

## **Beyond Backup Power: How Virtual Power Plants Build Resiliency**

JAMES MANZER MARCH 2025



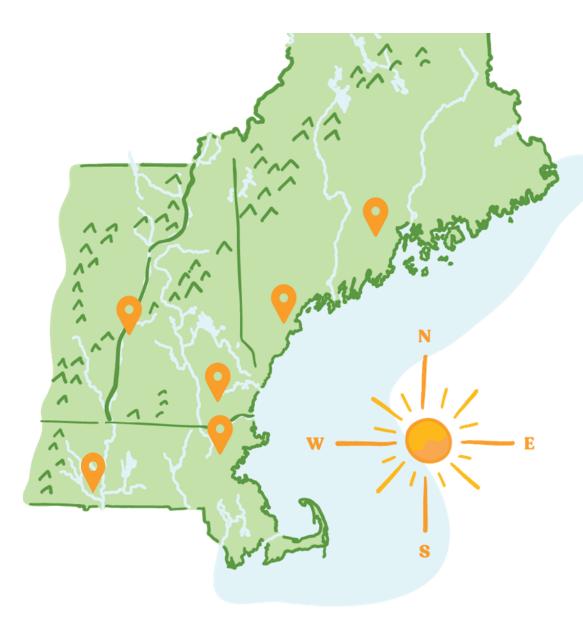


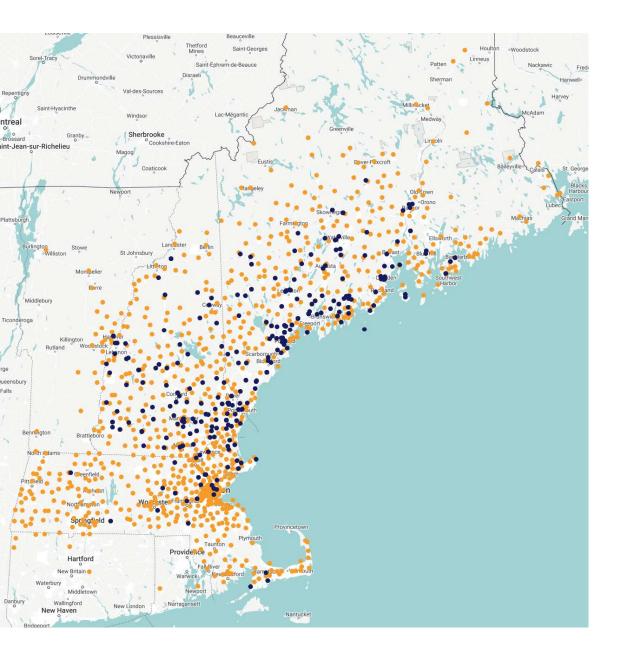
## Agenda

- 🗲 What is a VPP
- How do they work today?
- How will they work tomorrow?
- How VPPs will change building design
- Success Stories and Challenges
  - Financial Opportunities
- Q&A

# Locations

- Montville, Maine
- South Portland, Maine (HQ)
- Enfield, New Hampshire
- Brentwood, New Hampshire
- North Andover, Massachusetts
- Westfield, Massachusetts





# **Projects**

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**19,679** total ReVision projects



#### **140 thousand**

estimated tons of CO<sub>2</sub> offset annually

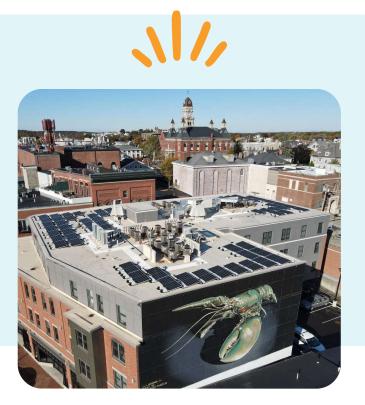


#### **\$73 million**

estimated annual electric bill savings

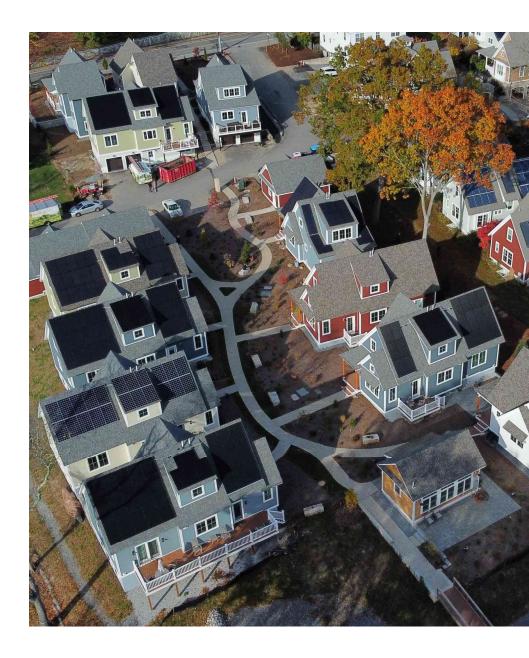
## What is a VPP?

- A Virtual Power Plant is a network of solar, batteries, and EVs working together like a power plant, generating and storing energy.
- Balances energy supply and demand in real time using decentralized resources.
- Array and battery owners earn payments by generating and sharing electricity with the grid



## How Does a Virtual Power Plant Work Today?

- Energy Production
- Energy Coordination
- Energy Dispatch
- Financial Incentives



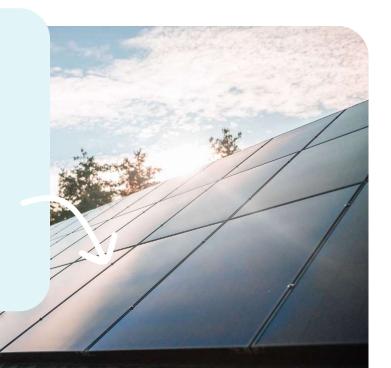
## How will a Virtual Power Plant Work Tomorrow?

- Smart meters + dynamic pricing will create real-time energy markets.
- Home batteries, EVs, and smart appliances will automatically buy and sell power based on market conditions instead of waiting for a utility call.
- Energy management platforms will enable individual buildings to maximize profits by responding to price signals, not just peak demand events.



#### **How VPPs will change Building and Energy Design**

- Buildings will no longer be just consumers of energy—they will be grid-interactive assets.
- What this means for architects & builders:
  - -Solar ready roofs
  - -Battery Storage Space (fire code)
  - -EV ready parking areas (prepped for V2G)
  - -Smart controls
  - -Load flexibility



# The Texas Success Story

- Texas is a Global VPP Leader Second to UK in Virtual Power Plant deployment.
- **Deregulated Electricity Market** Competitive energy markets accelerate solar + battery storage adoption.
- Fast and Simple Grid Integration Streamlined interconnection makes it easier to participate.



### Implementation Challenges

#### What's Slowing Down Adoption?

-Interconnection Delays

- -Regulatory Barriers
- -Fire codes
- -Upfront Costs
- -Centralized control

\*Keep your eye on sunsetting of net metering (California) – is headed to MA next?



# **Financial Opportunities**

#### -New Revenue Streams

- TOU (Time of Use) Pricing
- ConnectedSolutions

-Current Incentives Supporting VPP Growth:

- Federal Tax Credit (ITC) for solar + storage.
- 0% Interest 7-Year HEAT Loan for Massachusetts residents.
- SMART Incentive Program for new solar systems.
- More utilities expanding demand response programs—early adopters are already benefiting.











# **Thank you!**

#### For more info, please contact:

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