

Finding Common Unity Amidst Shared Challenges:

***National, Regional and State Energy Issues that impact VEC
(and what the Department of Public Service is doing about it)***

**Kerrick Johnson
Commissioner**

Public Service Department: *Vermonters' Energy and Telecom Advocate*

Mission:

Serve all citizens through public advocacy, planning, programs, and other actions that meet the public's need for **least cost, environmentally sound, efficient, reliable, secure, sustainable, and safe** energy, telecommunications, and regulated utility systems in the state for the short and long term.

- PSD advocates public interest in energy, telecommunications, water and wastewater utility matters
- \$12M annual budget/\$400M grants
- 70-member team

First...a word on VEC

“The reliability of the power grid remains extremely high, but...risks to reliability continue to mount. We’re seeing...an increasing number of small-scale events and near misses that continue to reinforce what we can’t call anything but a five-alarm fire when it comes to reliability.” – Jim Robb, NERC President, Oct. 21, 2025

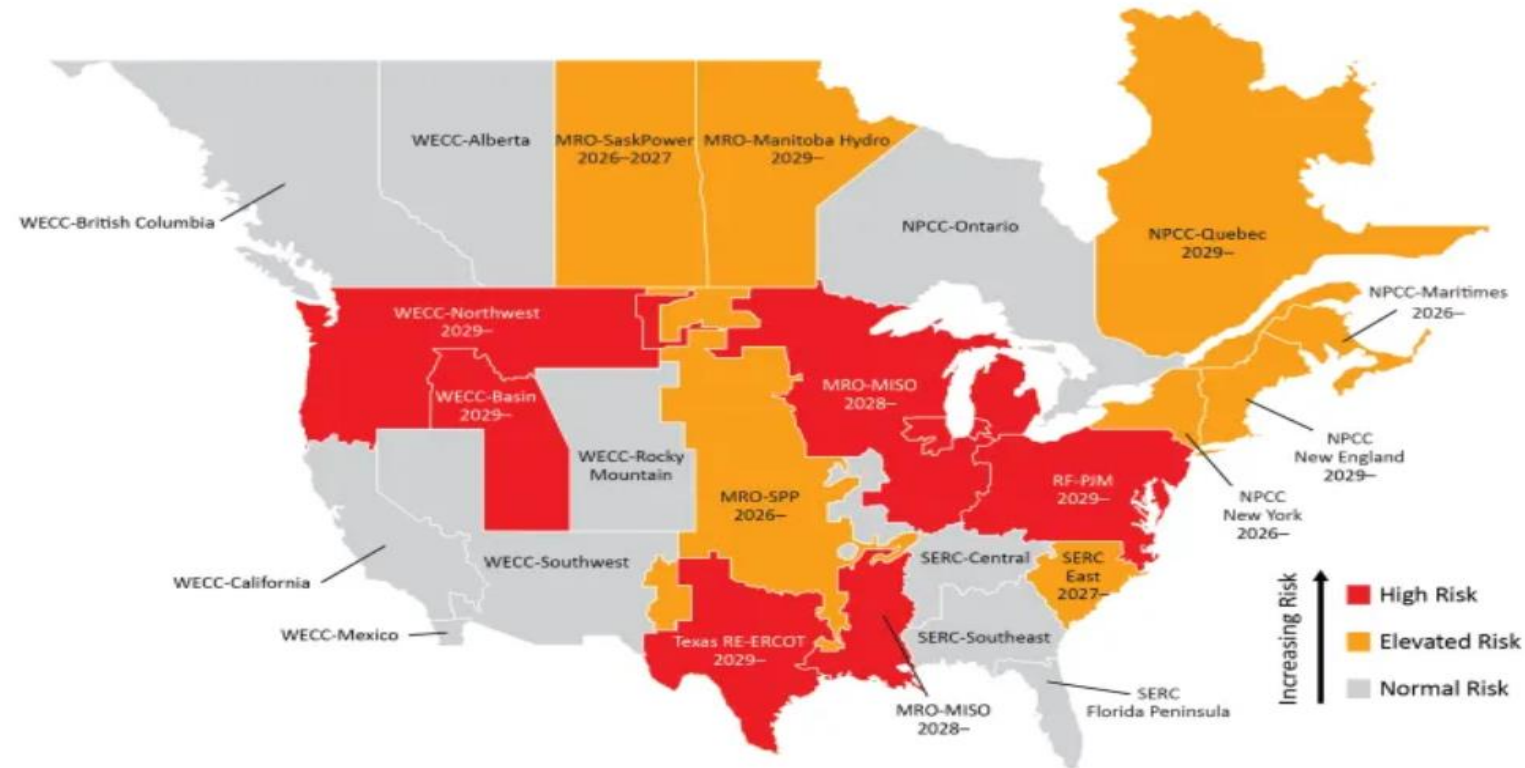


Figure 1: Risk Area Summary 2026–2030
Shows highest risk classification that occurs in the first 5 years and states initial year of occurrence

May 4, 2026 - NERC issues Level 3 alert (most urgent) detailing essential actions utilities MUST take due to reliability impacts of data centers and other computational large loads.

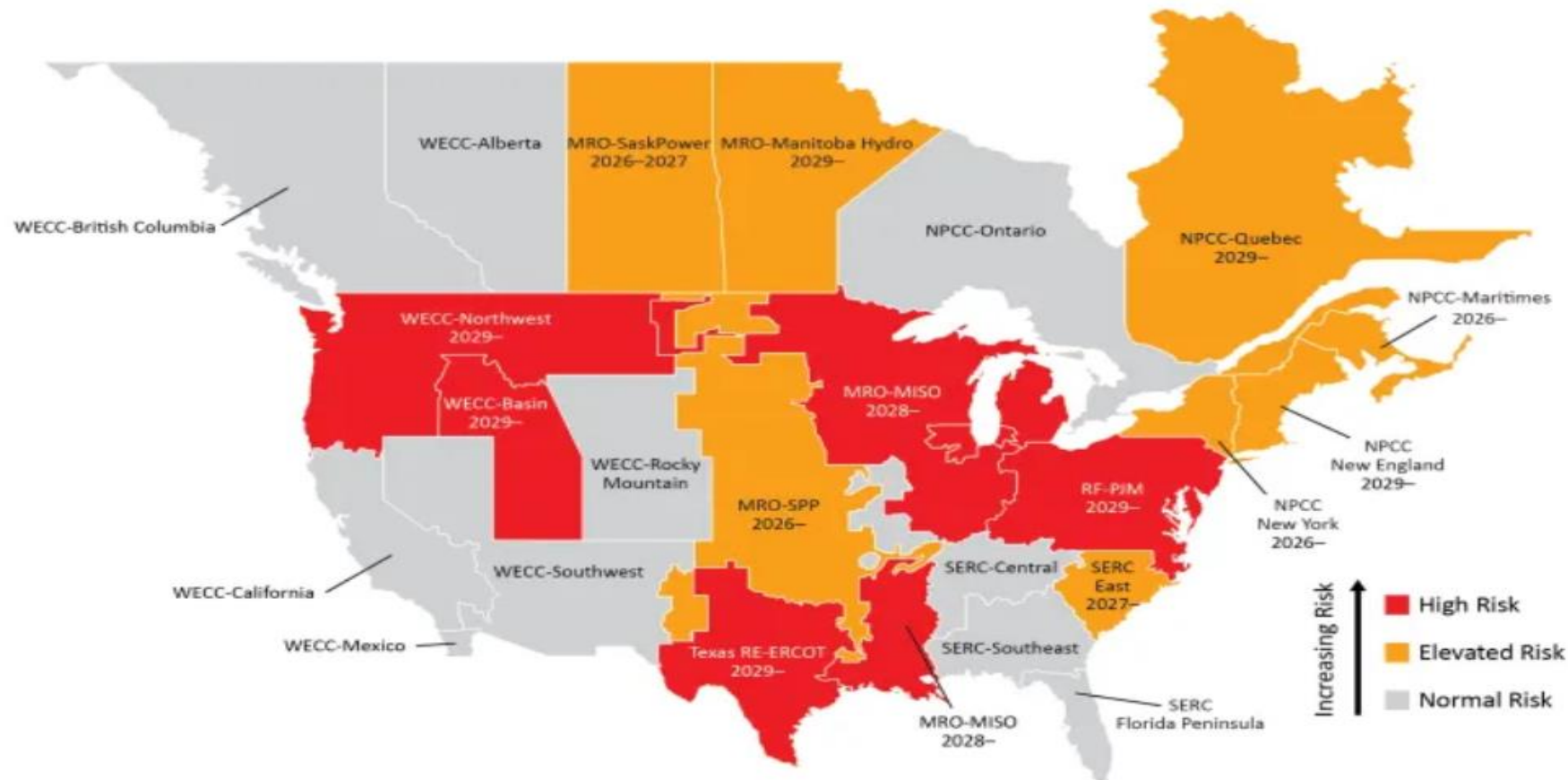


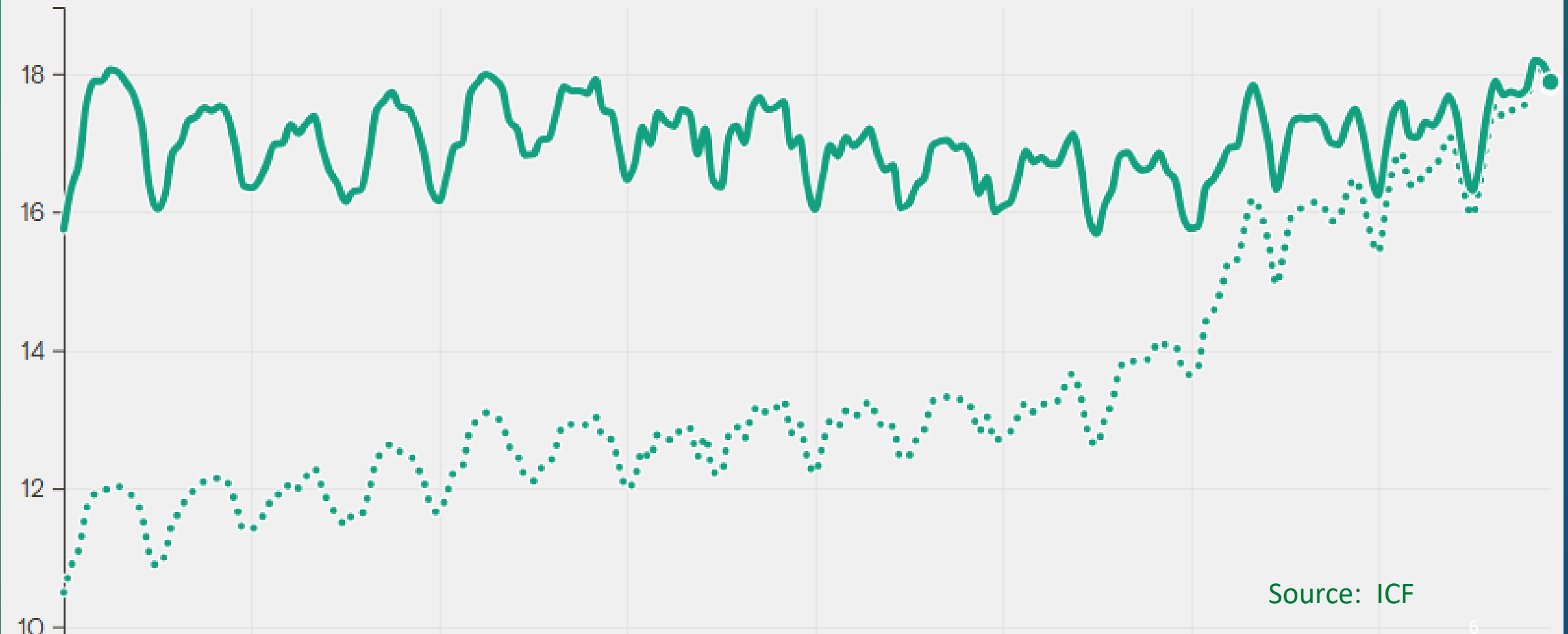
Figure 1: Risk Area Summary 2026–2030
Shows highest risk classification that occurs in the first 5 years and states initial year of occurrence

Source: NERC 2026 Long-Term
Reliability Assessment

U.S. residential electricity prices

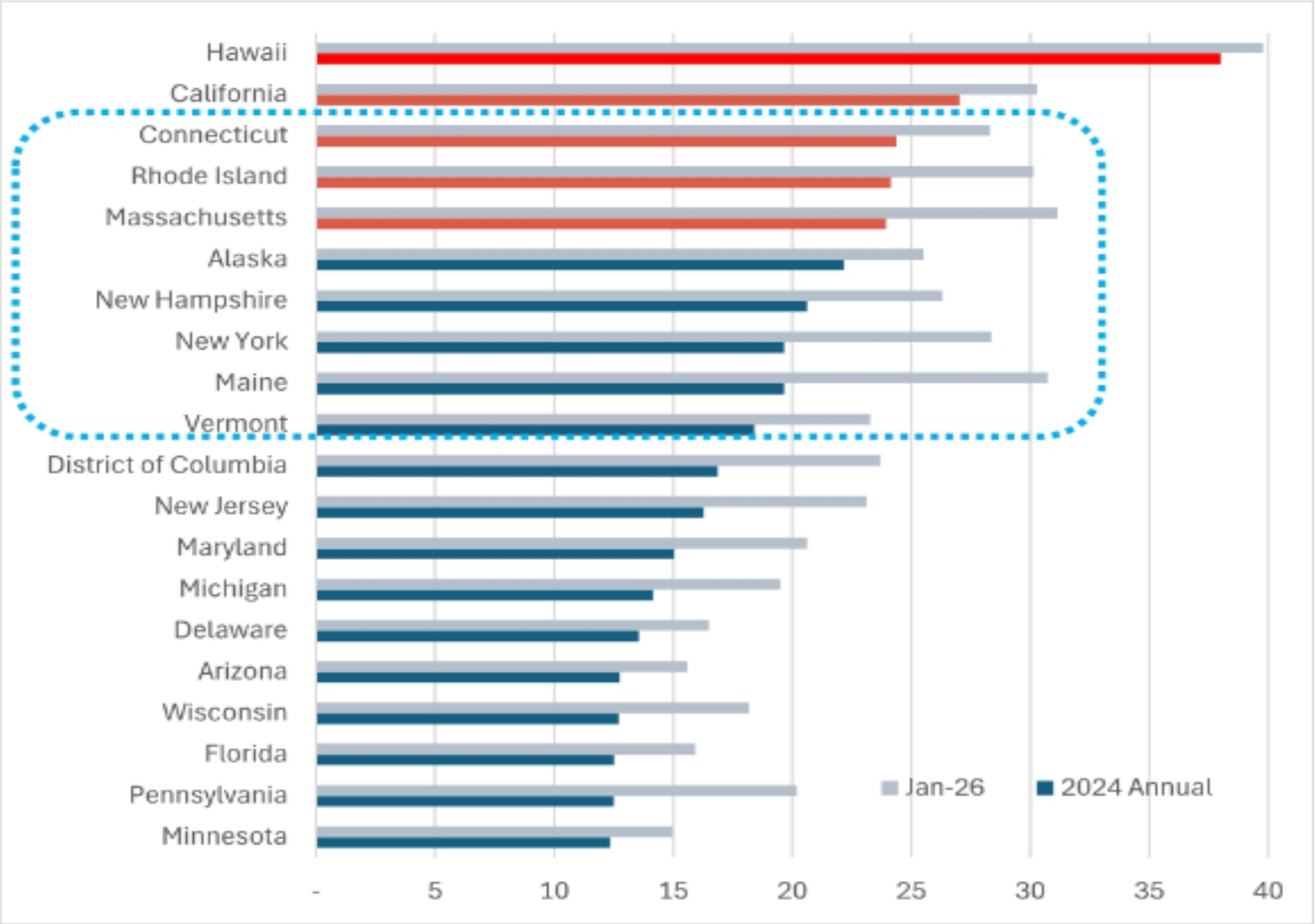
Real vs. nominal residential electricity prices, January 2010 – November 2025

— Real price (inflation-adjusted) Sticker price



Source: ICF

Chart 1 - 2024 Highest Residential Retail Electric Rates & January 2026 (per kilowatthour)

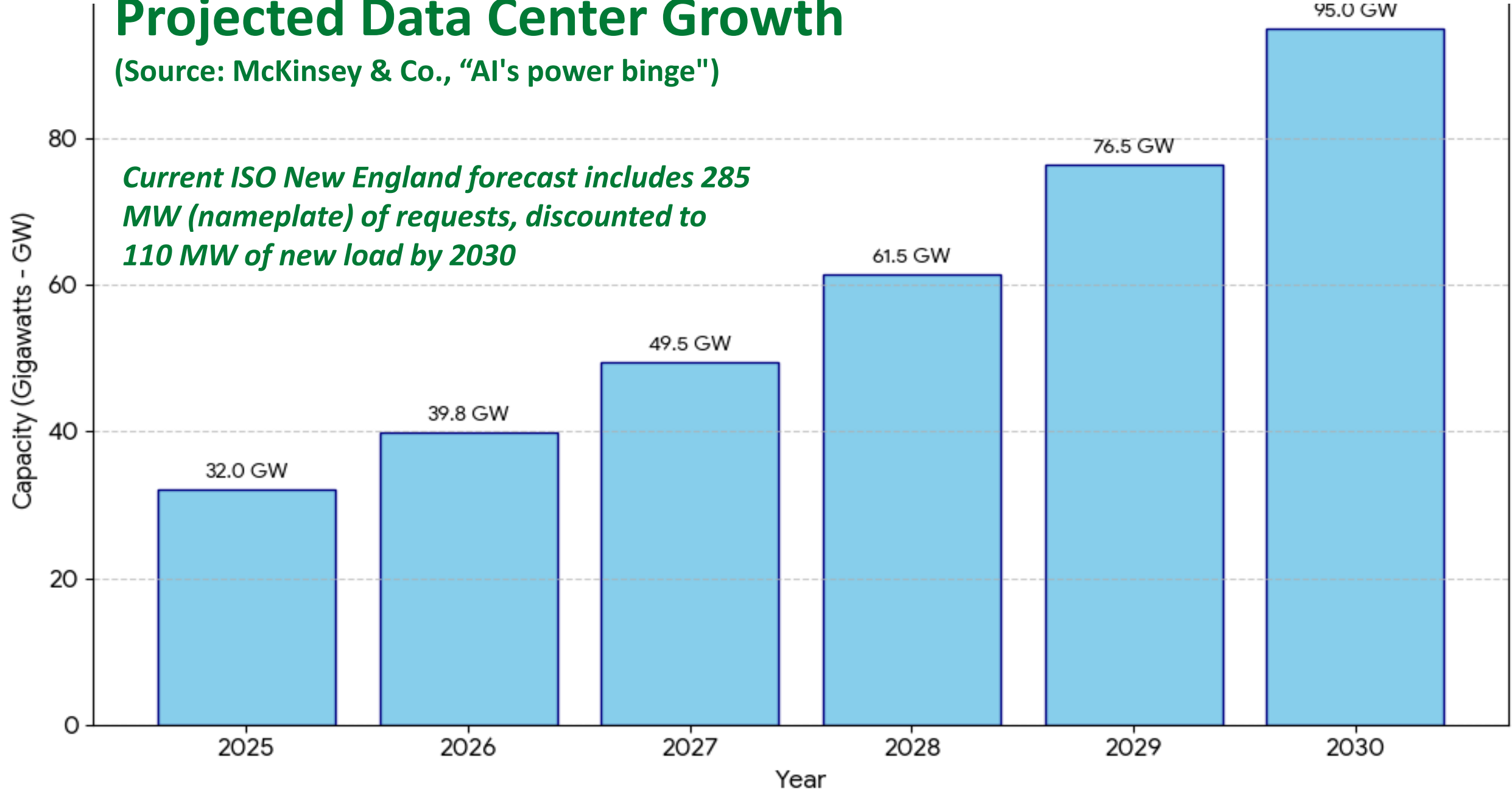


Source: Energy Information Administration

Projected Data Center Growth

(Source: McKinsey & Co., "AI's power binge")

Current ISO New England forecast includes 285 MW (nameplate) of requests, discounted to 110 MW of new load by 2030





Utility

(All)

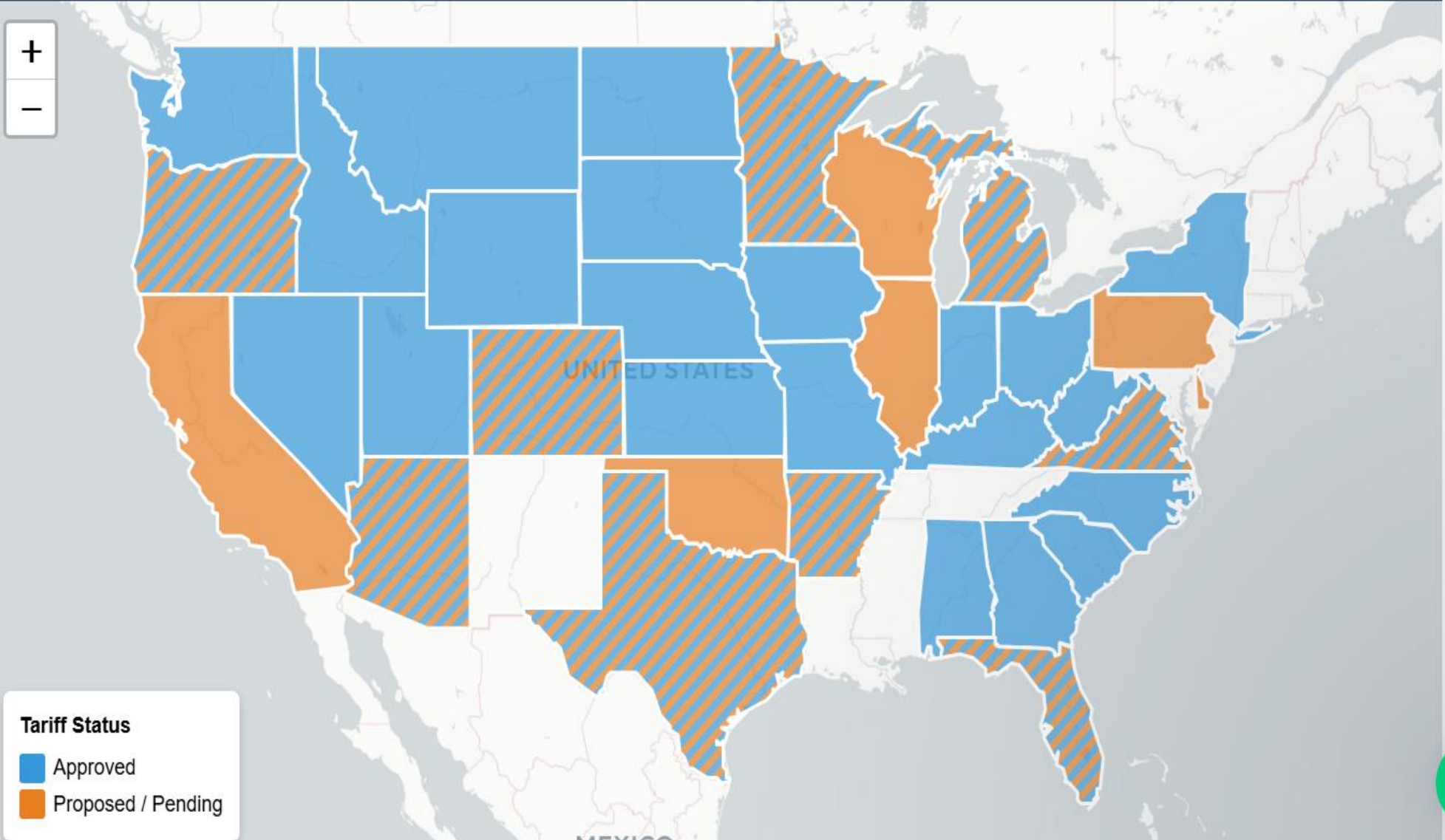
Tariff Status

- ☒ Approved
- ☒ Proposed / Pending

Tariff Focus

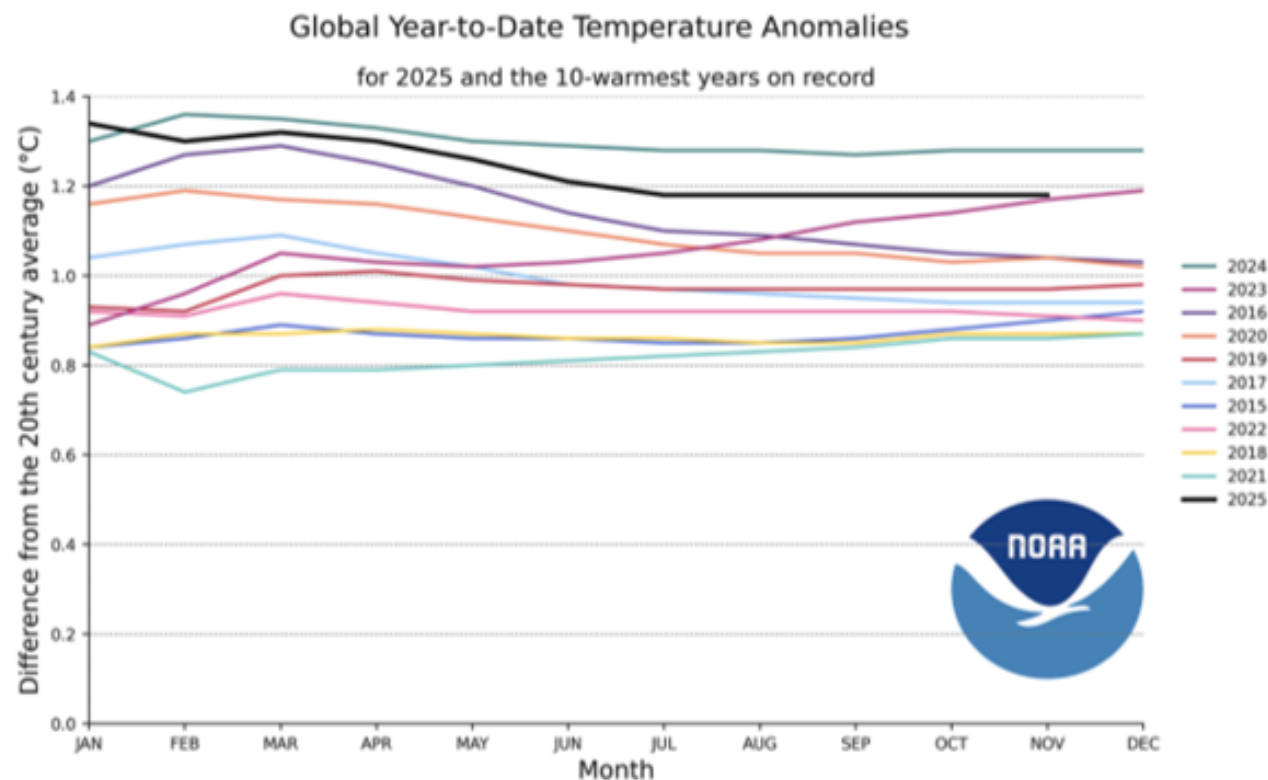
- ☒ General Commerical & Industrial Customers
- ☒ Large-Load Customers
- ☒ Data Center Customers
- ☒ Cryptocurrency Customers

Database of Emerging Large-Load Tariffs (DELTA)



Low and Behold: Barometric Extremes Amplifying Weather Hazards Impacts to Energy Infrastructure

*“The 10 warmest years in the 143-year record have all occurred **since 2015**. The 2024 January–December 2024 global surface temperature ranked warmest in the 175-year record at 1.29°C (2.32°F) above the 20th century average” (NOAA).*



Chief Meteorologist Ms. Sunny Wescott
Critical Infrastructure and Emergency Response Operations

Notable Weather and Climate Events: Annual 2025



It was the coldest Dec in AK since 1980.



Remnants of Super Typhoon Halong brought flooding, strong storm surge and hurricane-force winds to the AK West Coast in mid-Oct.



A glacial dam outburst on the Mendenhall Glacier in Aug caused record river crests and major flooding in Juneau, AK.



Drought coverage across the CONUS started the year at 38.1%, expanded through spring, contracted to 29.6% in early summer, resurged in the fall—peaking at 46.1% in Oct and Nov—and ended 2025 elevated at 42.8%.



A powerful EF-5 wedge tornado—the first confirmed EF-5 since 2013—struck near Enderlin, ND, in Jun, resulting in three fatalities.



A severe Mar storm brought 15–20 in. of snow and up to an inch of ice to northern MI—its worst ice storm in 50 years—causing widespread power outages and major infrastructure damage.



VT and NH each had their driest Jul–Sep period on record, with drought expanding to cover 100% of each state through Oct.



Wildfires in southern CA, including the Palisades and Eaton fires, burned more than 49,000 acres, destroyed over 16,000 structures and claimed 31 lives during Jan.



A slow-moving system in Apr brought widespread flooding and more than 150 tornadoes across the South and Midwest, resulting in many injuries and at least 24 fatalities.



Fueled by dry, windy conditions and Hurricane Helene debris, wildfires in late Mar burned more than 30,000 acres across the southern Appalachians.



Warmest Dec–Feb and the third-driest year on record for HI.



Catastrophic flash flooding struck the Texas Hill Country in early Jul following up to 20 in. of rain, resulting in at least 135 fatalities.



An arctic air mass pushed far south to the Gulf Coast in mid-Jan, bringing record cold and 6–12 in. of snow across coastal TX, LA, MS, AL and the FL panhandle, setting multiple all-time snow records.



Despite an active N. Atl season with three Cat 5 hurricanes, no hurricanes made U.S. landfall in 2025—the first time since 2015. Guánica, PR, received 2–4 in. of rain from Hurricane Melissa's outer bands in Oct, causing flash flooding.



The average U.S. temperature in 2025 was 54.6°F, 2.6°F above average, ranking fourth warmest in the 131-year record.



The average U.S. precipitation in 2025 was 29.19 in., 0.73 in. below average, ranking in the driest third of the record.



Global Climate Investment: Capital Raised by Category (USD Billions)



Adaptation and resilience are lagging

- ▶ Dominated by public funding
- ▶ Historically reactive
- ▶ Difficult to model immediate financial benefits

SOURCE: McKinsey



New England Energy Supply Adequacy

Reliability

- Winter Jan-Feb 2026 – biggest test of New England grid in nearly a decade
- Long spell of deep cold w/ heavy snow exacerbated dependency on natural gas
- Limited pipelines – used for both heating and generation; heating wins
- 7,000 MWs of generation retired from 2013-2024, with additional 750 MWs planned

Sustainability

- Generation mix (total 30,000 MWs) - Natural gas 51%; Nuclear 23%; Renewables 13%; Imports 7%; Hydro 6%
- Annual energy demand forecast dropping from 17% rise by 2033 to 9% rise by 2036
- **Battery** storage, **wind**, and **solar** generation top three sources seeking interconnection

Federal opposition reduces low-carbon energy options like Offshore Wind

- Trump administration work to stop five major East Coast offshore wind projects with a combined capacity of 5.6 gigawatts
- Antagonism of Canada complicates bilateral energy trade relationship

Abuse of Asset Condition Project Process by some NE Transmission Companies Costs New England Ratepayers

- Asset Condition project spending has steadily increased and currently stands at 70% of 2025 total transmission spend.
- Looking ahead, 93% of planned transmission investment is in asset condition projects. The region now expects to spend nearly \$6 billion on planned asset condition investments compared to \$420 million in planned reliability projects.
- Review of just seven (7) of these projects revealed **cost delta between best practice and the actual gold-plated submissions for cost recovery totals nearly \$500m.**
- Installation of an Independent Reviewer housed at ISO NE is now expected by Jan 2027.

Data is presented as a 3-year rolling average based on projected in-service year using most recent cost estimates.

Source: ISO-NE Final RSP Project List and Final Asset Condition List, March 2025

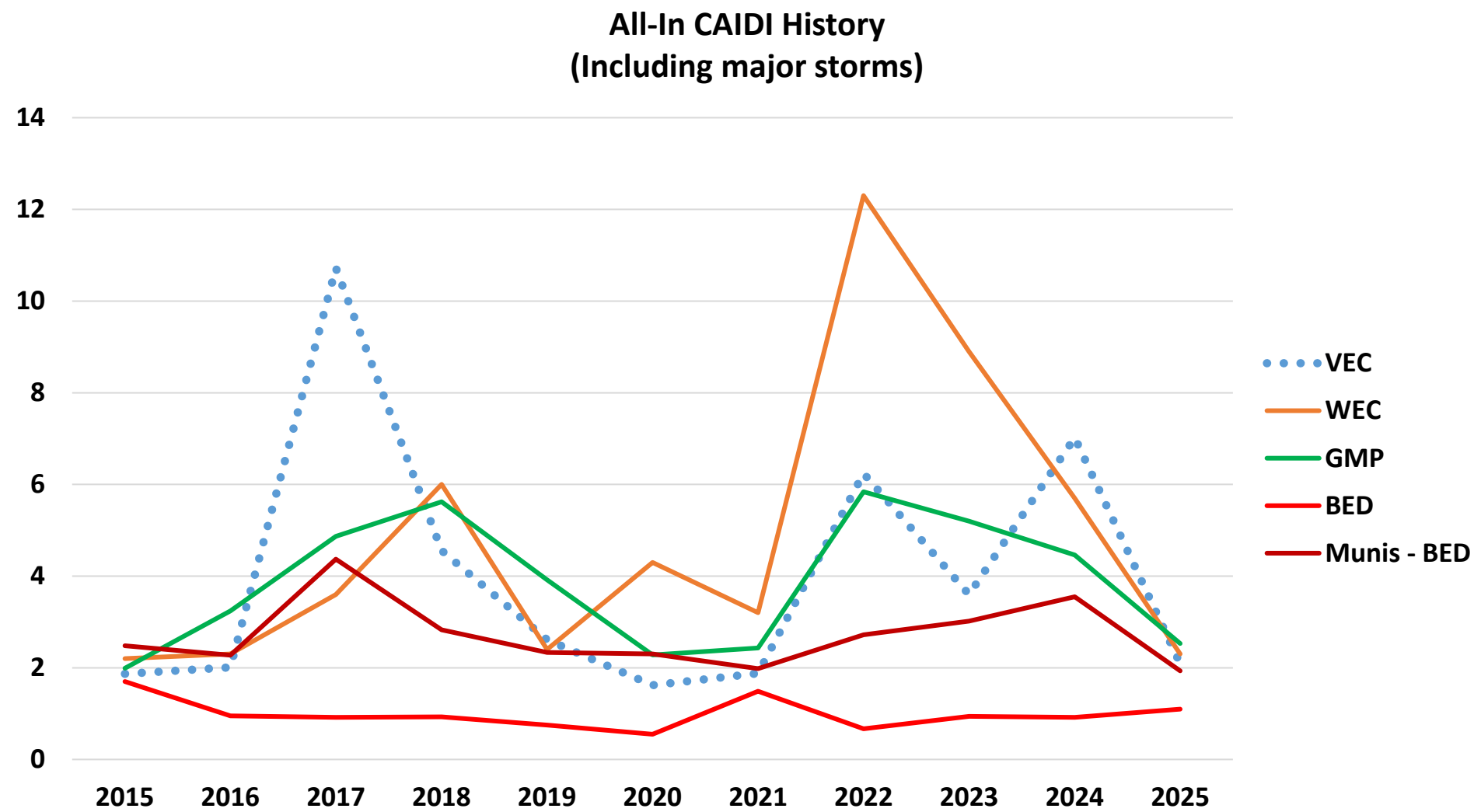
VT Ratepayers Hurt by FERC's Delayed ROE Decision

The Federal Energy Regulatory Commission lowered the return on equity (ROE) that New England transmission companies can recover in rates. The Order also requires transmission owners to issue refunds going back more than a decade. Decision hurts VT ratepayers because of VELCO's ownership structure. Bottom line: lower ROE puts upward pressure on customer rates.

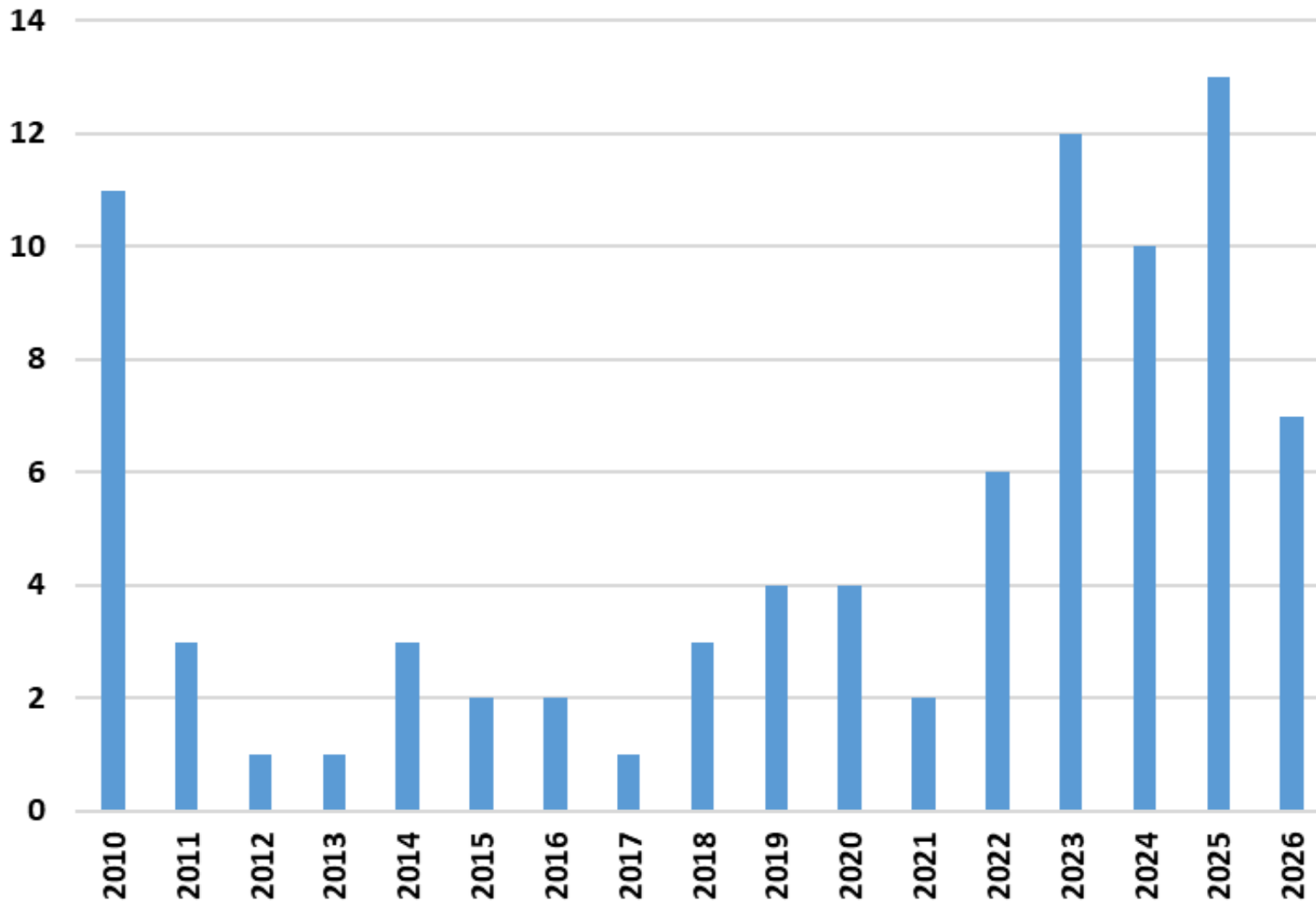
Impacts

- Reduced benefit to VT ratepayers going forward
- Unexpected **\$80m bill to VT ratepayers**; payments currently scheduled to start September 2026 and end December 2027
- Working collaboratively to mitigate if not outright negate
- Department response filed May 4, “not opposed” by Maine Office of Public Advocate
- Next steps: Awaiting FERC response; earn support from New England State Counterparts

Customer Average Interruption Index (including major storms)



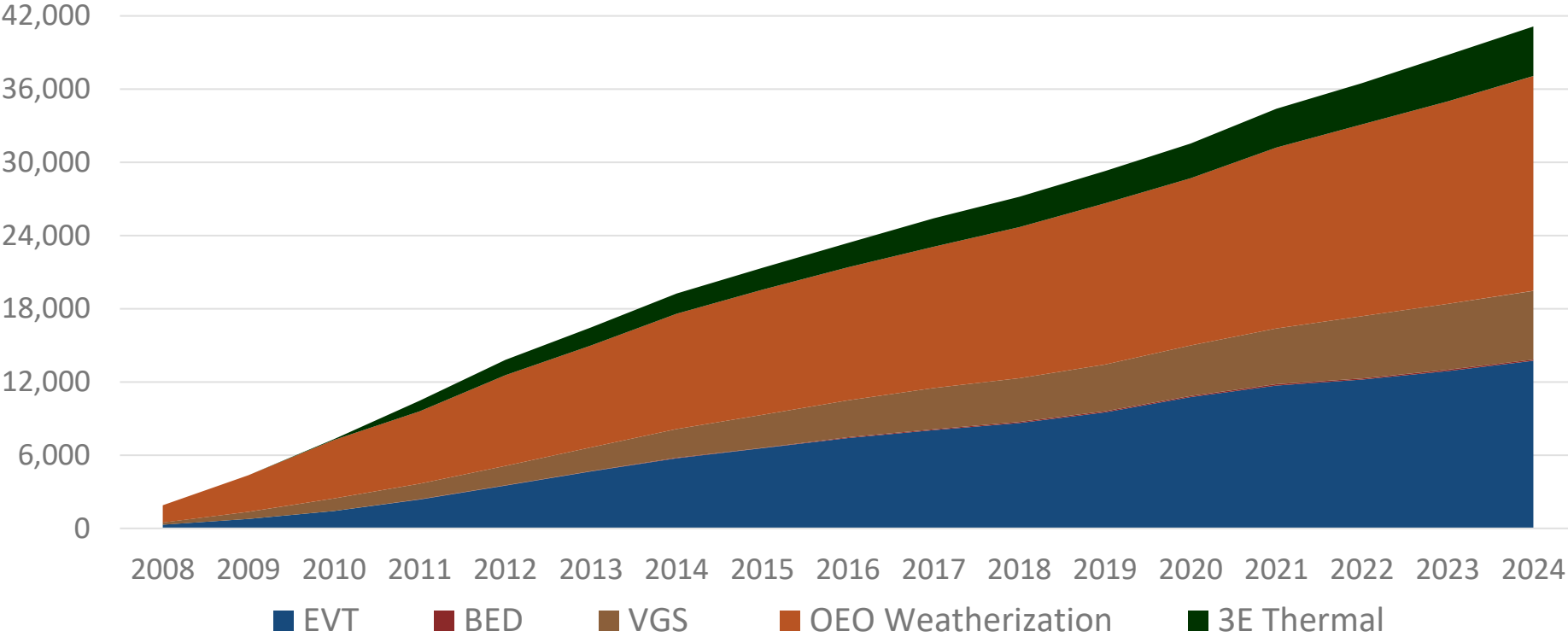
Electric Utility Rate Filings Per Year



- Annual number of rate cases increasing
- Rates projected to increase by an average of **20%-25% by 2030**. (Does not account for tariffs or ROE resolution.)
- Rate drivers: storm recovery and restoration; regional transmission and wholesale power; people & property taxes, and state Renewable Energy Standard compliance costs.

Over 40,000 Vermont Households have been Weatherized since 2008

Cumulative Building Energy Retrofits by Provider



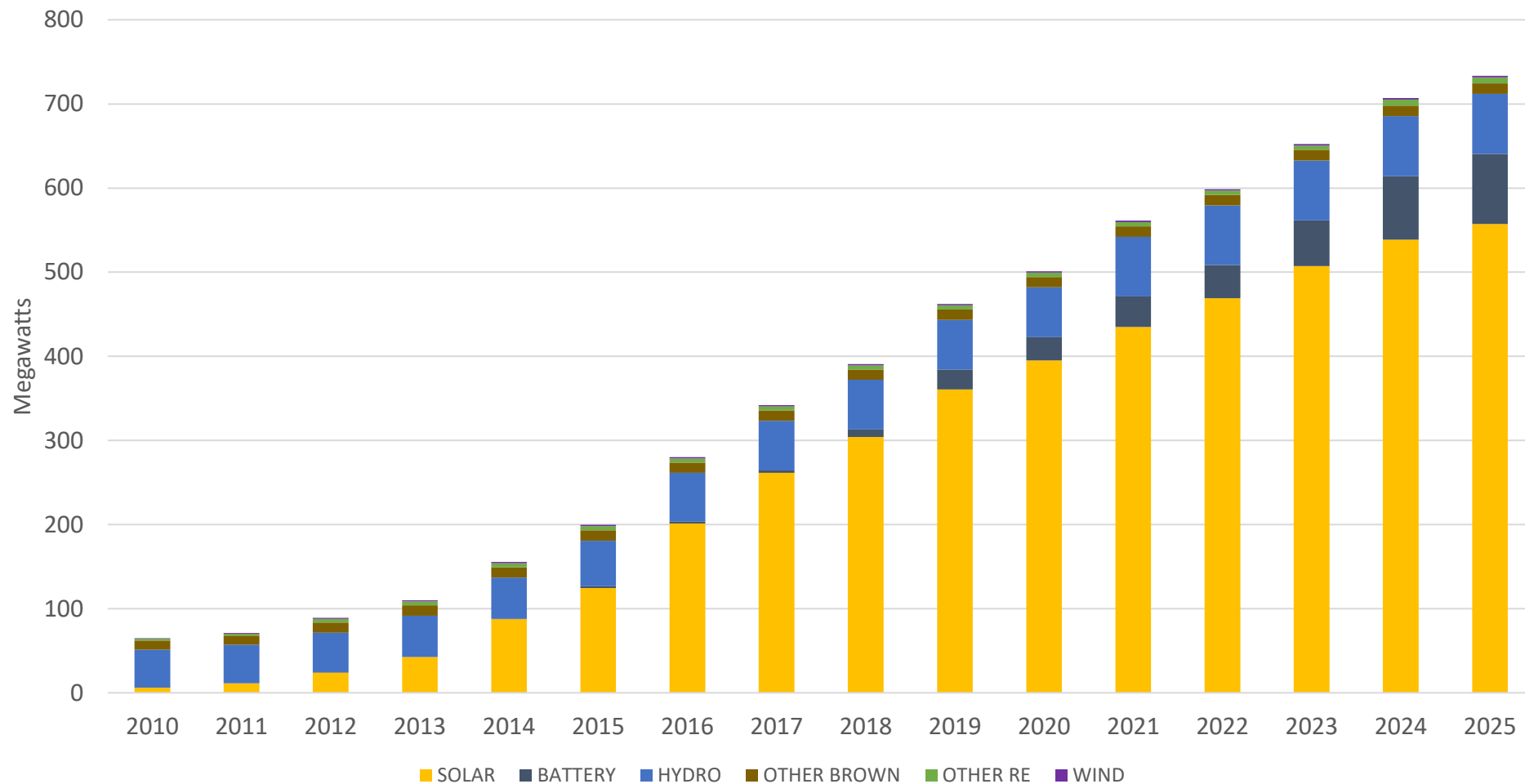
Vermont has supported the weatherization of over 41,000 units between 2008 and 2024, about 1/3 of Vermont's goal

Average energy savings: Approx. **28.5%** per household, or **\$853.143** saved per year by a household heating with #2 heating fuel.

VT's total renewable capacity is 1065 MW while VT's peak demand is 878 MW

733 MWs of renewables are Distributed Energy Resources (DERs)

Abundant Instate Renewables



**Derived from September 2025 utility PP-12 submissions to ISO-NE (excluding Stowe Electric Department) and additional data requests to Green Mountain Power*

DERs include 85 MW of battery storage

Extreme Weather - Natural Disasters are now more severe, frequent and expensive

- VT experienced 22 disasters in last 14 years
- VT tied for 5th in nation in # of disaster declarations (25) from 2011-2024
- VT 4th in nation in per capita cost (\$902) of these disasters
- Next Up: droughts, wildfires



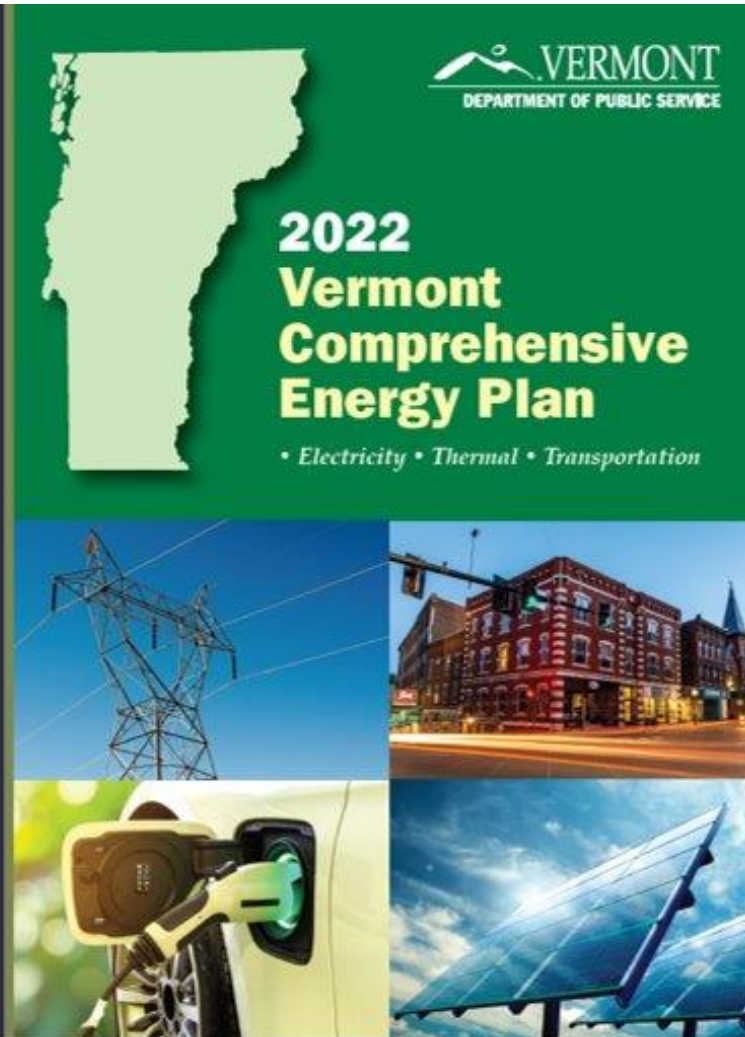
PSD Advocacy Initiatives: Our Work

- **Department – get more out of the resources we have**
 - Secure improved tech for data/information management
 - Complete review of 100 low- and middle-income energy burden programs
 - Establish Resilience, Flexible Load Management policies/requirements

- **State – help most vulnerable, increase energy supply options, get more out of what we have**
 - Secure increased and stable funding for Weatherization
 - Complete distribution utility assessment
 - Leverage Highgate Converter and former Vermont Yankee site in Vernon
 - Advocate affordability-driven policy reforms (PUC, Legislature)

- **Region – build and further strengthen effective collaboration**
 - Complete installation of “asset condition” project reviewer
 - Secure support for ROE refund mitigation solution
 - Pursue collaborative: power supply contracts, prudent transmission development, data center permit processes, and non-wires solution initiatives

THANK YOU!



Share your voice! We are launching a **Public Engagement Plan** this month for the 2028 Comprehensive Energy Plan, and we hope you will participate in events and surveys as we **all** shape Vermont's energy future.

Updates will be found here:

➤ <https://publicservice.vermont.gov/>

Or email us to be added to our newsletter:

➤ PSD.ComprehensiveEnergyPlan@vermont.gov