



Expanding Virtual Power Plants Across the U.S.

September 16, 2024



Webinar Logistics

- Participants can enter questions through the Zoom Q&A function
- Webinar recording will be published on United's website and shared via email 24 – 48 hours after the webinar

Advanced Energy United

We are the association of businesses united in our mission to achieve 100% clean energy in America.

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 100% clean energy in the power sector, the built environment, and in transportation.

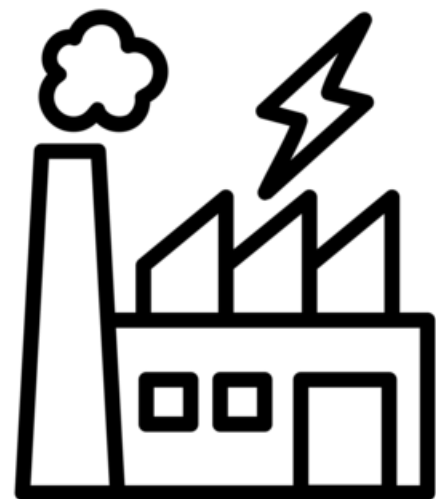


The new normal: We now have three options for power

1

Centralized fossil fuel power plants

(Coal, gas combined cycle, gas peakers)



2

Centralized clean power plants

(Solar, wind, batteries, nuclear/hydro)



3

Virtual power plants

(Large groups of DERs that can be remotely controlled, usually in homes and businesses)



There are 30-60 GW of VPPs across the US today – we want to see that triple by 2030

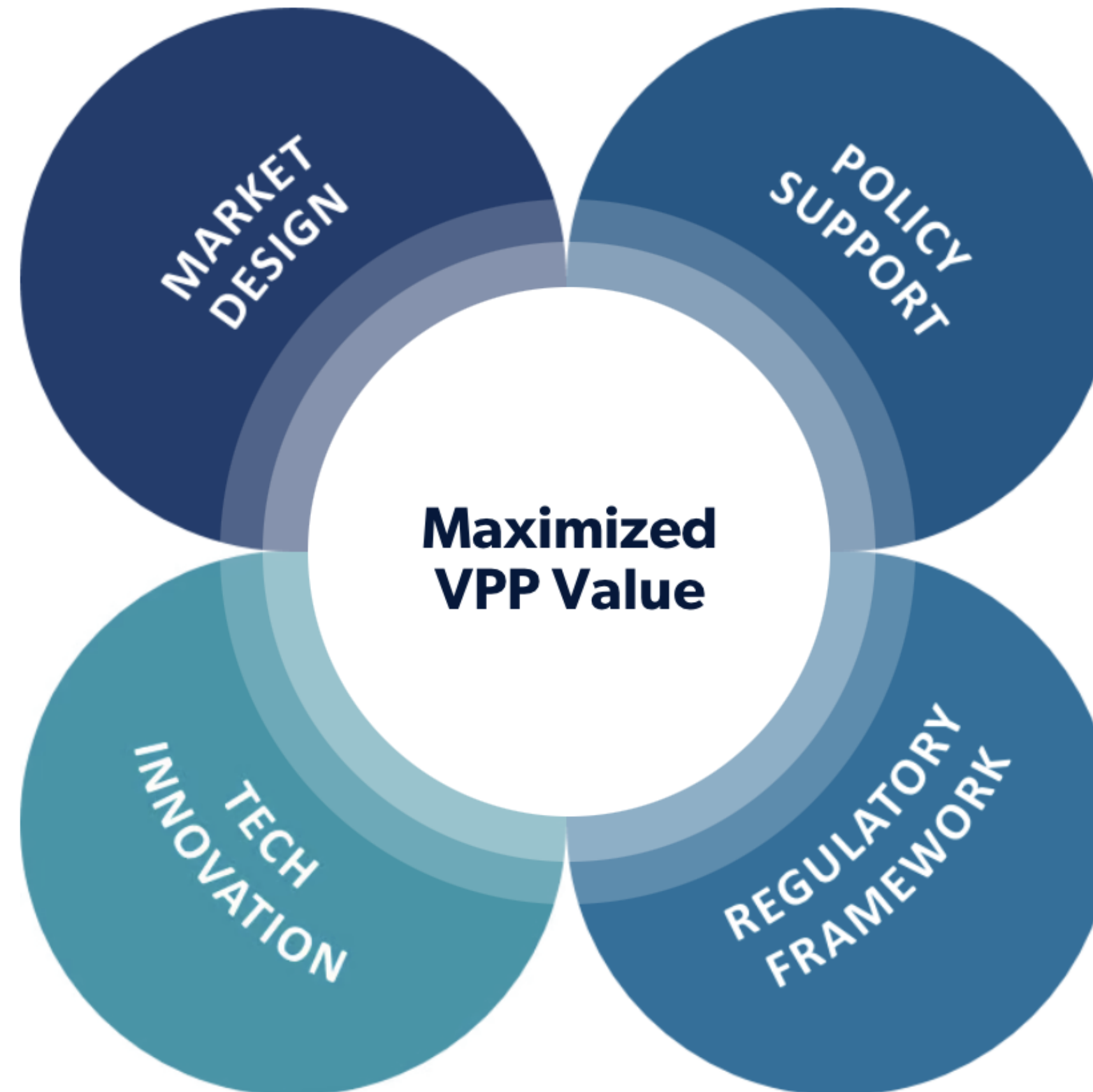
Advocacy to scale virtual power plants

MARKET DESIGN

- Wholesale markets provide a level playing field for demand-side resources
- Retail rates and programs incentivize participation in innovative, customer-centric ways

TECHNOLOGY INNOVATION

- DERs are widely available and affordable. DERs can communicate with each other and the system operator
- Algorithms effectively optimize DER use while maintaining customer comfort and convenience



POLICY SUPPORT

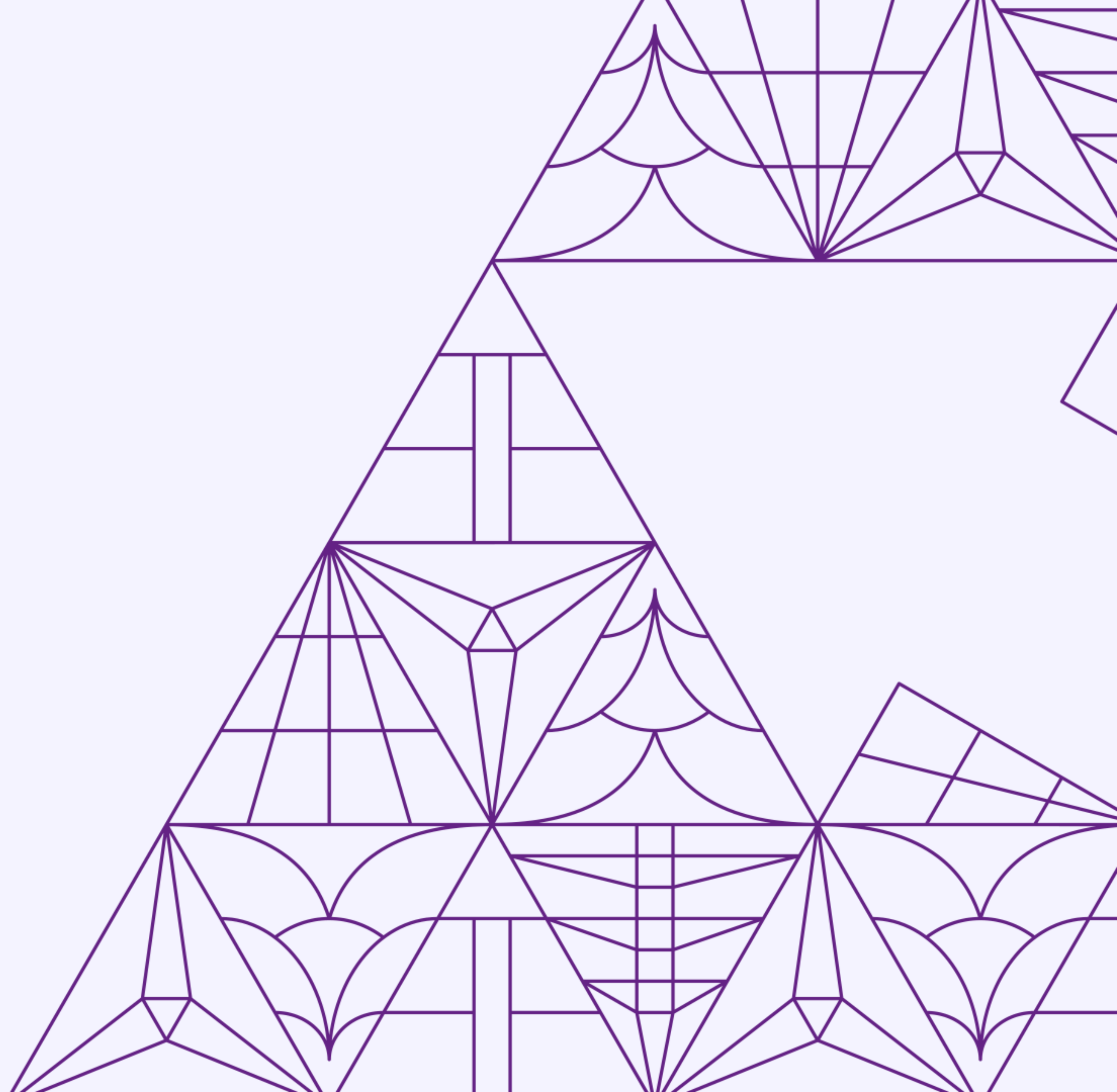
- Codes and standards promote deployment of flexible end-uses
- R&D funding supports removal of key technical barriers

REGULATORY FRAMEWORK

- Utility business model incentivizes deployment of VPPs wherever cost-effective
- Utility resource planning and evaluation accounts for the full value of VPPs

[Source: Brattle Group, "Real Reliability: The Value of Virtual Power" \(2023\)](#)

Thank you.



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