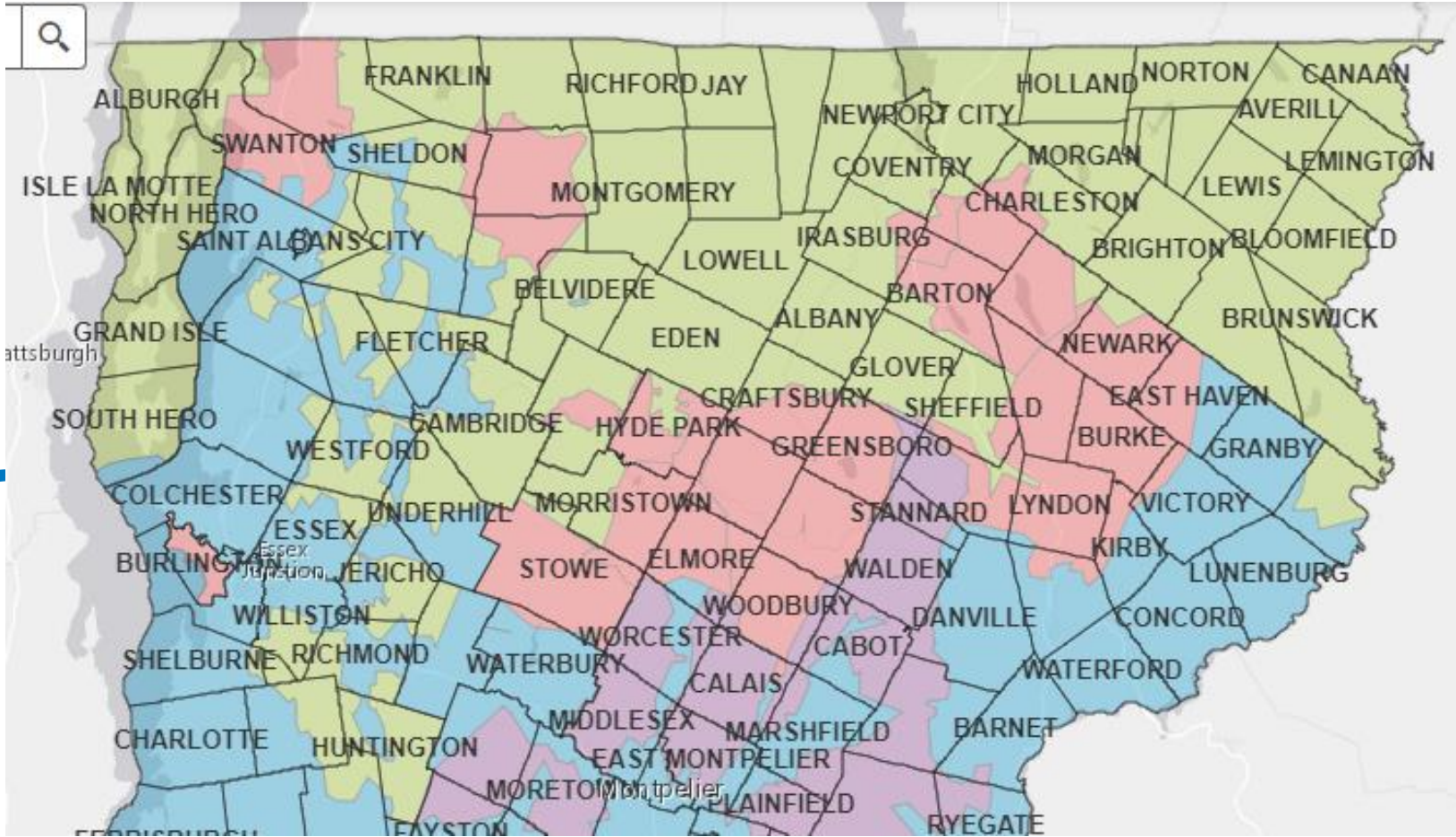


# February 7, 2023

## VEC at Senate Finance



# VEC Service Territory



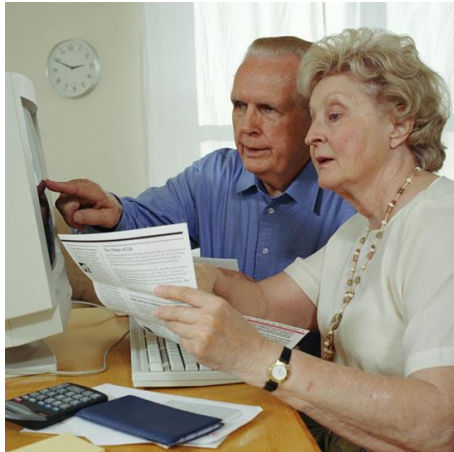
# ABOUT VEC



- 35,000 members
- 75 towns
- 8 counties
- 41,000 meters & 2,880 miles of line
- 14 meters/mile
- 2022 Peak 84 MW, Jan. 5pm.



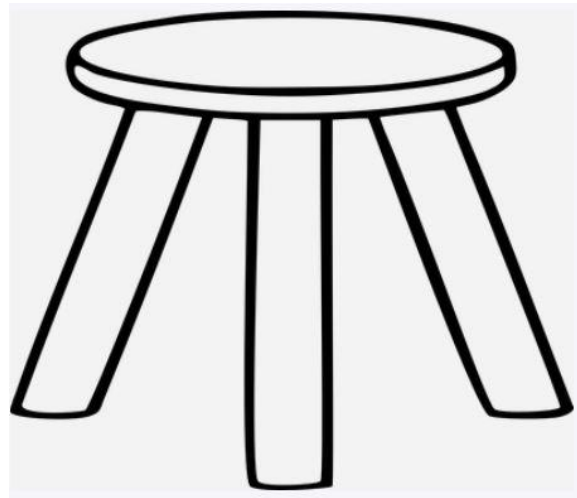
# ABOUT VEC MEMBERS



- 50% Residential /50% non-residential (by load)
- 45% Retired. Average Age 57.5.
- 88% Homeowners



# Priorities



COST

CARBON

RELIABILITY &  
RESILENCY

# Priorities



## OUR TOP CHALLENGES

### 1. DECARBONIZING THE ENERGY ECOSYSTEM

Develop a diverse, affordable, and reliable 100% renewable portfolio roadmap and make smart investments to expand energy transformation

### 2. JUST TRANSITIONS AND ENERGY EQUITY

Support rural and members with high energy burdens to enable membership-wide participation in the energy transition

### 3. MAINTAINING A RELIABLE ELECTRIC GRID

Invest in infrastructure upgrades and resiliency

### 4. SUPPORTING A RAPIDLY SHIFTING CENTRALIZED & DECENTRALIZED GRID

Develop an innovation farm where ideas grow and flourish, attract and develop excellent talent, and build a complementary technology road map

### 5. PROVIDING MEMBERS WITH CHOICE

Expand VEC's role in the energy services sector to meet individual and membership wide needs with comprehensive energy options



# VEC is 100% Committed



**100%**

**CARBON-FREE BY 2023**

**100%**

**RENEWABLE BY 2030**



VEC currently has 7 MW in Co-op Community Solar (Hinesburg pictured here) and 2 other PPA projects in our service territory (4+ MW) at preferred sites (landfill and gravel pit). 4 of the 5 projects in partnership with Encore Renewables.



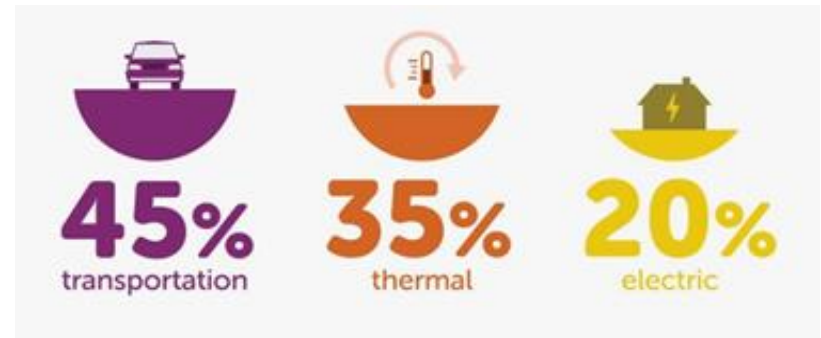
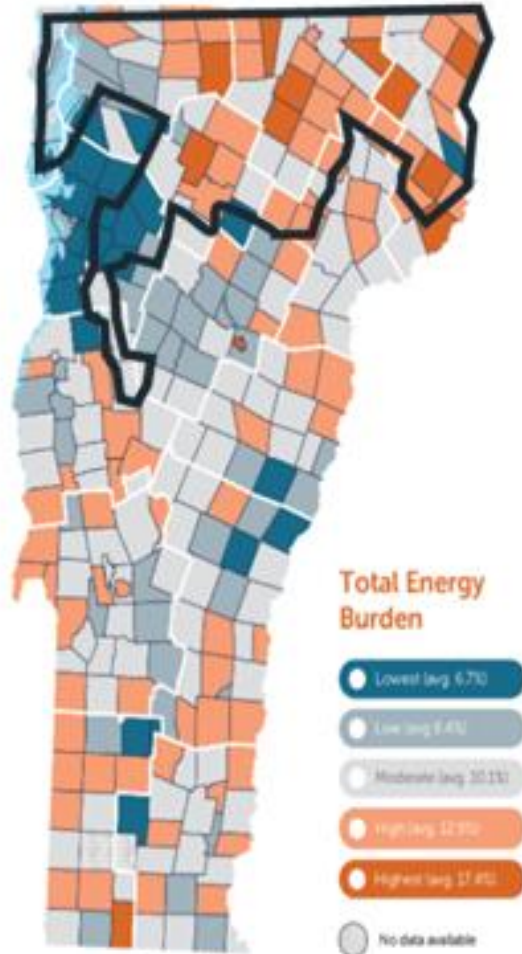
# Just Transitions and Energy Equity



## 2019 Energy Burden Report



Efficiency  
Vermont

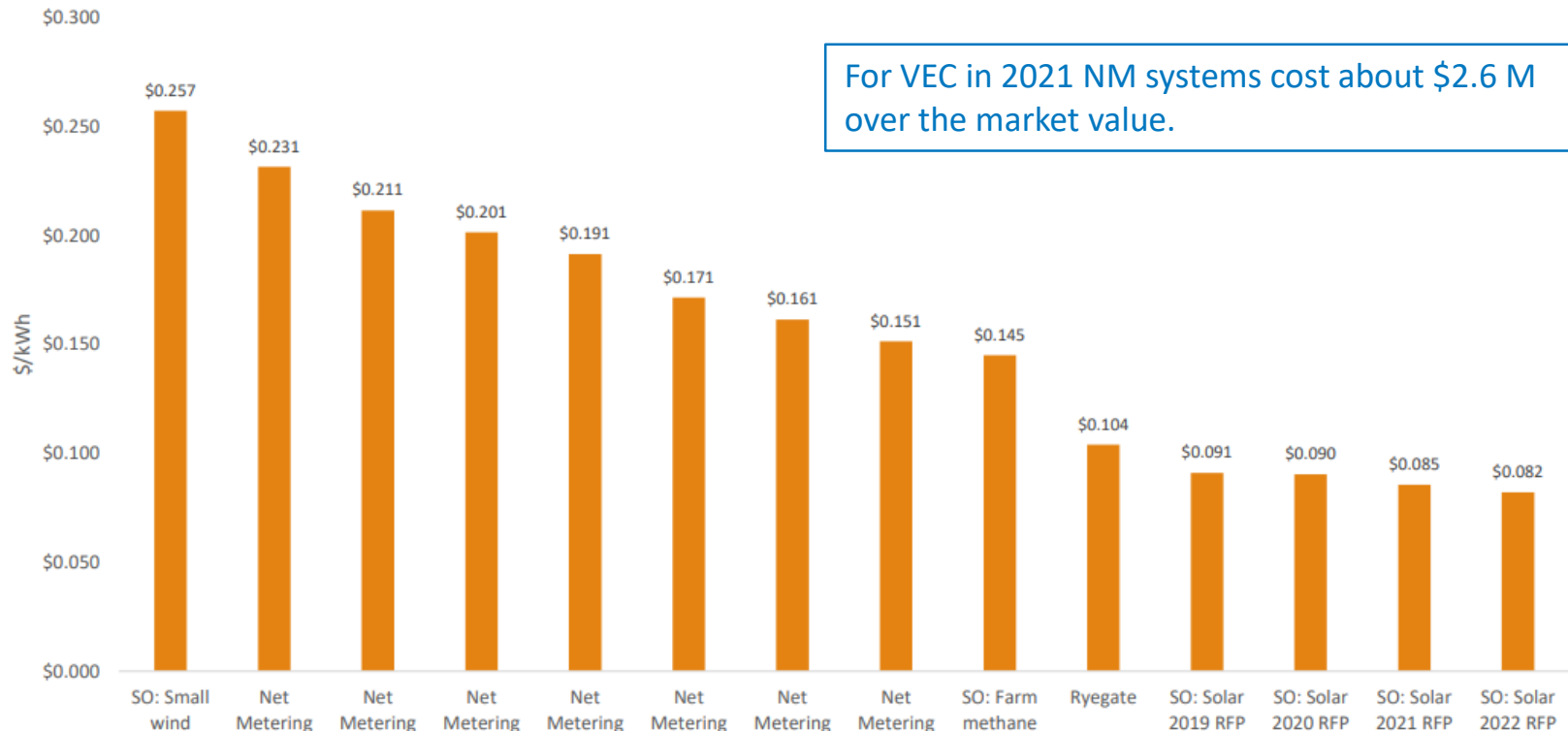


Energy Equity *opportunity*  
as we transition heating and  
transportation to electric



## Example Renewable Resource Costs

Illustrative Cost Comparison of Renewable Resources



# VEC Co-op Community Solar



Alburgh

**Solar Power For People,  
Not Profit.**



Hinesburg



Grand Isle

# Just Transitions and Energy Equity



## Net Metering Applications in VEC Service Territory



# VEC Integrated Resource Plan

## 100% Renewable on Hourly Basis



### Important Takeaways:

- **Baseload** renewable or fossil-free resources will be necessary to minimize costs;
- Relying on **one technology source** will lead to a over procurement of generating resources and introduce a high volume of risk on reselling excess generation when batteries are full;
- It will take a significant decrease in **battery costs** before storage is a cost-effective strategy to turn intermittent resources into baseload resources. Until a significant decrease in storage costs occurs, storage can play a role around the edges

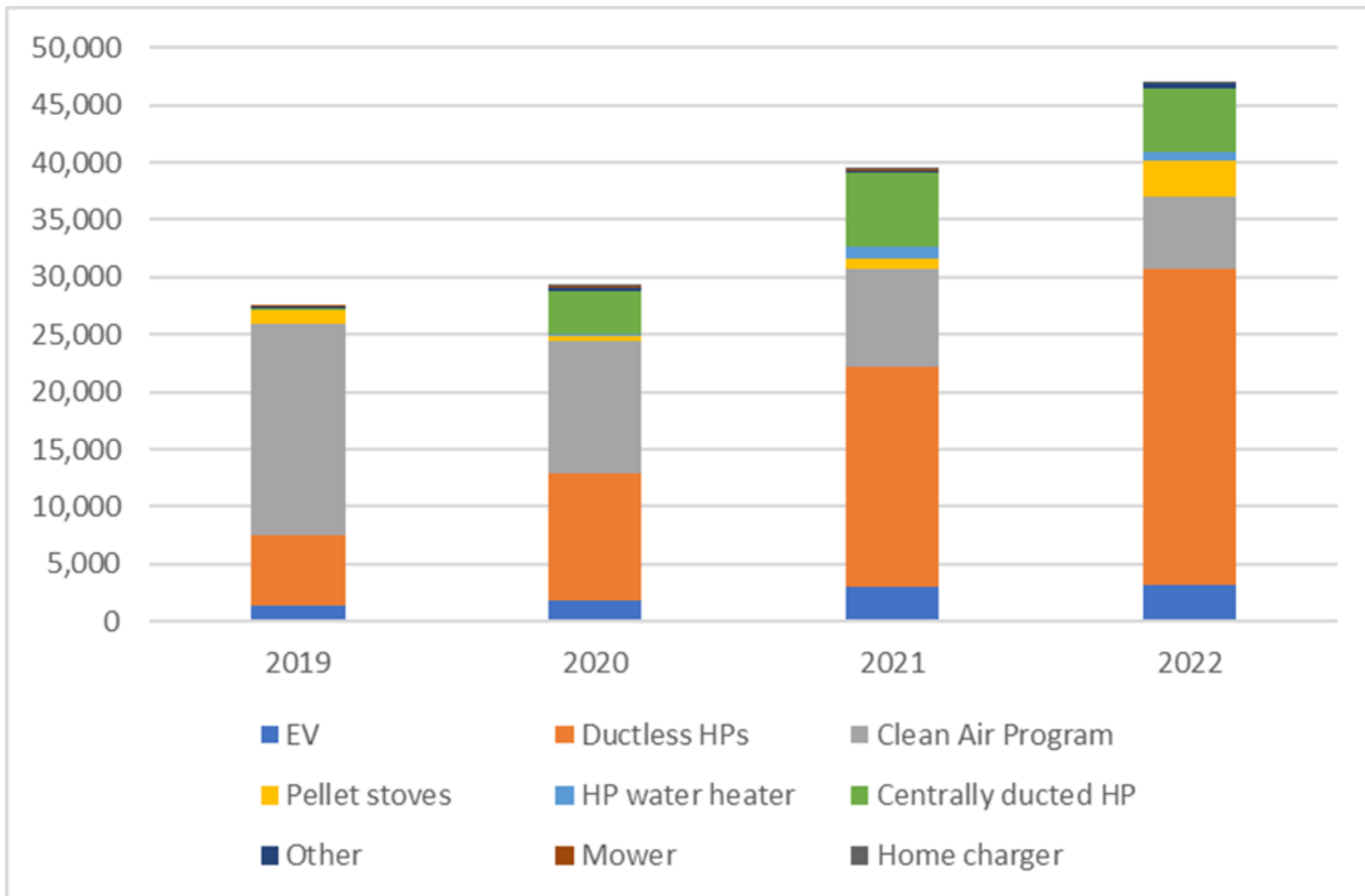
### Regional approach is critical

- Hydro Quebec: abundant 24/7 renewable
- New York & Maine: significant onshore wind
- Southern New England: offshore wind development





# Carbon Reduction VEC Energy Transformation



# VEC Energy Transformation Clean Air Program



VEC's Clean Air Program (CAP) offers customized opportunities to members with off-grid or underserved homes or businesses to replace fossil fuel usage with electricity. May include cost sharing on service upgrades and line extensions. About 30 projects implemented to date to help members move away from diesel, oil, or propane generators to run their business. Includes maple syrup producers, sawmills, gravel production, cheese-makers, greenhouses, asphalt producers.

## Little Charlie's Sugarbush (Jay):

.57 mile line extension to displace  
7,907 gallons of propane per year



**Northeast Sand and Gravel (Irasburg):**  
Service upgrade and extension to replace  
38,699 gallons of diesel per year



## Nugent Sawmill (Bloomfield)

Upgrade to  
electric service  
to displace  
13,059 gallons  
of diesel per  
year



# MAINTAIN A SECURE AND RELIABLE GRID



**Maintain a high level of cybersecurity controls and practices.**

**Pursue resilience through ongoing system hardening and technology deployment**

**Continue to improve the vegetation maintenance cycle to increase reliability**

**Other training and process improvements**

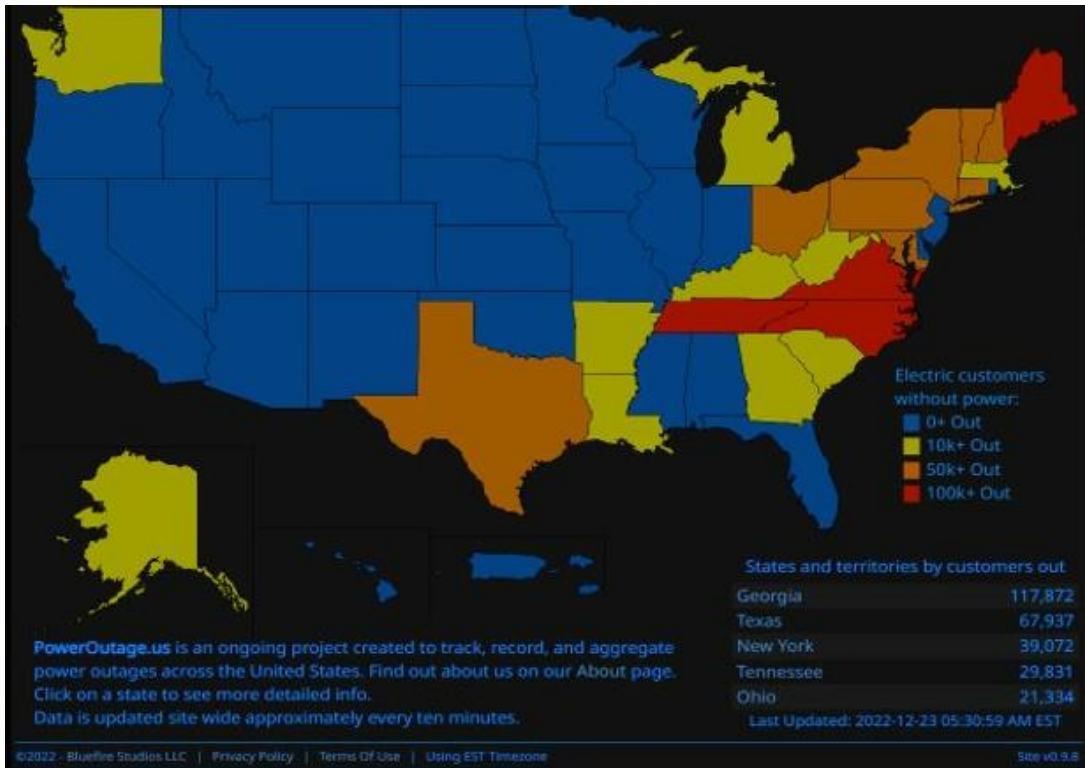


# MAINTAIN A SECURE AND RELIABLE GRID



## Storm Elliot December 2022

Since 2010 there have been 10 major outage events



### Elliot

- 3<sup>rd</sup> in # of broken poles
- 3<sup>rd</sup> most expensive
- 5<sup>th</sup> longest in days to recover
- 5<sup>th</sup> in max out concurrently
- 5<sup>th</sup> highest customer hours out
- 6<sup>th</sup> in # of separate outage events



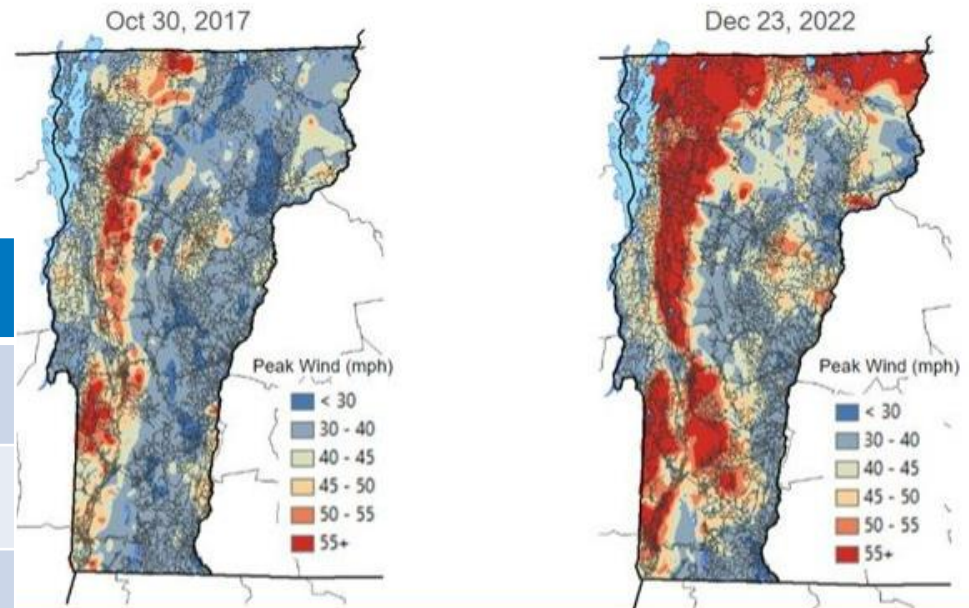
# MAINTAIN A SECURE AND RELIABLE GRID



Elliot was a more significant weather event than Philippe but caused less damage to the system and we had a faster restoration.

	Philippe	Elliot
Length	6.7 days	5.5 days
Max out concurrently	17,115	13,790
Total cust. hours out	604,058	298,567
Separate outages	480	293
Broken Poles	70	47

### Wind Snow Storm - Mapping Comparison



# Work Force

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- VEC has 105 employees in a diversity of positions.
- VEC is an excellent employer with a great workplace culture and competitive wages and benefits.
- When we have vacancies we attract a strong pool of candidates and we are able to fill positions, especially field positions.
- 2022 we experienced usual turnover (2020 was low and 2021 was high).
- Workforce development investment in electrical trades and weatherization would be beneficial. Also investment in general job skills and job search skills.



# Thank you!



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