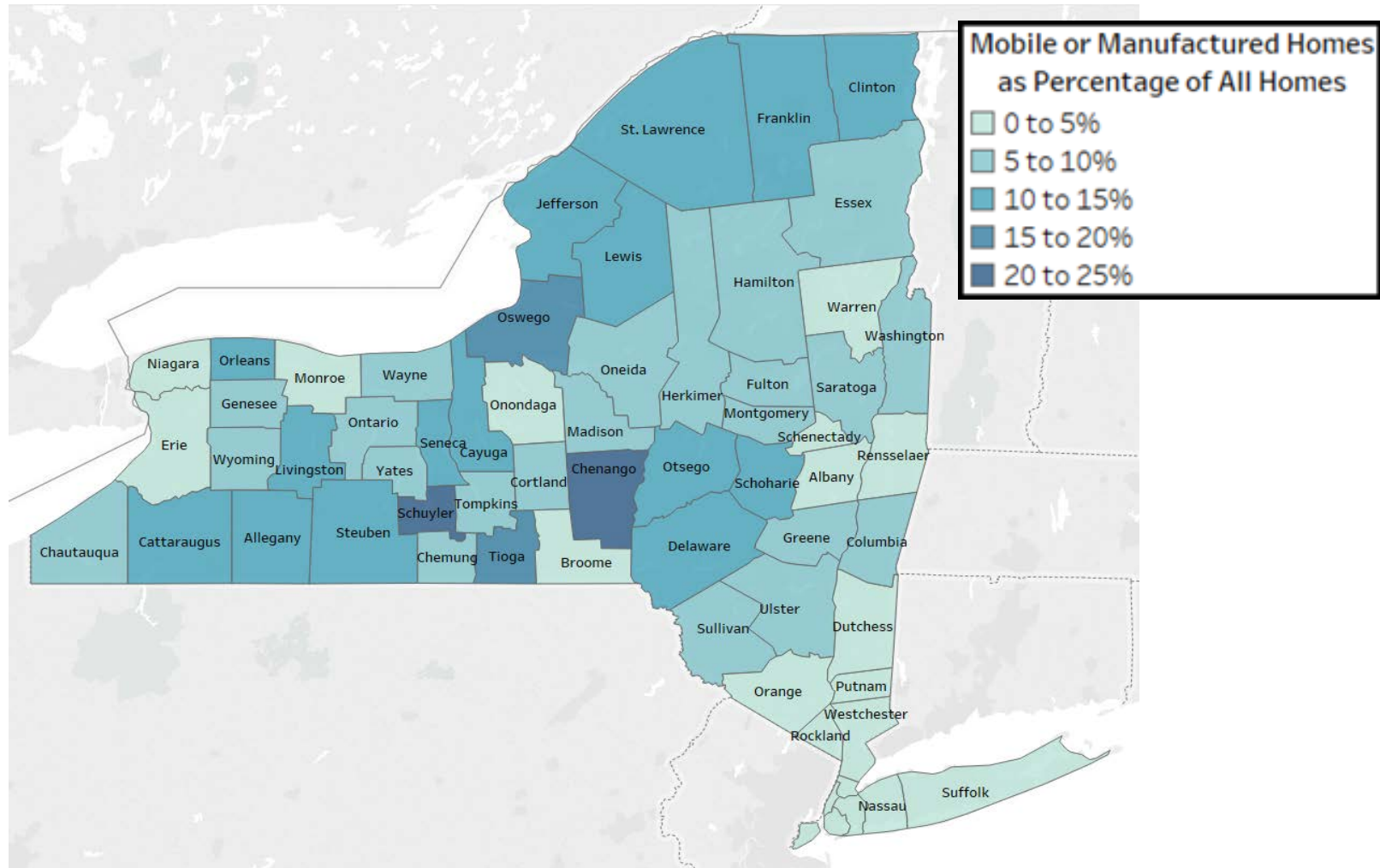
**Climate change**





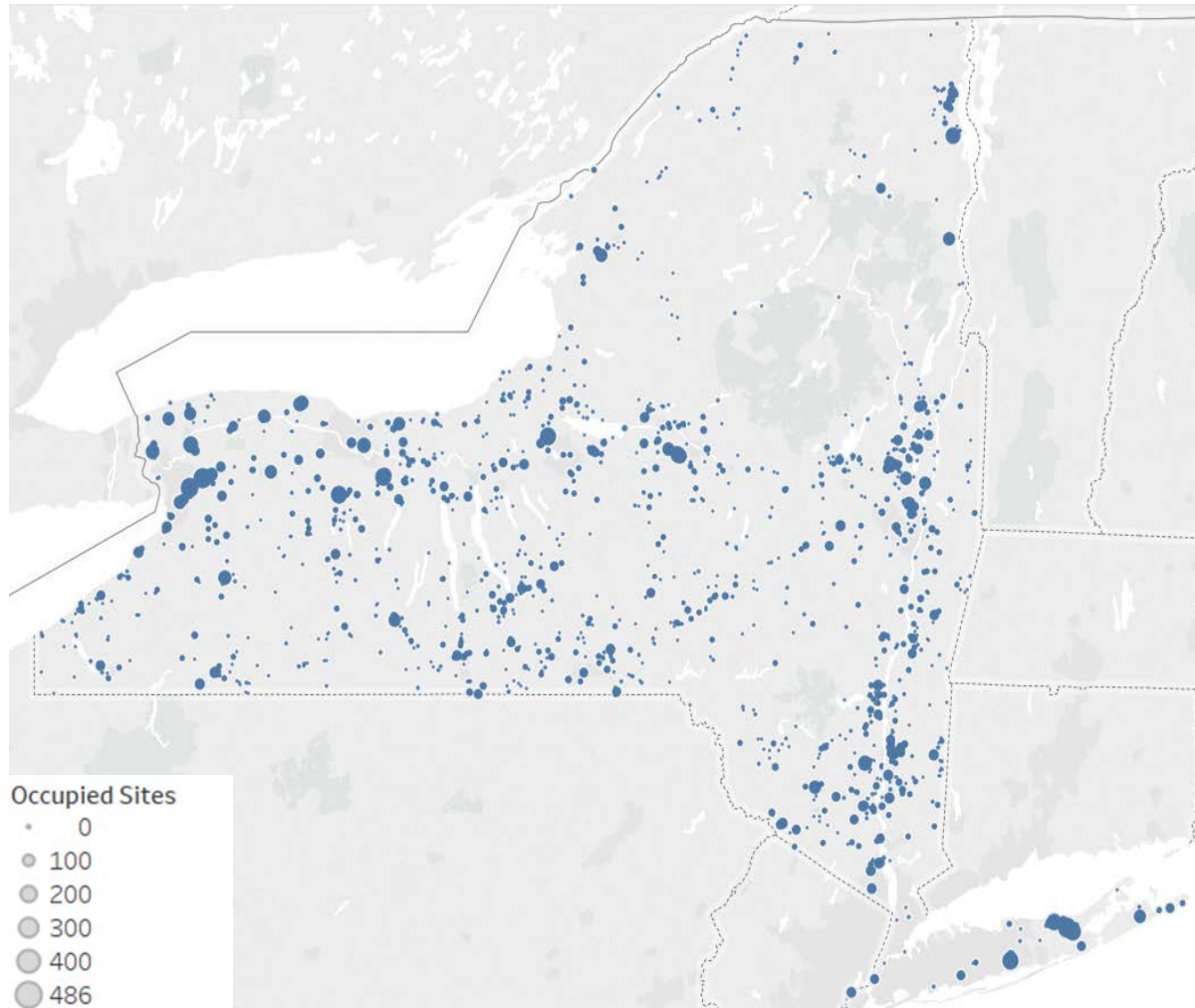
**Poverty**

# Mobile and Manufactured Home Distribution in New York State



Source: 2016 American Community Survey 5-Year Estimates, US Census Bureau

# Mobile Home Park Locations in New York State



Source: NYS Mobile Home Park Registry

Mark Size Indicates Number of Sites. (Due to geocoding 1,875 locations, a small number of parks are located incorrectly.)





**ZEM Home**





**ZEM Factory**

# Waltham, Vermont: McKnight Lane



- Developed by Addison County Community Trust in partnership with Cathedral Square Corporation
- Site was formerly an abandoned mobile home park and brownfield with significant soil contamination
- Designed for low-income rental housing with tenant eligibility based on 60% of area median income

## BACK-UP BATTERY PILOT

- VEIC, Clean Energy States Alliances, High Meadows Fund, and Green Mountain Power partnered to purchase and install battery storage at no cost to the developer
- Back-up battery powers critical loads (lights, ventilation, heat, fridge) during a grid outage
- Green Mountain Power draws on network of batteries to lower peak electric load a few times per month, which reduces the overall cost of electricity to all utility customers



## SITE PLAN

- 7 duplexes with 14 two- and three-bedroom homes
- 2 homes are ADA wheelchair accessible
- Common outdoor space and pedestrian access to downtown Vergennes

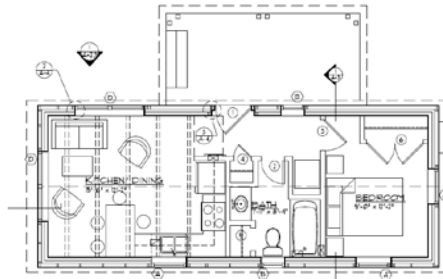


# Burlington, Vermont: North Avenue Co-op



After purchasing the park from its former owner in 2015, the 117 households of the North Avenue Co-op own their community and manage it as a cooperative.

The Co-op has a community garden and is within walking distance of shopping, banking, city buses, and other essential services.



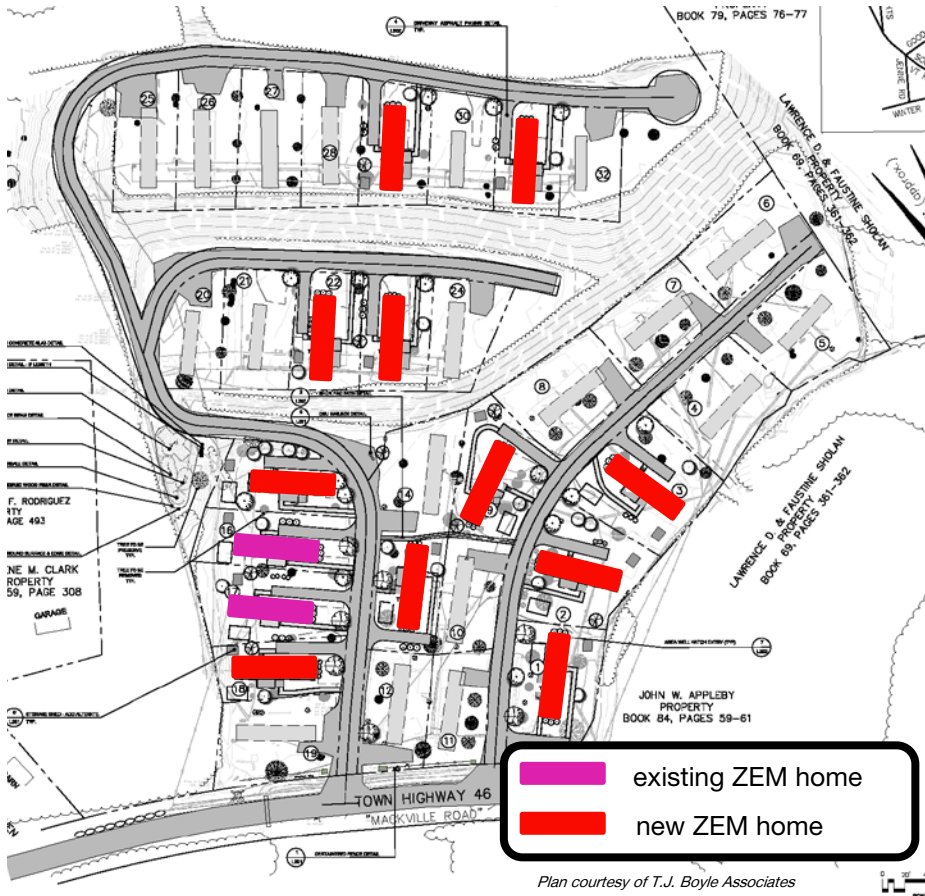
## 14' X 35' VERMOD COTTAGE

- 1 bed / 1 bath home
- 415 ft<sup>2</sup> + 150 ft<sup>2</sup> loft (7' of head room at peak)
- 3-4 kW of rooftop solar
- Includes washer/dryer

Tours available in March 2017.

*Plans courtesy of Pill-Maharam Architects*

# Hardwick: Evergreen MHP



Evergreen Mobile Home Park is owned by Lamoille Housing Partnership, an affordable housing non-profit based in Morrisville.

- 2 existing ZEM homes were set in 2014
- 11 new ZEM homes will replace abandoned mobile homes to serve as affordable rental housing (2 homes will be fully ADA accessible)



# Questions?

**Thank you!**

**Alison Donovan - [adonovan@veic.org](mailto:adonovan@veic.org)**