Voluntary Energy Markets - Status & Trends (2024 Data)

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NREL at a Glance

4,026 Workforce, including:

- 2,968 regular/limited term
- 508 contingent workers
- 228 postdoctoral researchers
- 155 graduate student interns
- 167 undergraduate student interns

—as of 6/9/2025

World-class research expertise in:

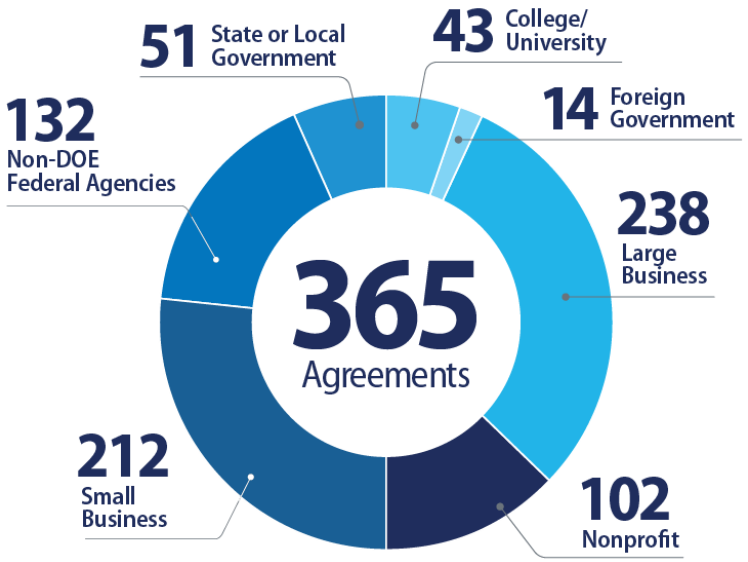
- Energy Systems Integration
- Transportation and Fuels
- Buildings and Industry

Partnerships with:

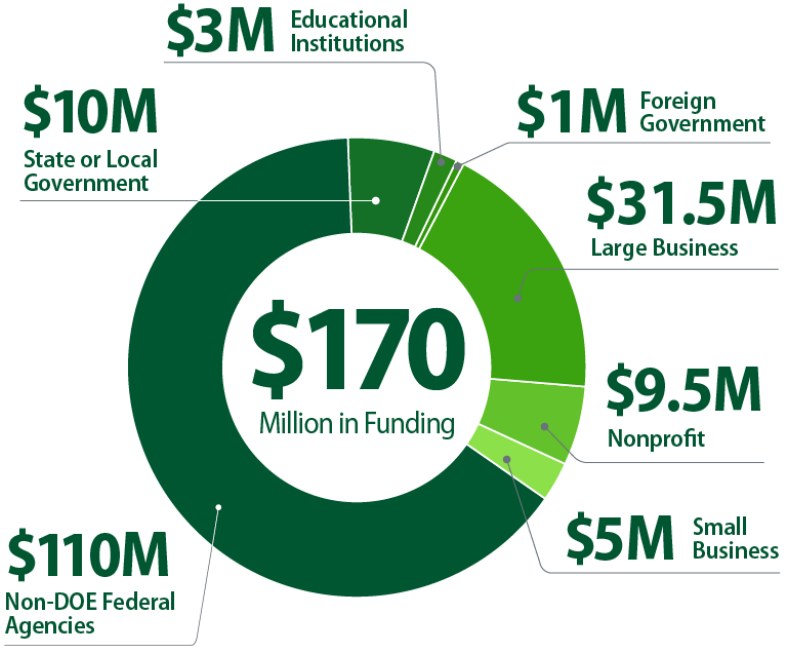
- Industry
- Academia
- Government

4 Campuses operate as living laboratories

More Than 1,100 Active Partnerships in FY 2024



Agreements by Business Type



Funding by Business Type

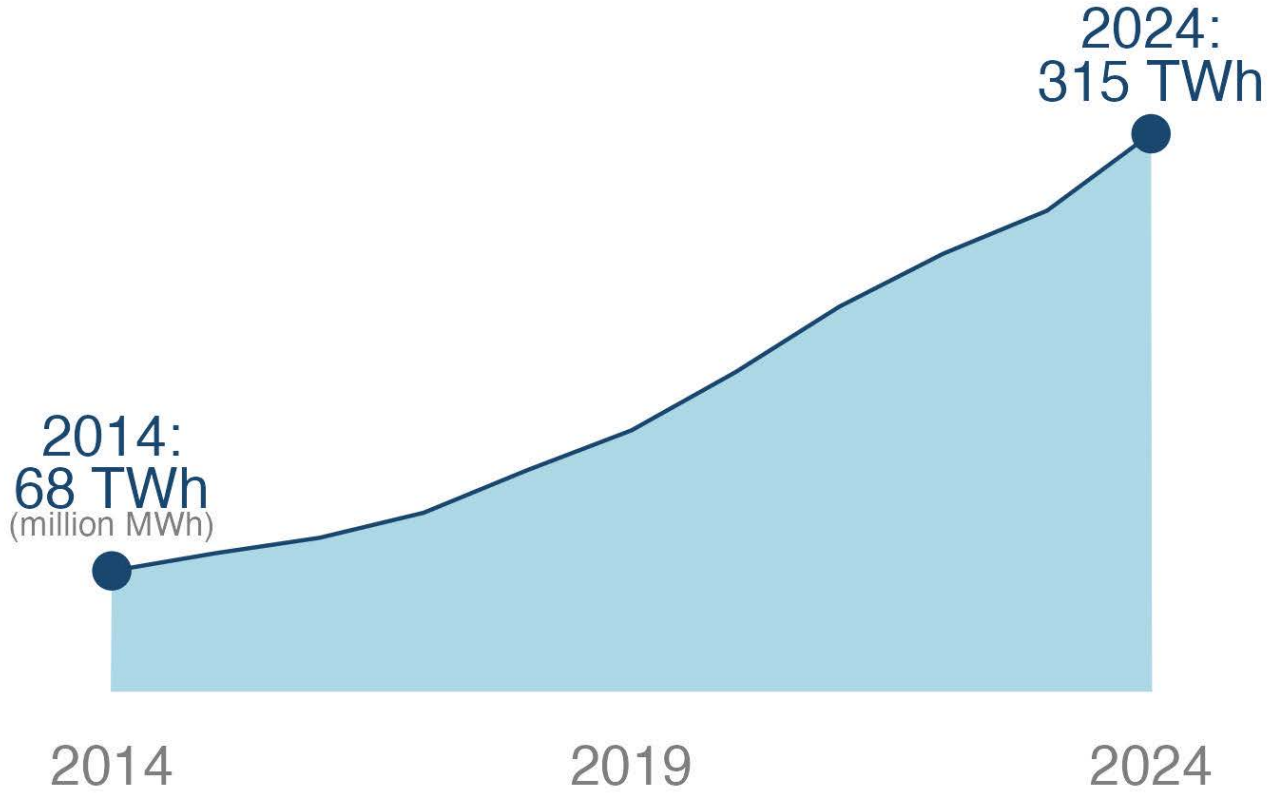
*Due to agreements involving multiple partners, the number of partners exceeds the 365 new agreements executed in FY24.

Voluntary Green Power Markets

- Voluntary green power refers to renewable electricity **voluntarily** purchased by **retail** electricity customers
- The voluntary green power market refers to the suite of products that allow customers to procure green power:
  - Utility green pricing programs
  - Utility renewable contracts
  - Competitive suppliers
  - Unbundled RECs
  - Community choice aggregation
  - Power purchase agreements

The Big Picture

In 2024, about **9.2 million customers** procured about **315 million MWh** of renewable energy through power markets.



Total renewable power sales 2014-2024

That represents about:

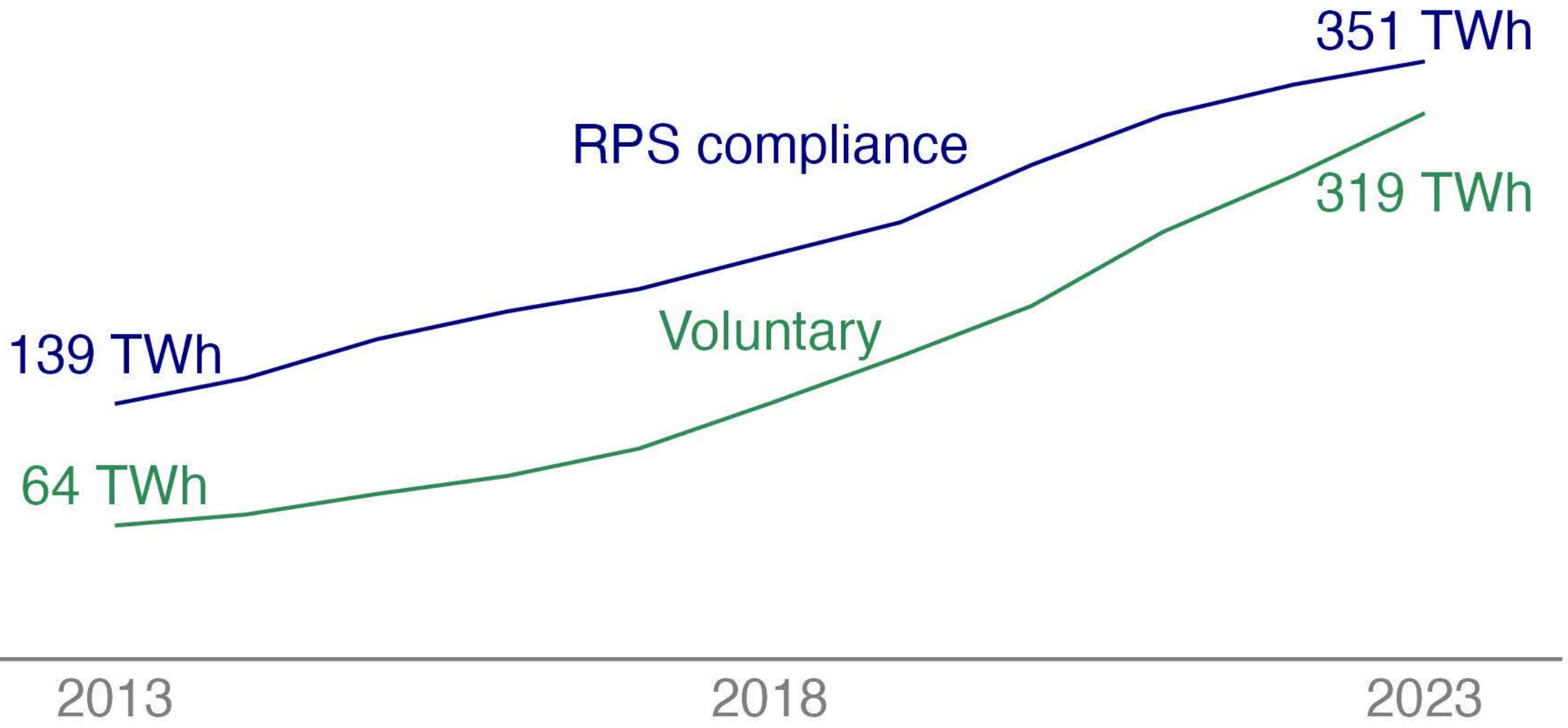
1 in 17
U.S. retail electricity customers

8%
of U.S. retail electricity sales

45%
of U.S. non-hydro renewable energy generation

Source: Estimates based on data from O'Shaughnessy et al. 2024. "Status and Trends in the Voluntary Power Market (2023 Data)." Golden, CO: NREL, with updates for 2024 data

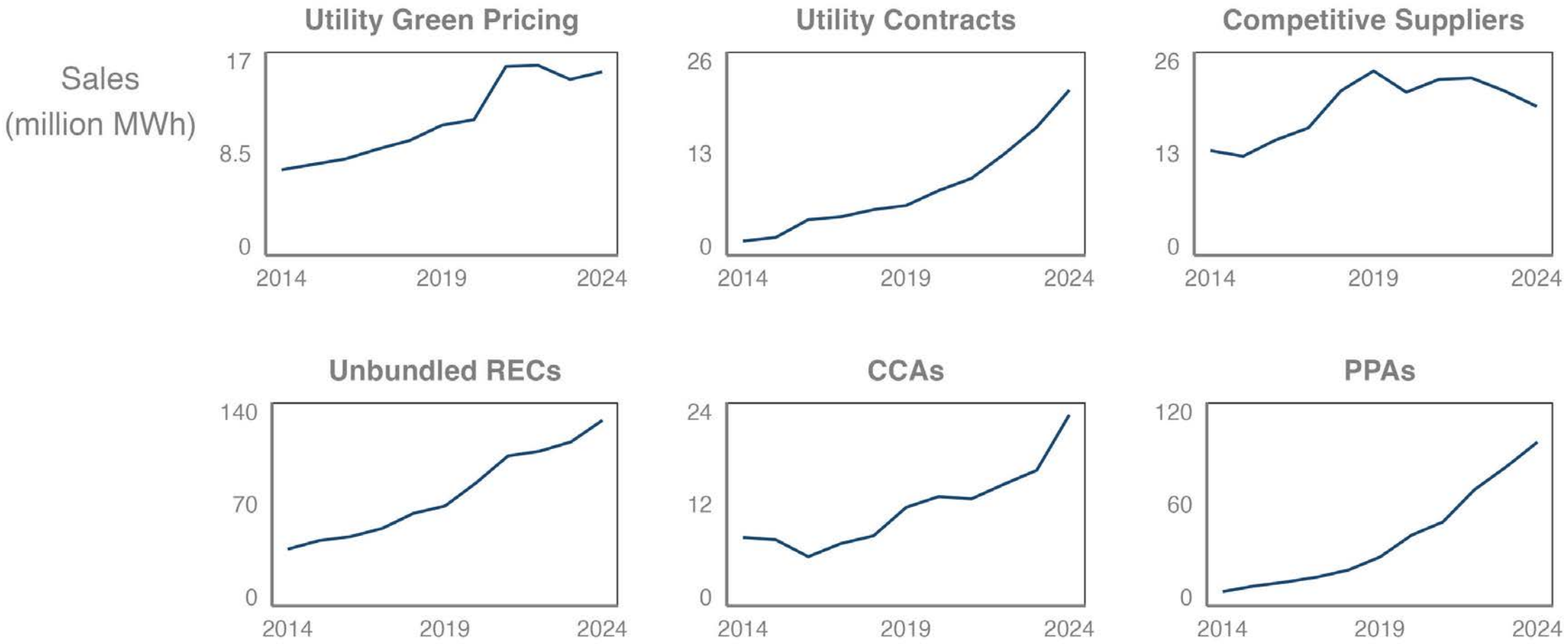
Closing the Gap with the Compliance Market



Source: Status and Trends in the U.S. Voluntary Power Market: 2023 Data
https://www.nrel.gov/docs/fy25osti/92289.pdf

The Procurement Options

Sales: Ongoing Shift to Long-term Contracts



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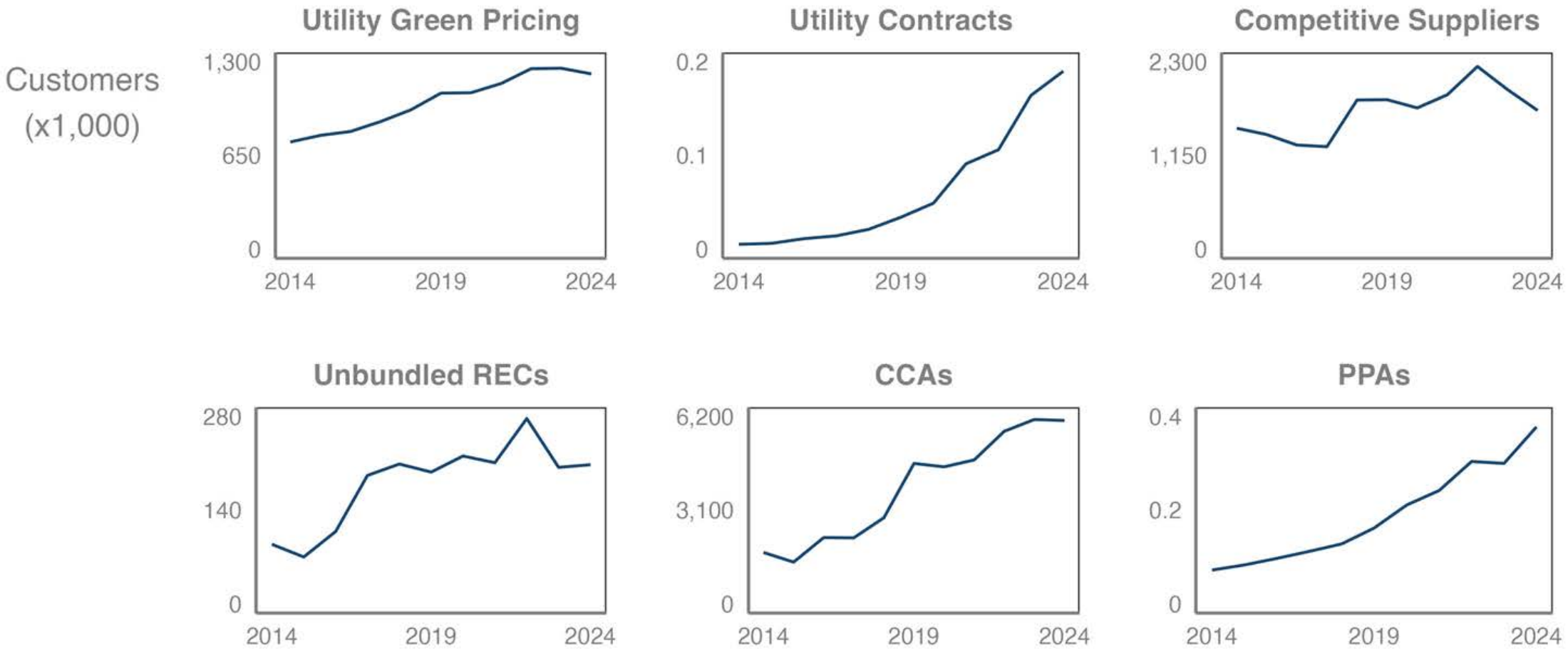
Mass Participation is Plateauing



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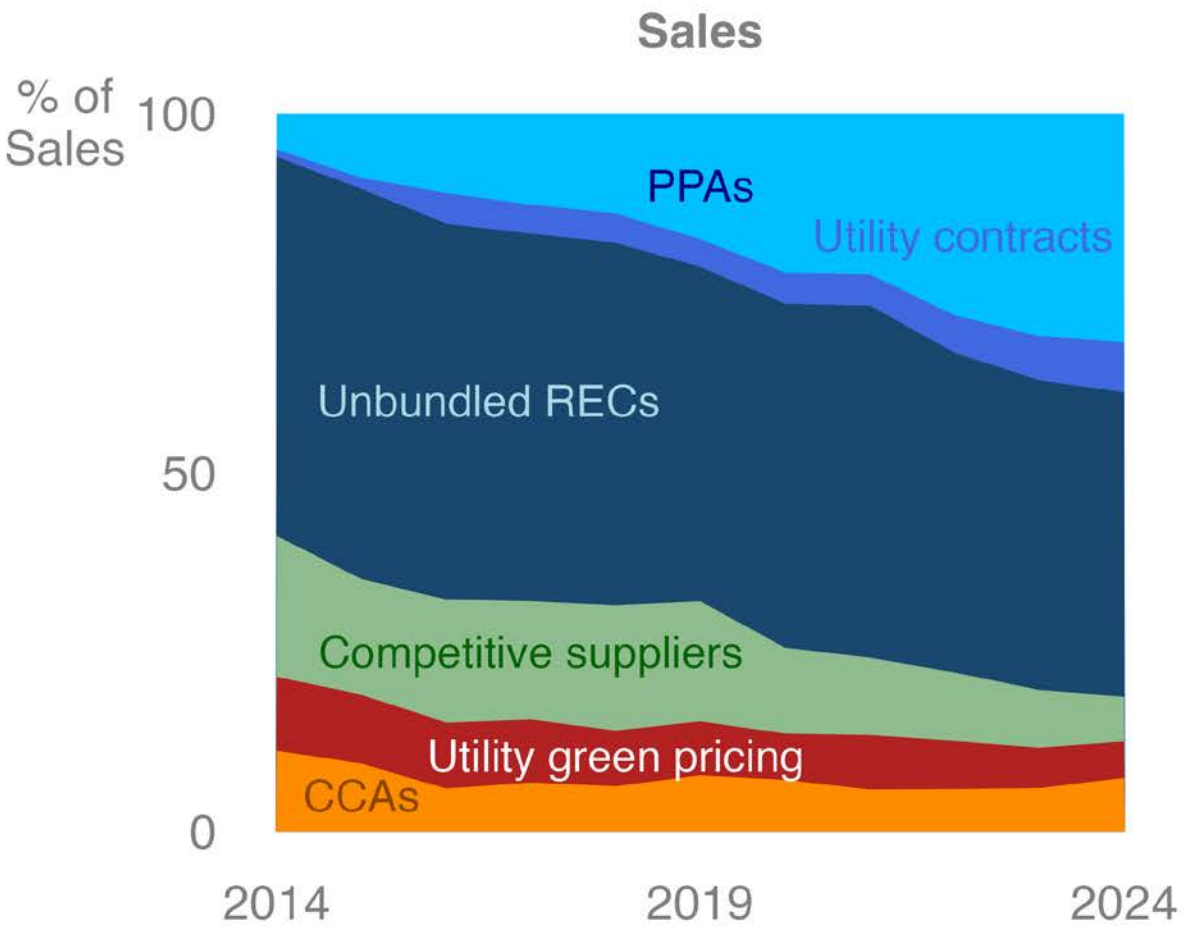
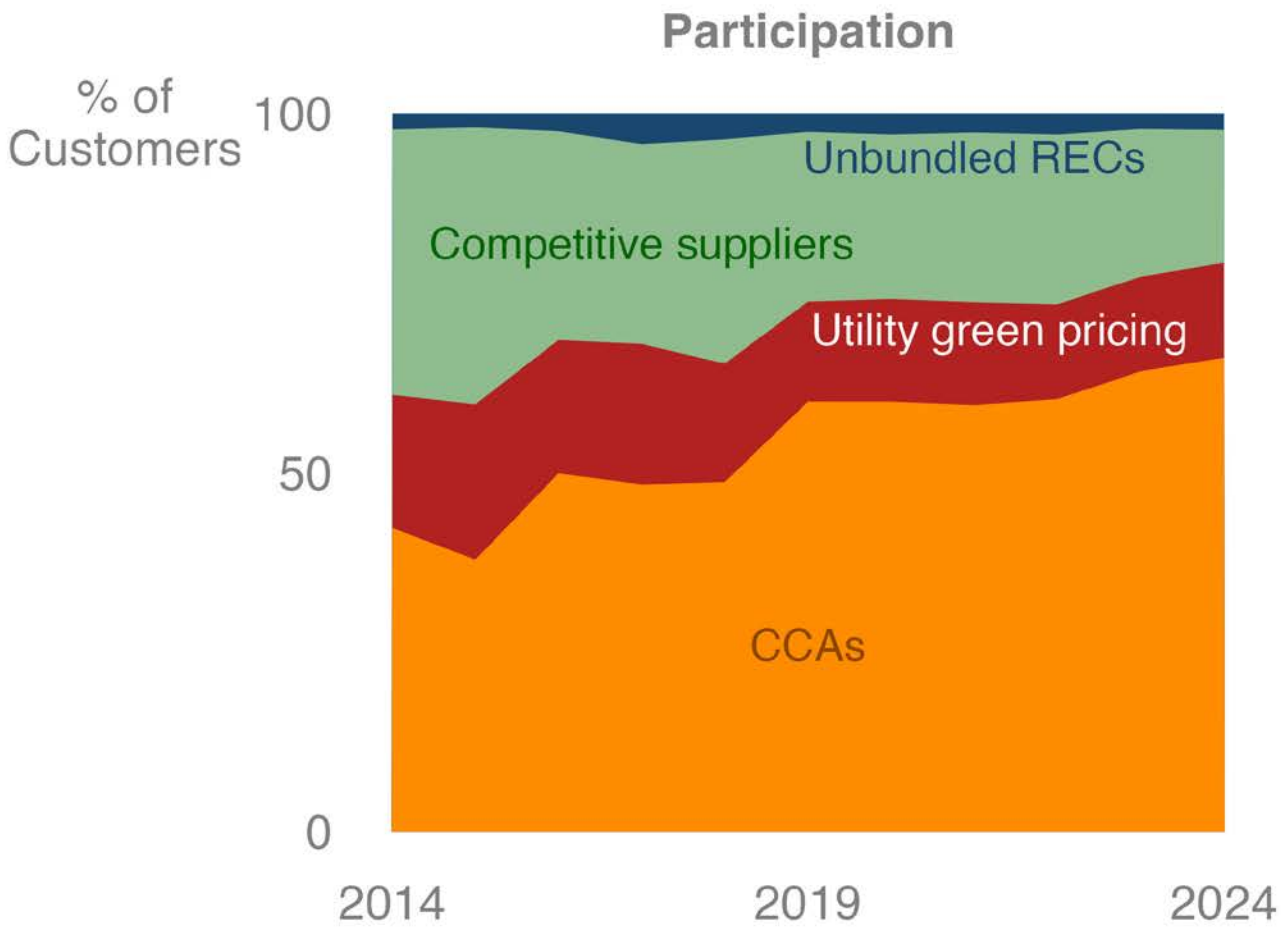
An Evolving Market





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Additional NREL Resources

Find additional resources at the NREL Voluntary Renewable Power Procurement landing page:

https://www.nrel.gov/analysis/renewable-power

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