ADVANCED ENERGY UNITED™

Unleashing Grid Edge Resources

November 16, 2026



Advanced Energy United

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We are the association of businesses united in our mission to create an economy built on advanced energy.

We provide:

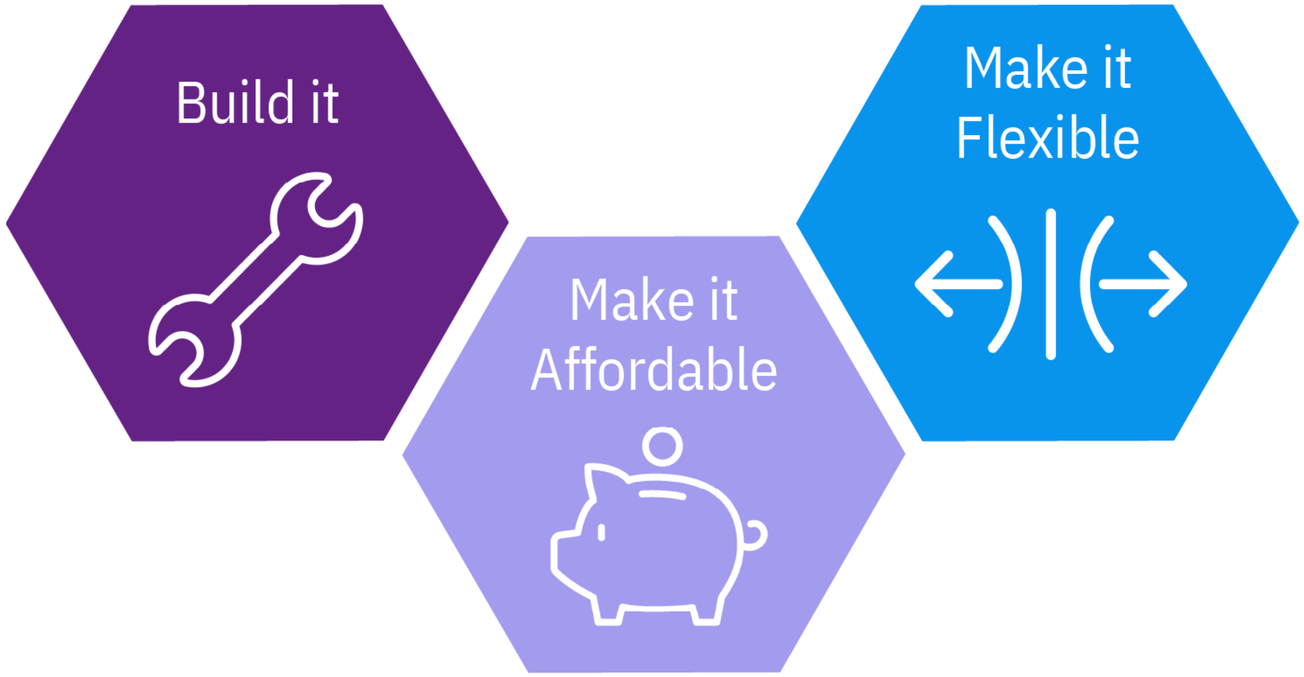
- ✓ **Credible research and analysis** about the advanced energy industry
- ✓ **Knowledge about technologies** and services available to consumers and the power grid
- ✓ **Policies and regulations** that drive the transition to an economy powered by advanced energy to deliver economic growth, and reliable, low-cost, and abundant clean power.

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How We Work

Advanced Energy United's Policy Playbook



Policymakers are facing three major energy trends today: rising demand, rising reliability threats, and rising costs.

Advanced energy companies provide the solutions to these challenges. Political leaders can use policy solutions to harness the power of our technologies with three big goals in mind:

- **Build more energy infrastructure faster**
- **Deploy and leverage grid-edge solutions**
- **Direct state and utility investments towards advanced energy**

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Our Members

Energy technology and solutions providers



Our Member Companies:

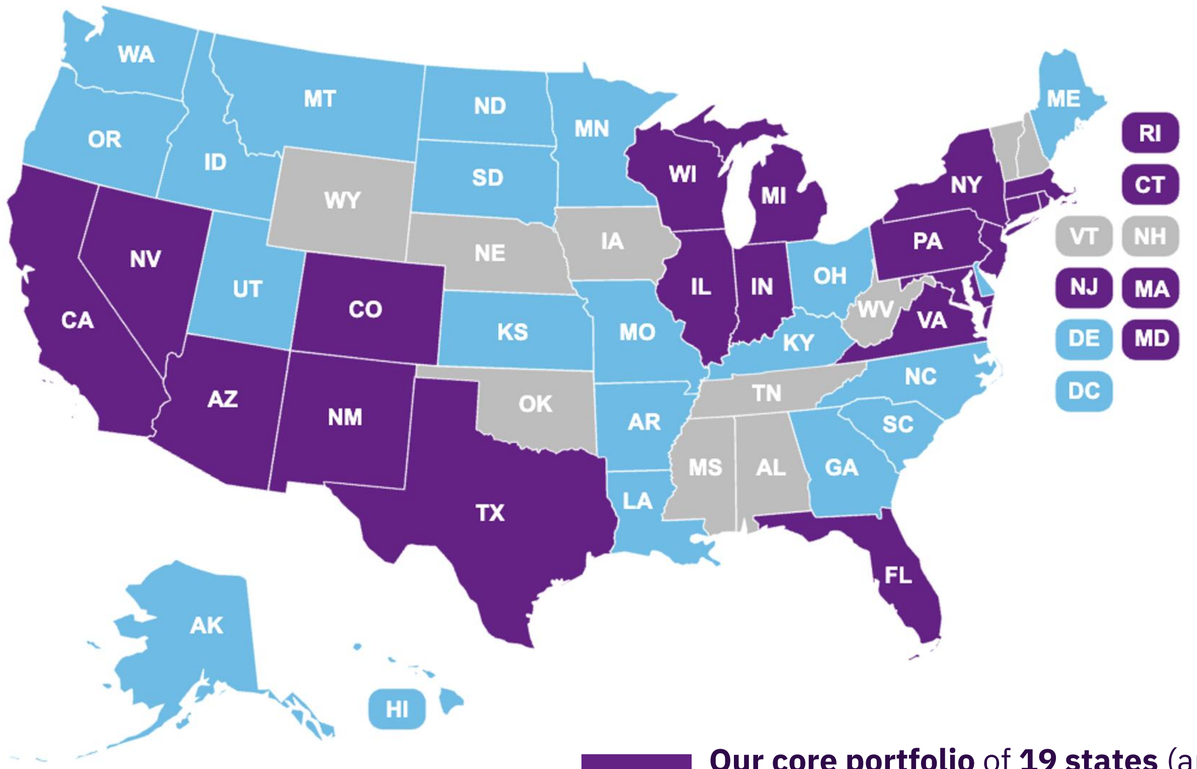
- Develop renewable energy projects that serve everyone from homes to utilities
- Build, enhance, and strengthen the transmission grid
- Create solutions to manage data and demand making energy use more efficient
- Provide storage solutions to increase reliability
- Support clean energy development through large-scale purchasing commitments
- Build electric vehicles and the charging infrastructure to support them

And so much more!

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Where We Work

Regulatory, legislative, and gubernatorial engagement in 18+ states.



Our core portfolio of **19 states** (and **5 RTOs/ISOs**: ISO-NE, PJM, MISO, SPP, and ERCOT)

Our broader PUC education program which reaches across an **additional 22 states**

Energy market advocacy at Federal Energy Regulatory Commission (FERC) and Regional Transmission Organizations (RTOs) / Independent System Operators (ISOs)

Policy engagement with Congress and federal agencies relating to infrastructure investments and manufacturing

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Unleashing Grid Edge Resources Report

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About the report: what we did and why

What we did

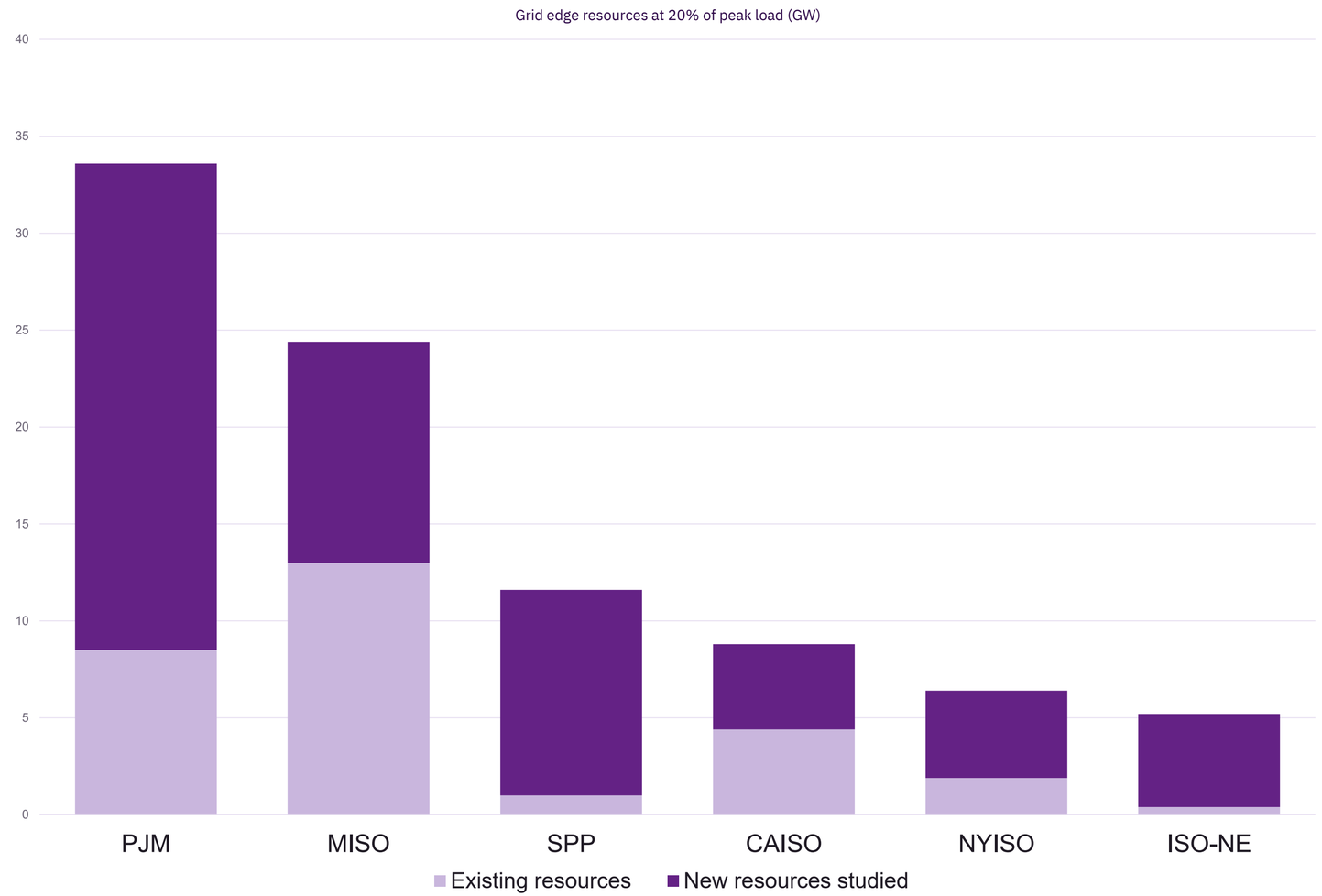
- Valued 60 GW of new grid edge resources across six ISO/RTO markets in 2031
- Five resources: demand response, BESS, managed EV charging, and home and business solar + storage
- Benefit-to-cost ratio for every resource in every market
- Built entirely on public market data

Why we did it

- Distribution value is well documented. Wholesale market value was not.
- Demand is rising and markets need capacity fast
- FERC opened the door with Orders 745, 841, and 2222, but market rules haven't kept up
- Regulators act on numbers, so we put numbers on it

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The question: what are 60 GW worth?



90 GW

20% of peak load across six ISO/RTOs

30 GW

Already on the grid, mostly demand response

60 GW

New resources valued for 2031

Public data only: hourly market prices, market monitor capacity data, transmission rates

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THE ANSWER

$26B

in benefits to wholesale markets in 2031
from 60 GW of new grid edge resources

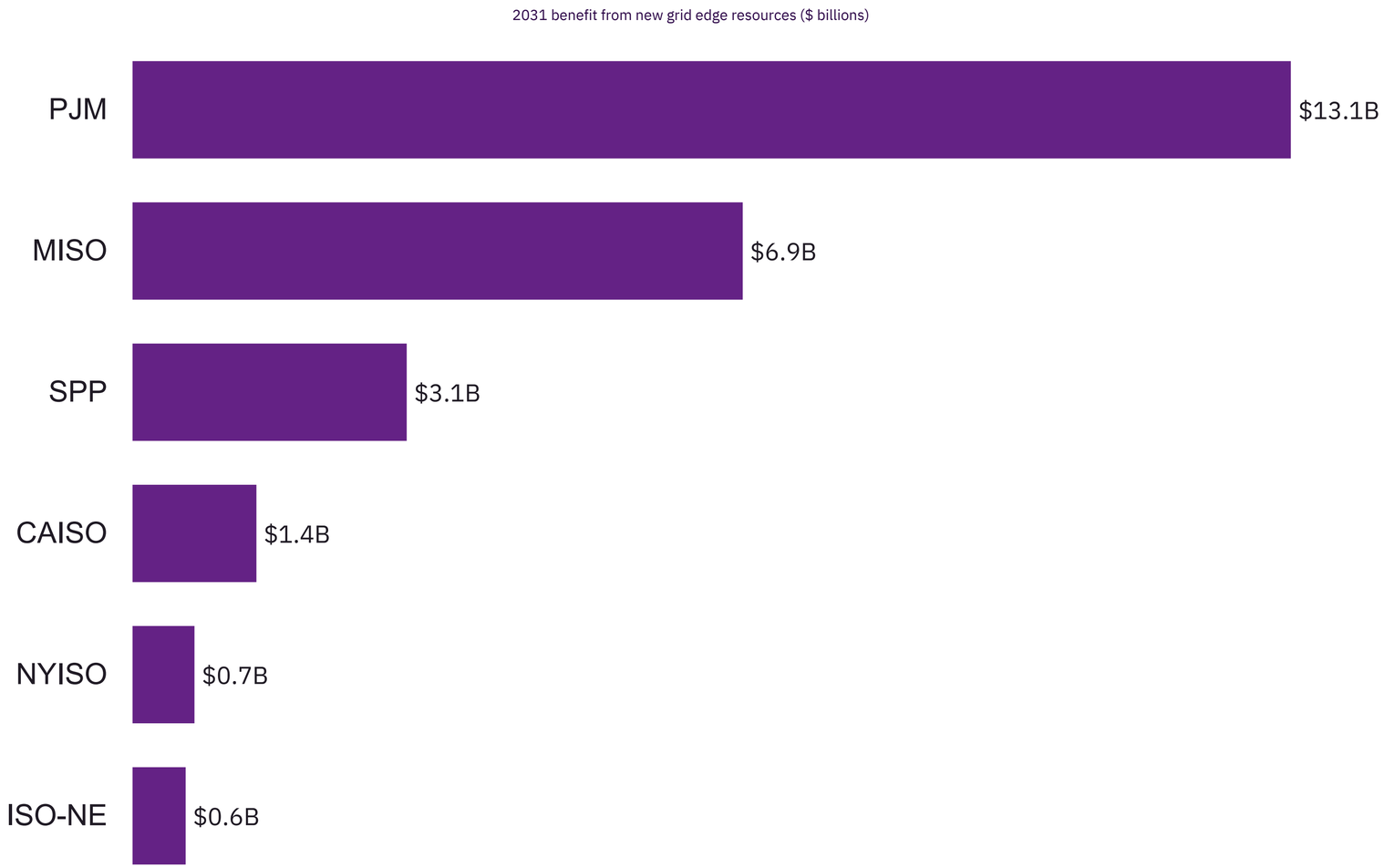
Up to $40B

if the 30 GW already on the grid is
put to better use too

Assumes an equal mix of resources in every market. No cherry-picking.

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Every region comes out ahead



15% of SPP's projected 2031 market cost, the biggest share of any region

13% of projected market cost in both PJM and MISO

$13B to PJM, the largest market, from 25 GW of new resources

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Where the money comes from

Lower Energy Costs

Shows up in the year's most expensive hours

Capacity

Less peak to serve means less capacity to buy

Congestion

Relieves tight spots on the transmission system

Transmission

Shaves substation peaks, delays upgrades

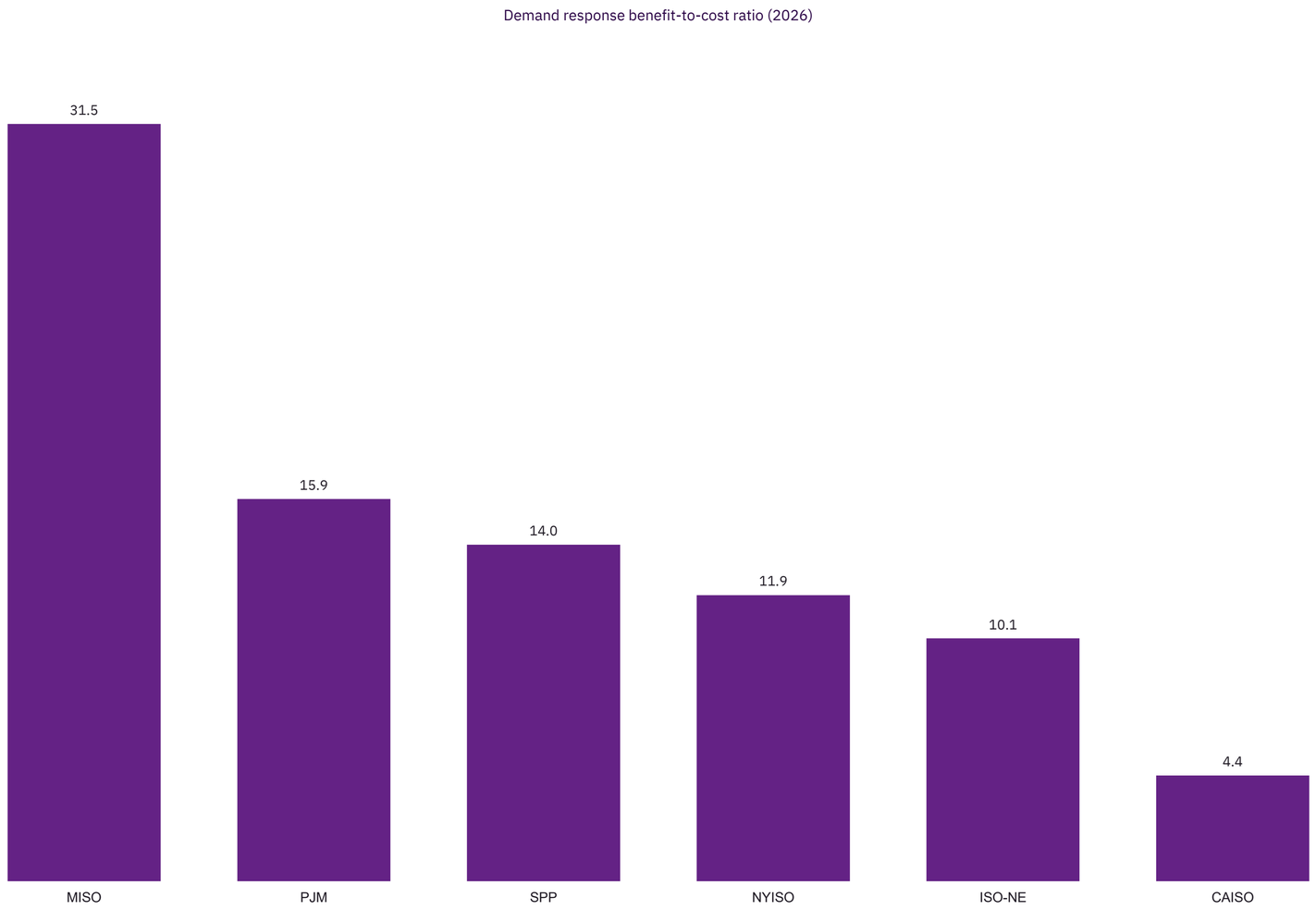
Emergencies

Avoids paying emergency price caps

Every dollar counted once: benefits already paid through retail tariffs like net metering are left out.

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Demand response is the star of the show



$30+

back for every $1 spent in MISO

$10+

per $1 in five of six markets

The only resource where the product is doing less

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Nearly everything else pays for itself too

BESS

1.3 to 13.5

Highest in PJM. Value tracks congestion, so location matters.

Managed EV charging

0.5 to 3.7

Lowest ratios, but pays off in five of six markets. The easiest win.

Home solar + storage

5.3 to 50

Emergency-only. A slice of an installed battery is cheap capacity.

Business solar + storage

11 to 136*

Larger batteries mean more capacity on call.

*136:1 in MISO reflects MISO's $10,000/MWh emergency price cap. Ranges are 2026 benefit-to-cost ratios across the six ISO/RTOs.

So what's the holdup? Five barriers

1	**Participation models**	Built for summer peaks, one size fits all
2	**Metering**	Power plant rules applied to home batteries
3	**Planning and interconnection**	Left out of plans, studied apart from load
4	**Accreditation (ELCC)**	Artificially low values that swing every year
5	**Net metering**	Blocks solar + storage from emergency dispatch



Asking a home battery to meter like a 500 MW plant

The roadmap

Build It

Clear the path to get grid edge resources built and connected

- Accreditation based on real performance
- Count resources in distribution plans
- Study onsite resources with load

Make It Flexible

Update market rules for how the grid works today

- Models for short and long duration
- Emergency dispatch for solar + storage
- Incentives aligned with performance

Make It Affordable

Unlock billions in savings consumers are missing out on

- Right-size metering
- Statistical sampling for residential DR
- Customers control their data

Who needs to act

FERC and the ISO/RTOs

- Flexible demand response participation models
- Metering sized to the resource
- Accreditation that reflects real performance
- Statistical sampling
- A way to dispatch behind-the-meter hybrids

State commissions and legislatures

- Customer data access
- Third-party meter reading
- Grid edge resources in distribution plans
- Concurrent study with load
- A narrow net metering exception for emergencies

Already moving: United is active in FERC dockets on several of these issues, including statistical sampling.

The cheapest megawatt is already plugged in

60 GW

of new grid edge resources

in 2031 market benefits

29 of 30

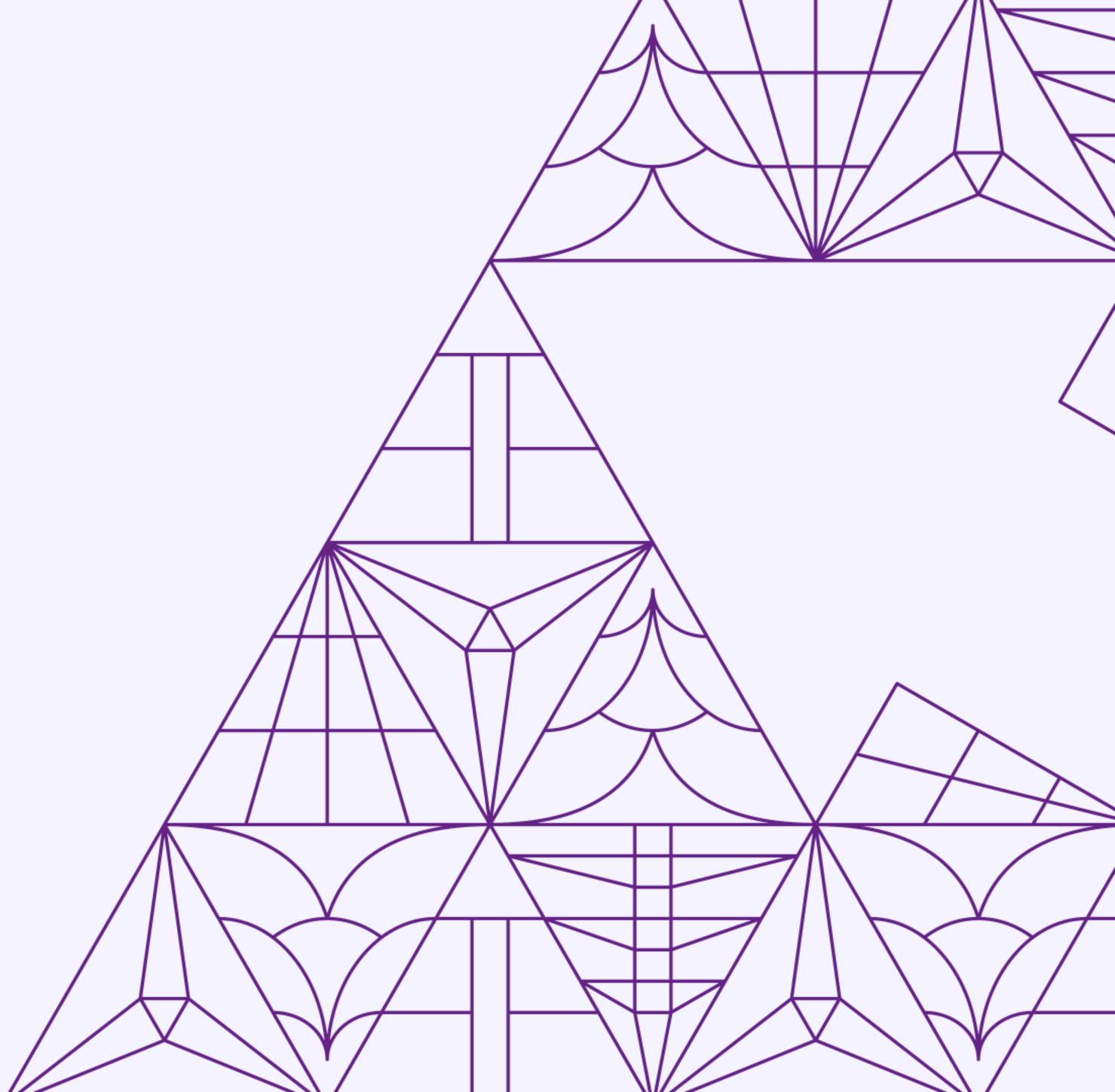
resource and market combinations pay for themselves

Build It. Make It Flexible. Make It Affordable.

Questions?

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Thank you.



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advancedenergyunited.org
@AdvEnergyUnited

1801 Pennsylvania Avenue NW, Suite 410
Washington, DC 20006