NARUC Summer Policy Summit

Managing the Resilience Bill: Planning to Balance Resilience with Affordability

Committee on Energy Resources and the Environment

Managing the Resilience Bill: Planning to Balance Resilience with Affordability

Moderator:

Hon. Philip Bartlett II, Maine

Panelists:

Aaron Breidenbaugh, Senior Director, Regulatory and Government Affairs, CPower

Tom Content, Executive Director, CUB of Wisconsin

Sean Gallagher, Senior Vice President, Policy, Solar Energy Industries Association (SEIA)

Managing the Resilience Bill: Planning to Balance Resilience with Affordability

Sean Gallagher

Senior Vice President, Policy
Solar Energy Industries Association (SEIA)

SEIA Solar Energy Industries Association®

Leading the Transformation to a Clean Energy Economy

SEIA works with its 1,200 member companies and other strategic partners to fight for policies that create jobs in every community and promote competition and the growth of reliable, low-cost solar power.

Reconciliation substantially cuts federal policy support for solar

Customer-owned rooftop systems **must be installed by the end of the year** to be eligible for the 30% federal tax credit

Larger (community solar or wholesale) solar systems, and leased rooftop systems, have two paths to tax credit eligibility:

- Be placed in service by the end of 2027, or
- Starting construction by next July 4 enables a longer time frame, generally 4 years, to complete the project
    - *But note July 7 Executive Order indicates intent to narrow these rules, potentially affecting what counts as starting construction and/or the timeline*

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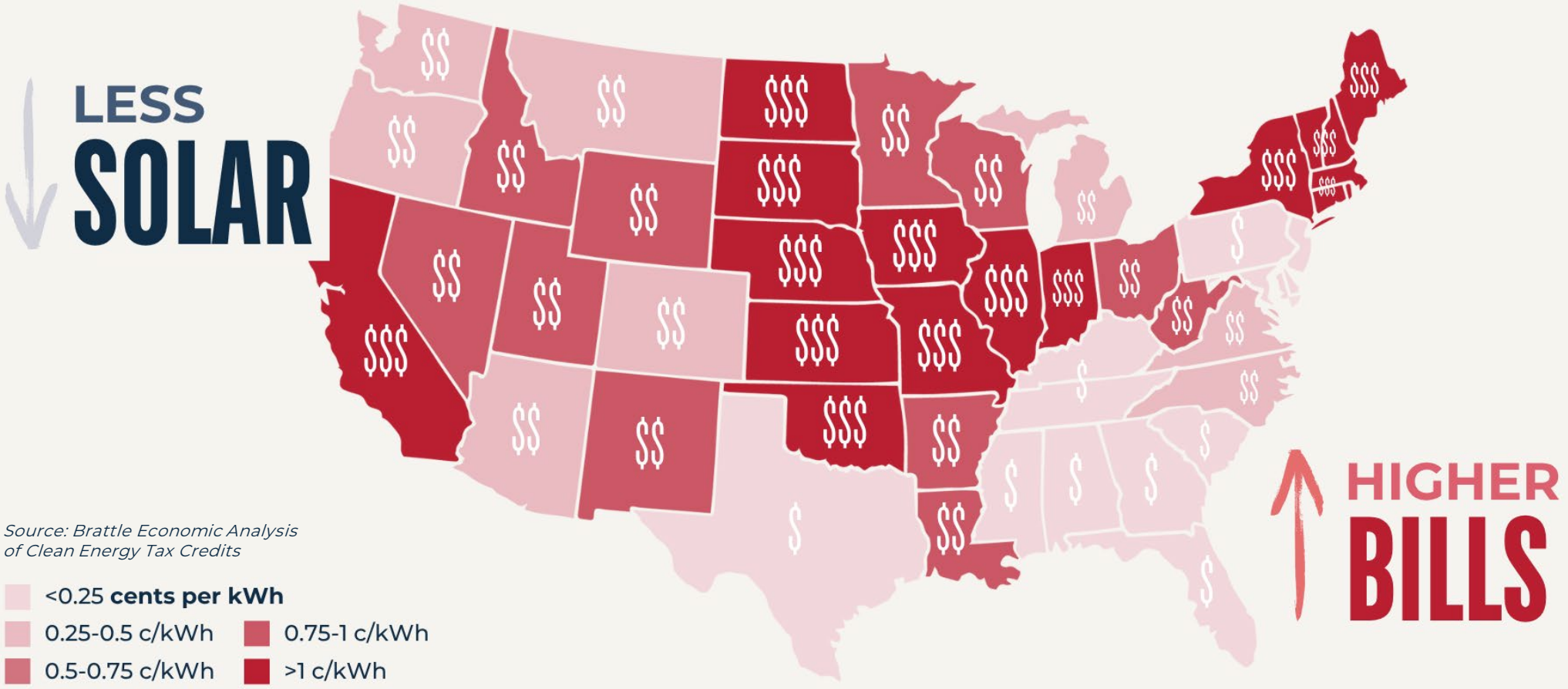
HR 1: Energy shortfalls and higher prices

It means **falling short** of the energy we need to meet growing demand

It means **higher prices** for consumers



Why?

The bill undercuts solar, which is readily available, affordable, fast to construct

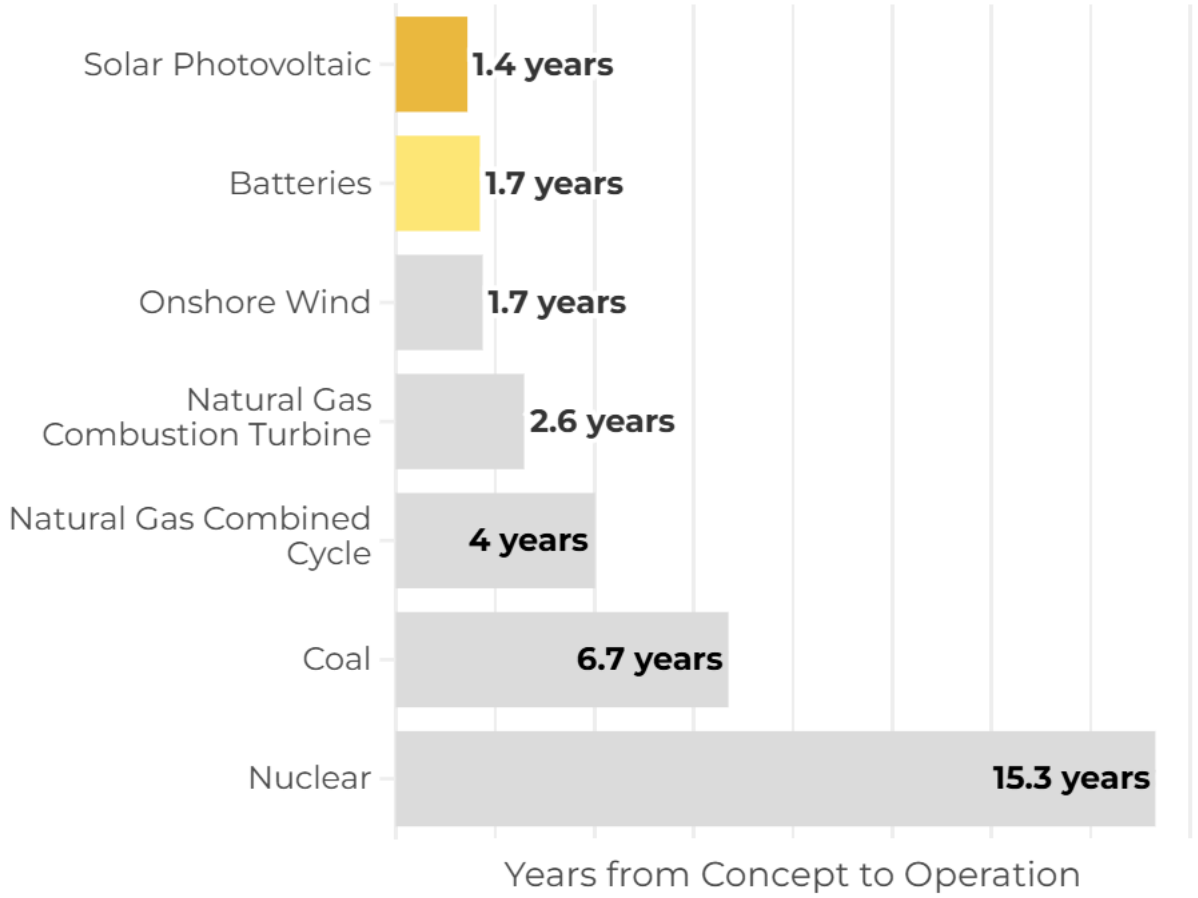
Battery prices are dropping rapidly and pair well with solar for resilience and reliability

Other energy sources are constrained

- New gas-fired power plants are not available for 5 yrs due to turbine shortages
- New and advanced nuclear units are not available until at least the early 2030s, meeting our resource adequacy needs in a decade from now, while solar and storage can meet our immediate needs.

Solar and Batteries Deploy Faster

Average U.S. Power Plant Development Timeline



Source: SEIA analysis of EIA Form 860M data for plants that have started reporting to EIA prior to seeking regulatory approval and plants which have reached operating status. • Due to the low number of coal and nuclear plants developed over the past decade, additional desk research provided supplemental data for the last 3 nuclear facilities to come online and for all coal facilities commissioned since 2010.

But don’t just listen to us…

Florida Power & Light

“In 2023, FPL projects that its customers saved approximately **$186 million** in system fuel costs **from having solar generation** on its system. Since 2009 (when FPL began adding large scale universal solar facilities to its generation mix), **FPL has avoided over $893 million of fuel costs because of its solar generation.”**

FPL

Tampa Electric

“Solar and storage distributed resources provide peaking capacity and fuel savings.

To cost-effectively meet the expected system demand and energy requirements over the next ten years, **solar PV,** base load, intermediate, and distributed energy resources are **needed.”**

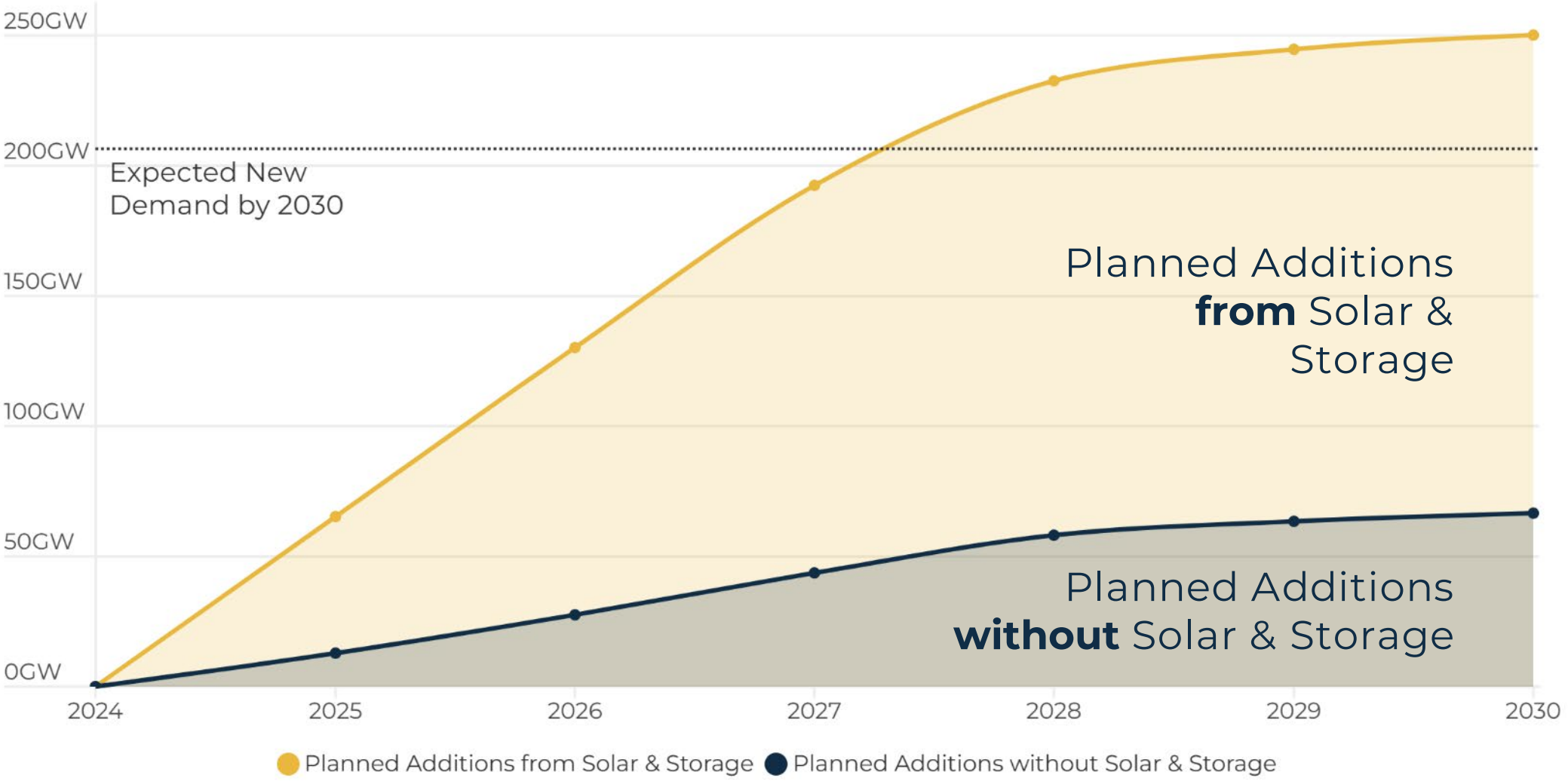
TECO
AN EMERA COMPANY

Duke Energy Carolinas

“When integrated across the grid with storage at scale, renewables, such as wind and solar, can provide additional **grid reliability** and serve to **mitigate fuel cost** volatility and reduce the Companies’ reliance on fuel supply chains.”

DUKE ENERGY®

No solar? No way to meet demand



Source: EIA, 860M & Annual Energy Outlook

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Where we go from here

SEIA's policy recommendations for a reliable, secure grid…

- *Support Energy & National Security with Domestic Manufacturing*
- *Meet Demand Challenges of Data Centers and AI*
- *Reform Interconnection Processes*
- *Reform Wholesale Market Design and Compensation*
- *Modernize Transmission Infrastructure*
- *Incentivize Distributed Energy Resources (DERs)*
- *Invest in Long Duration Storage Innovation*
- *Reform State Utility Resource Planning*

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Residential Solar and Batteries

Energy and Economic Security for American Families

The potential benefit residential rooftop solar is vast. In 2024, over 560,000 residential rooftop systems were installed totaling 4.7 GW. There are now 5.26M US homeowners with solar on their roof totaling 40.9 GW of power; this is close to the cumulative capacity of all solar in Texas . Each year we see hundreds of thousands of new rooftop systems installed across the US. Not only do these provide a much-needed boost in US energy production but they have the ability to provide savings to homeowners as well as resiliency to the country's energy grid.

Meeting Surging Energy Demands

Electricity generation from solar rooftops has tremendous potential. It is estimated that the US could install 731 GW of solar systems on residential rooftops. If fully utilized, this could generate 1,200 TWh per year. Since the United States currently uses a little over 4,000 TWh per year, this means that solar rooftops could effectively increase total US energy production by over 28% While no energy source is built out to its total potential, building out even a portion of this would make a massive contribution to meet the growing electricity demand from new homes, manufacturing facilities, data centers, and military bases.

Helping Homeowners Save Money with Consistent Bills

While annual savings vary based on electricity usage, system size, and utility, many homeowners can save significant amounts of money on electricity bills. Collectively, US homeowners with solar systems saved Billions of dollars over the past decade. By 2030, millions more U.S. homes are expected to install solar systems that could provide savings to Americans across the country.

Resilience Is Needed

Increasingly, homeowners are adding batteries to their solar systems, enabling them to keep the lights on during power outages. During several past storms, like hurricane Helene which swept through Florida and the Carolinas or Hurricane Beryl or Winter Storm Uri which hit Texas, several reports emerged showing that homeowners with solar and storage systems were able to keep the lights and refrigerators on while their neighbors were in the dark. While most homes have no backup at all, solar and storage offers the ability to keep food and medicine cold in the fridge and heating and cooling systems running. They can help the US energy gid withstand and recover faster from hurricanes, fires, floods, and other disruptions to its energy supply.

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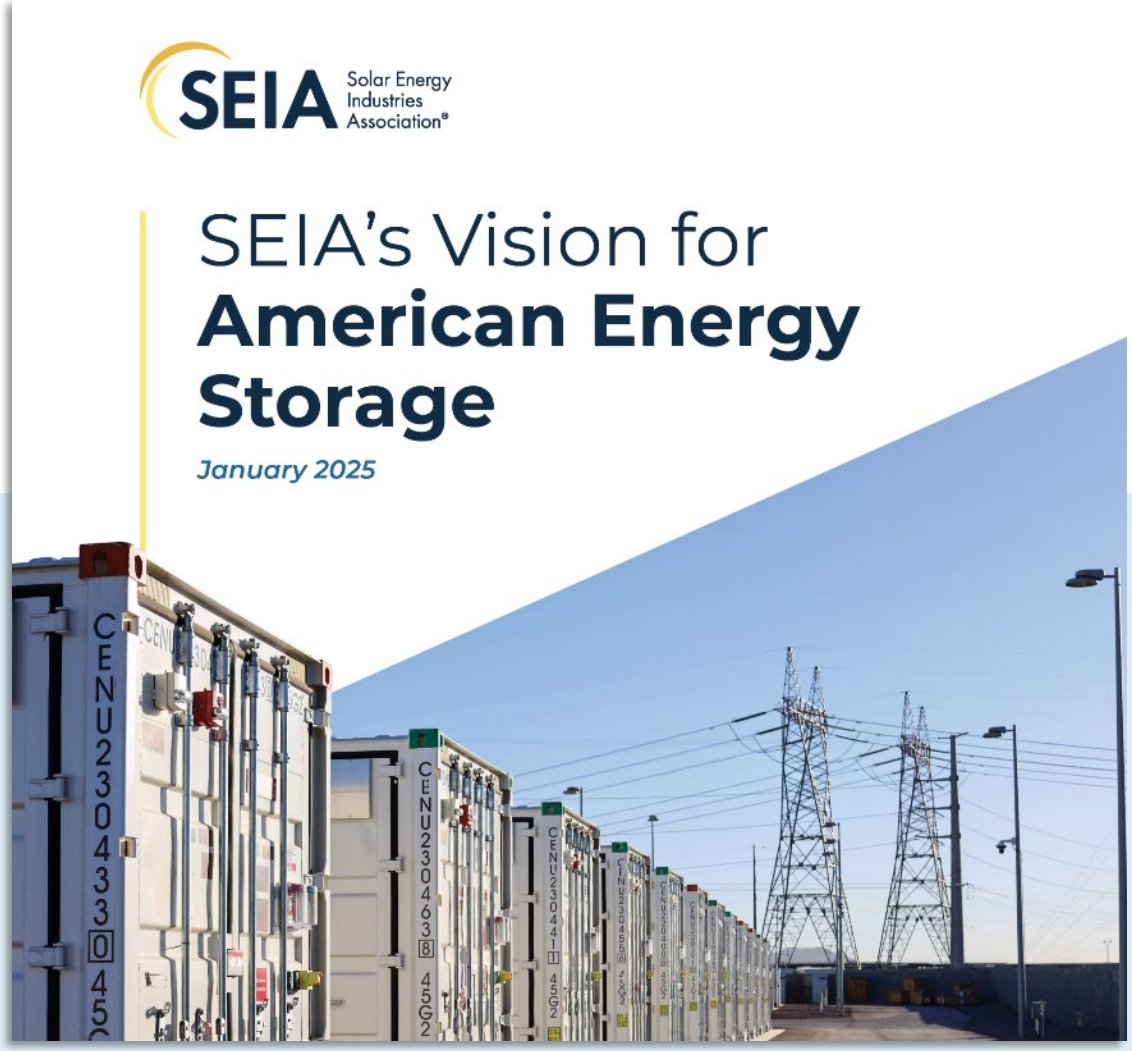
Storage and VPPs: SEIA's Whitepaper and Goals



SolarAPP+ Expansion Roadmap

SolarAPP+ is a tool that standardizes and automates reviews for solar and storage permits

SolarAPP+ is:

Free: Free for government to use

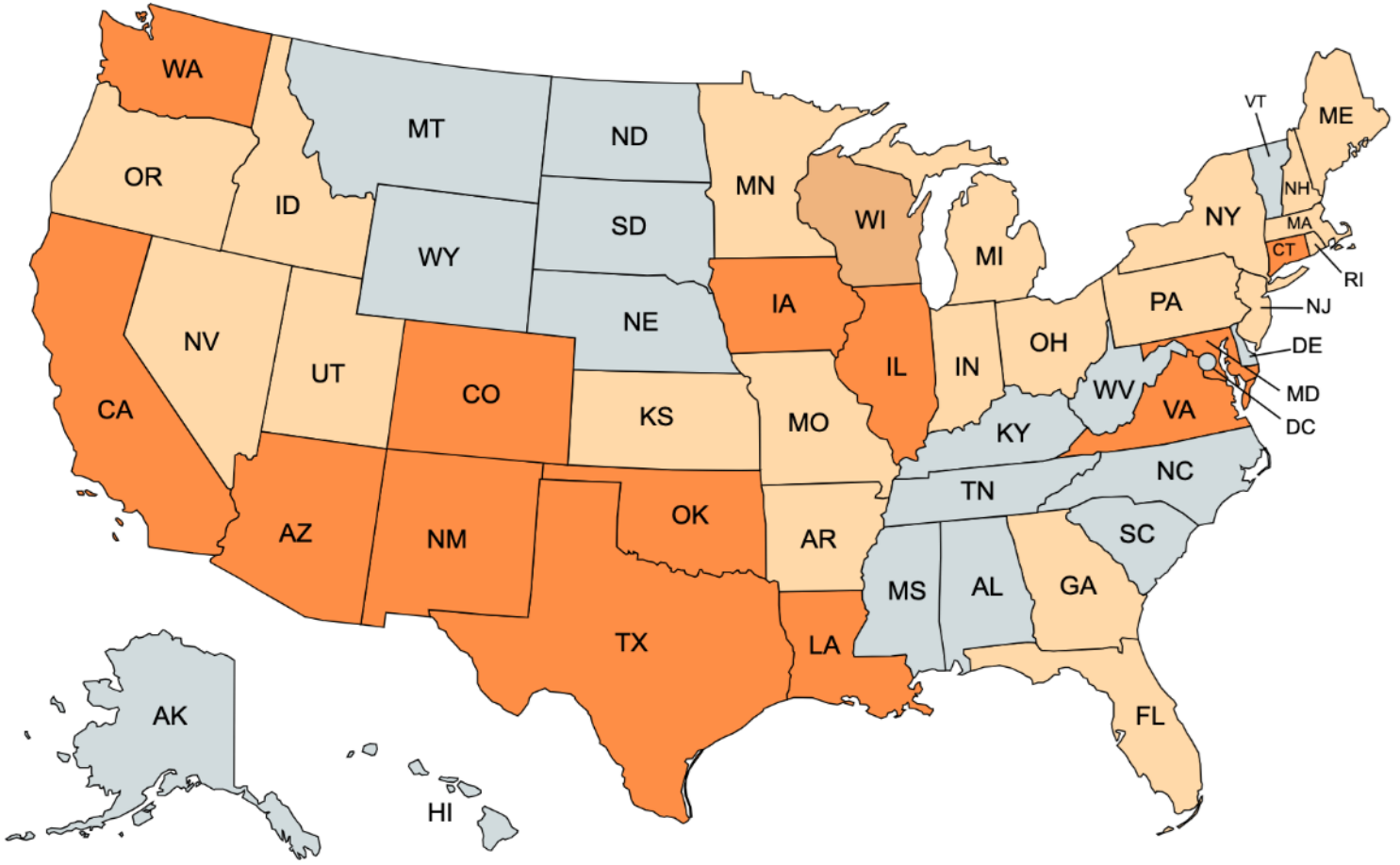
Safe: Leverages the latest residential, electrical, and fire codes

Predictable: Applies predictable and consistent standards for installers

Fast: Provides instant permits

Impactful: Lowers costs and reduces wait times for residents

SolarAPP+ is live in 276 jurisdictions today, across 13 states.



Live Communites
Piloting Communities
Interested Communities

SolarAPP Foundation

SEIA Solar Energy Industries Association®

SEIA Solar Energy Industries Association®

Questions?

CPower

July 29, 2025

DERs: Part of the Solution

2025 NARUC Summer Policy Summit
Session: Managing the Resilience Bill: Planning to Balance Resilience with Affordability

Our Purpose:

To enable the grid of the future with the power of customer DERs.

Our Mission:

We unlock the full value of distributed energy resources for our customers to balance the power grid when and where dispatchable resources are needed the most.

Our Vision:

Creating the Customer-Powered Grid® to enable a flexible, clean and dependable energy future.

Powering the Energy Transition with the Customer Powered Grid

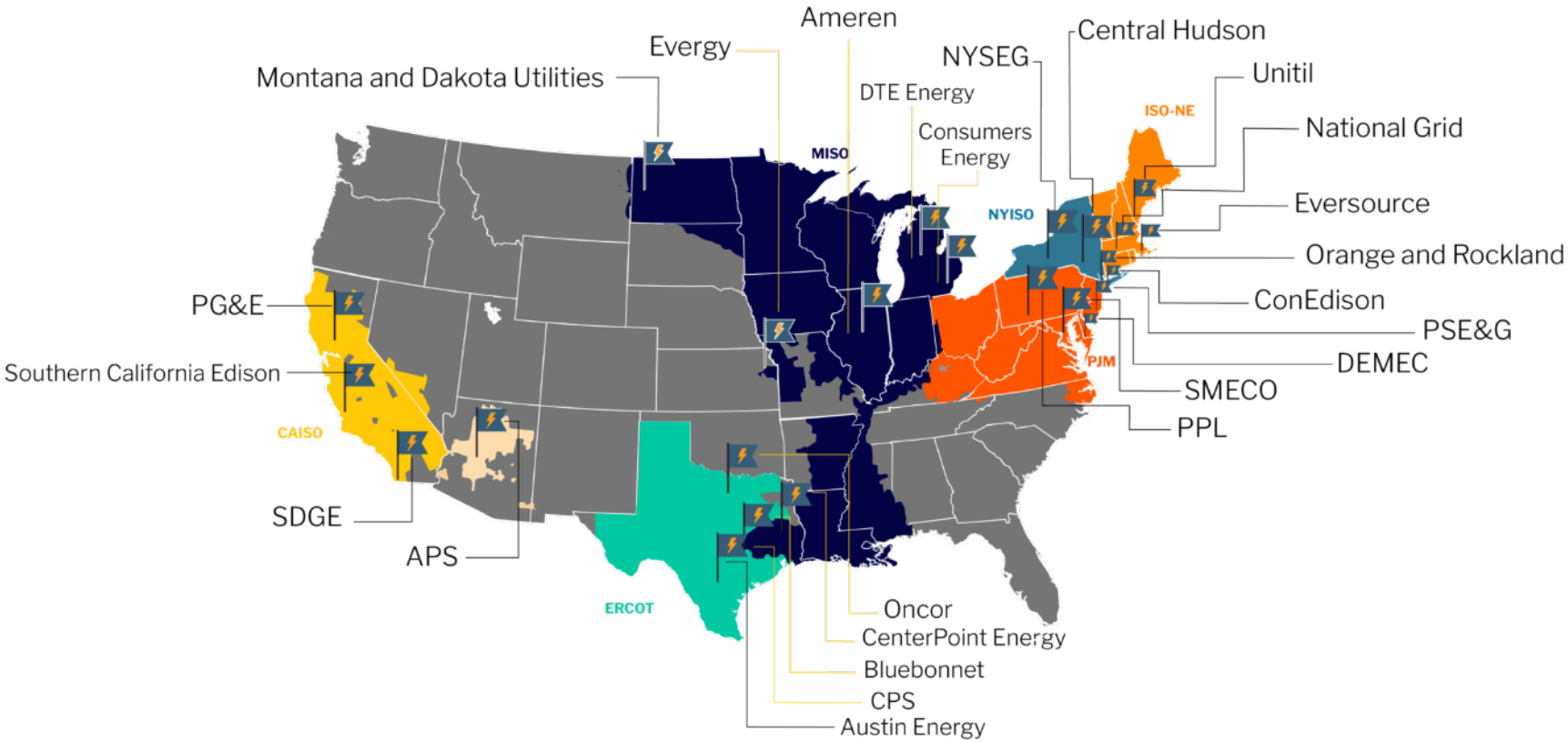
CPower is the leading, national Distributed Energy Resource (DER) monetization and Virtual Power Plant (VPP) provider.

Leading Virtual Power Plant Provider

CPower offers more than 60 grid services solutions across the US

~ 7 GW at 27,000+ sites

Over $1 BILLION in revenue paid to customers since 2015



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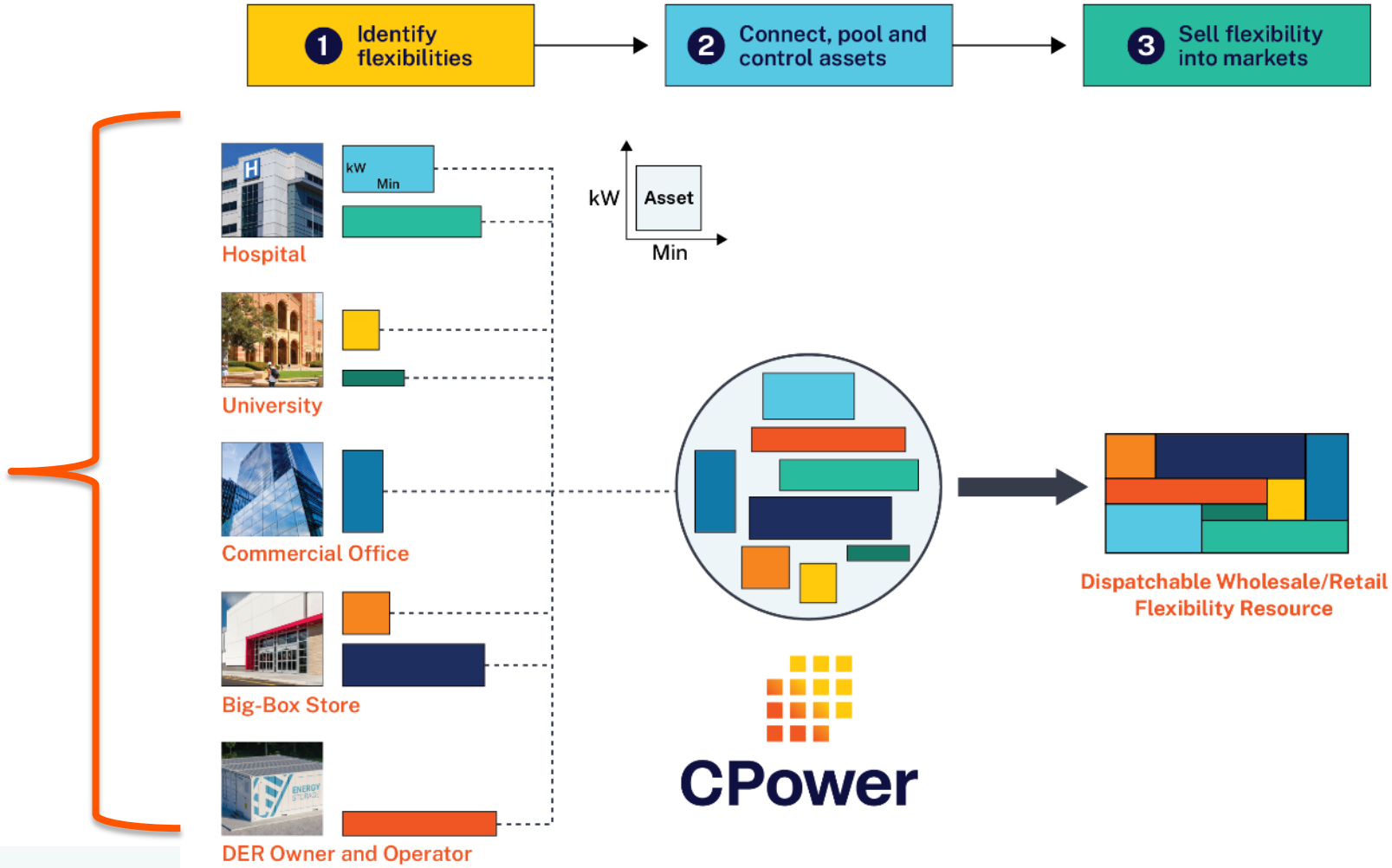
What is a Virtual Power Plant?

An aggregation of distributed energy resources (DERs) such as smart appliances, rooftop solar with batteries, EVs and chargers, and commercial and industrial loads that can balance electricity demand and supply and provide grid services like a traditional power plant

DOE VPP “Liftoff” Report



Virtual Power Plants: Role in the Energy Landscape

For the grid to stay balanced, grid operators and utilities need flexible distributed energy resources (DERs).

Power Generator	Utility Grid	Grid Operator	VPP Provider	Energy Users & DER Owners / Operators
Supply grid with electricity and meet demand for power most of the time.	Transmits electricity from generators to customers, can be stressed by severe weather and other events.	Ensures grid supply/demand always balanced, pays incentives to consumers for enrolling and shedding load.	Facilitates and makes VPP participation easy for electric customers	Receive incentives for participating in demand response and supporting a reliable and sustainable grid.
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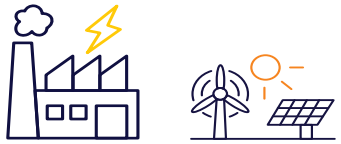
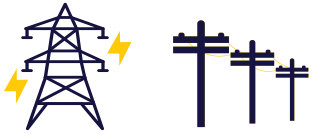
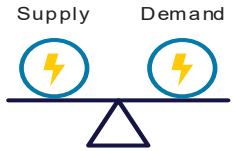
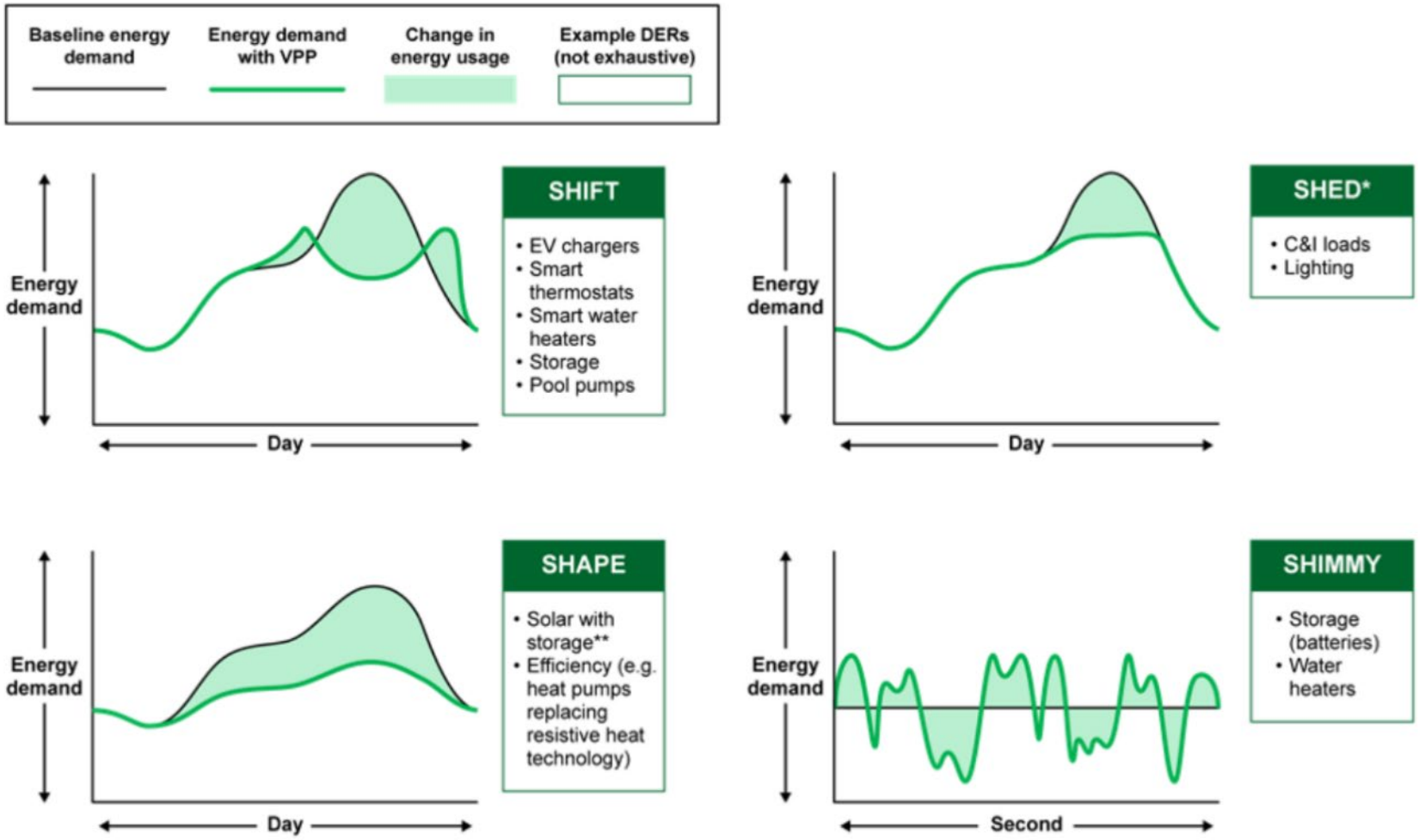
				

The existing flexible DERs are EXACTLY the kind of flexible resources the grid needs and energy markets reward

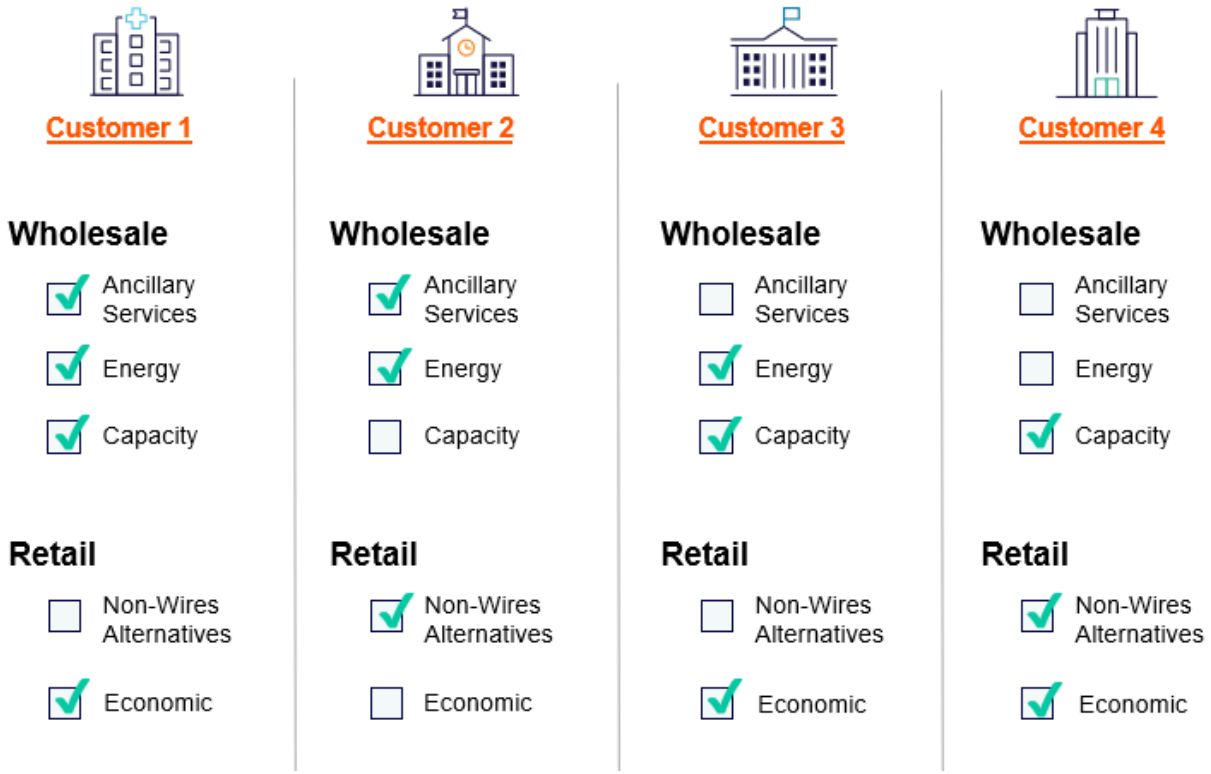
Examples of DER Potential

- Flexibility of demand is used to shift, shed, shape, or shimmy
- Use cases and technologies continue to increase
- Considerations can be for emergencies or economically based



Distribution Services and Dual Participation

- DERs are uniquely suited to provide grid services to the distribution system
- Distribution system planning should account for DER growth and services to minimize ratepayer costs
- Enabling dual participation – DERs can provide discrete services at both wholesale and retail levels.
- Customer capabilities to "stack" services are critical to maximize participation, while ***preventing double-counting and compensation***.



Examples include:

- New York
- Massachusetts
- Connecticut
- Texas

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VPPs: Fast, Inexpensive, Reliable & Needed

- A new, 400-MW VPP has a net cost of $43/kW-year, compared with $69/kW-year for a utility-scale battery and $99/kW-year for a gas-fired peaker plant
  - DOE January, 2025 update to its VPP "Liftoff Report"
- VPPs can be deployed in six to 12 months
  - July 2024 VP3 Report "Meeting Summer Peaks: The Need for Virtual Power Plants"
- "PJM said that demand response was essential"
  - FERC Chair Mark Christie, June 30, 2025 press conference
- Balancing authorities could collectively add nearly 100 GW of large loads to the grid with minimal impact if they could be curtailed only 0.5% of the time
  - Duke University Report "Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads in US Power Systems"
- Demand-response and other VPPs are a cost-effective method to enhance grid resilience, smoothing out electricity demand and mitigating price spikes. They enable integration of new large loads while reducing the need for new transmission or generation infrastructure
  - Clean Air Task Force/Brattle Report "Optimizing Grid Infrastructure and Proactive Planning to Support Load Growth and Public Policy Goals"

What Can You Do? – Support Flexibility

- Support utility VPP/flexibility programs by:
  - Allowing Aggregators to enroll customers
    - Aggregators can do what utilities cannot, like aggregate for performance
  - Recognizing all value streams afforded at both the Retail and Wholesale levels
    - Reliability/Capacity
      - The value associated with not having to build new generation or avoiding outages during times of system stress and high energy prices
    - Energy
      - The value of energy that does not have to be purchased
    - Flexibility
      - At the wholesale level this would be the value of ancillary services such as operating reserves and regulation
    - Investment Deferral
      - The value of deferred or avoided transmission or distribution investment
    - Environmental
      - The value of environmental benefits of clean resources not otherwise recognized

What Can You Do? – Support Data Access

- Data access by 3rd parties remains one of the single largest barriers to enabling and leveraging DERs to provide grid services
- Lack of AMI for smaller customers can essentially prohibit participation.
- Existing “standards” (ex. Green Button Connect) are not often implemented in a uniform manner, fully adhering to the GBC standard
- Standardizing access methods and platforms reduces costs to implement and utilize
- Examples of data access models:
  - NY – Integrated Energy Data Resource (IEDR)
  - NH - Statewide Energy Data Access Platform
  - TX – Smart Meter Texas

CPower

Thank you

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Meetings will resume at 1:30 p.m. with a General Session

Made in America: Products Shaping Our Future