

The State of the U.S. Voluntary Green Power Market (2023 Data)

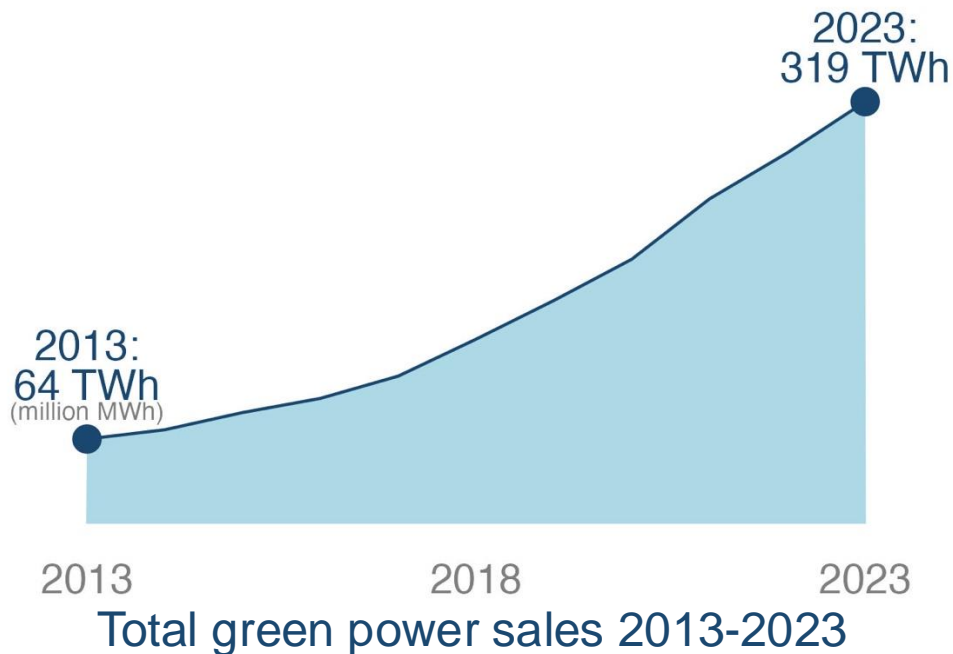
Eric O'Shaughnessy
Subcontractor, NREL

Renewable Energy Markets Conference
Denver, CO, 9/18/2024

NOTE: This deck has been updated from the version
presented on 9/18/2024 to reflect adjusted estimates

The Big Picture

In 2023, about **9.7 million customers** procured about **319 million MWh** of renewable energy through green power markets.



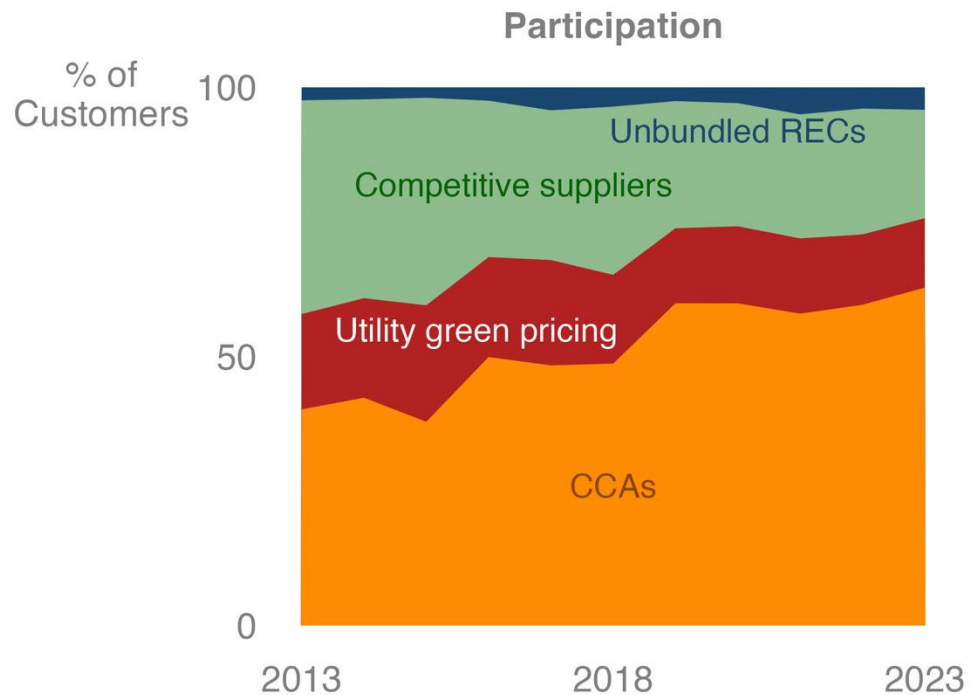
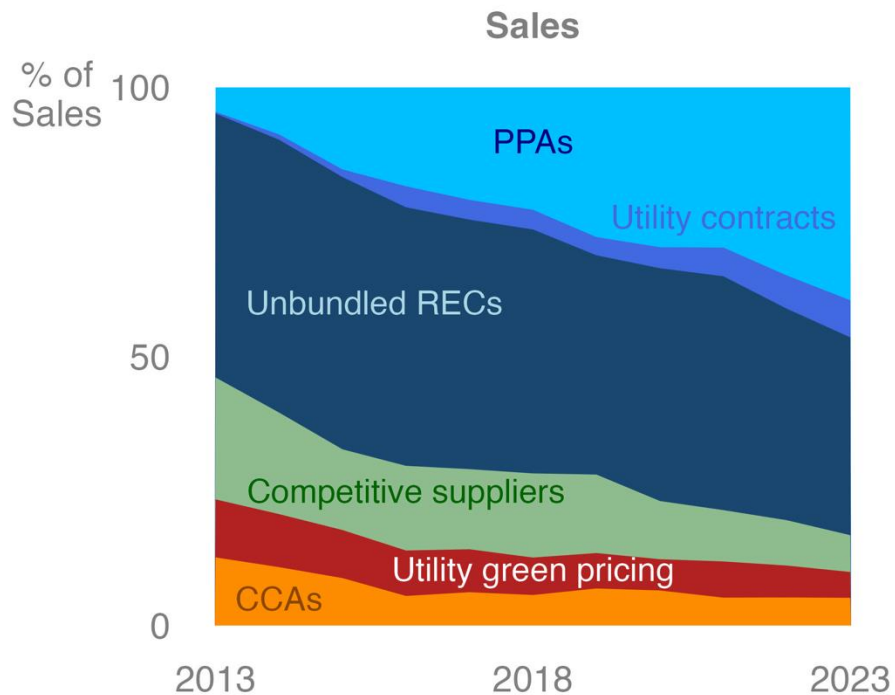
That represents about:

1 in 16
U.S. retail electricity customers

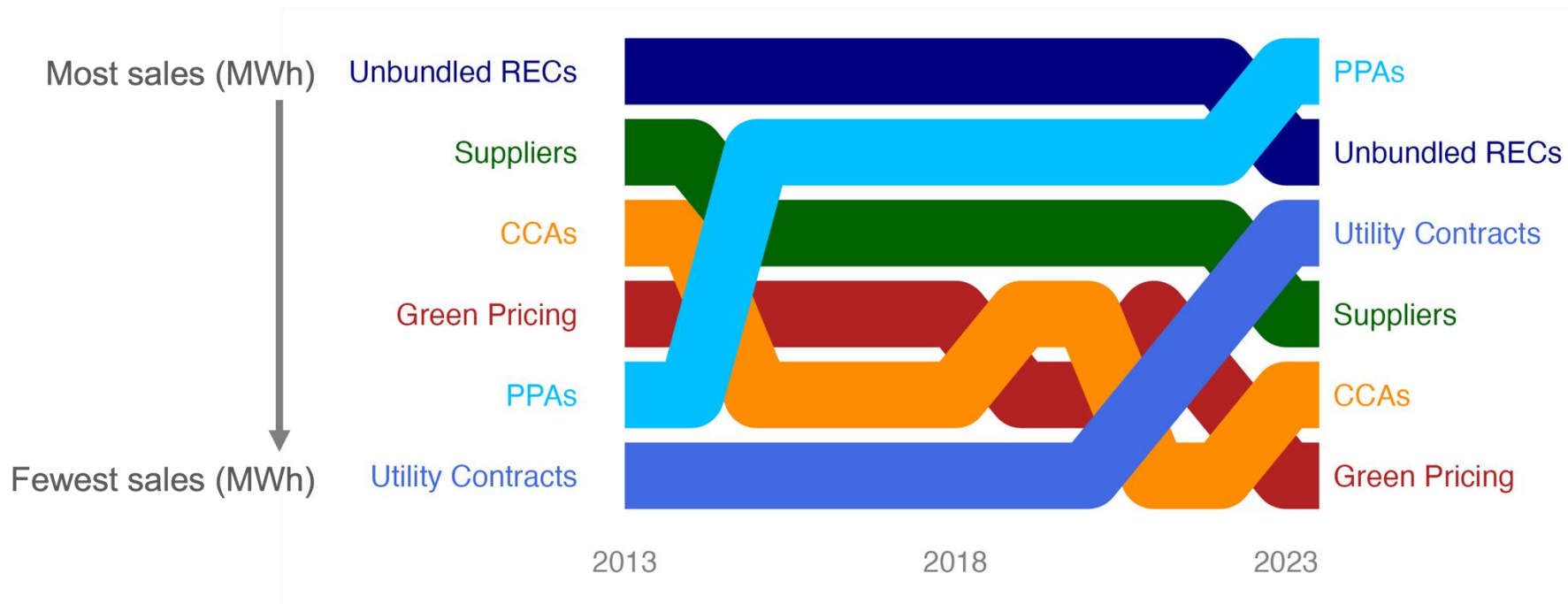
8%
of U.S. retail electricity sales

44%
of U.S. non-hydro renewable energy generation

An Evolving Market



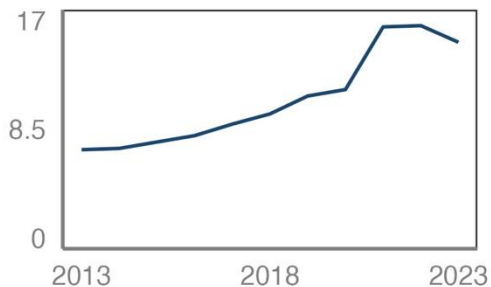
Bundling Up



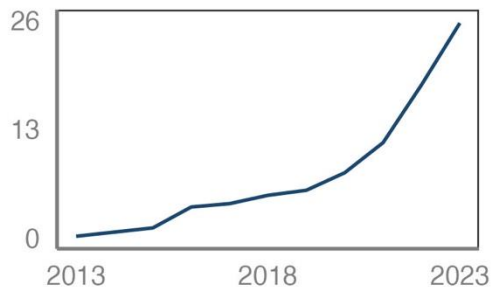
Sales: Ongoing Shift to Long-term Contracts

Sales
(million MWh)

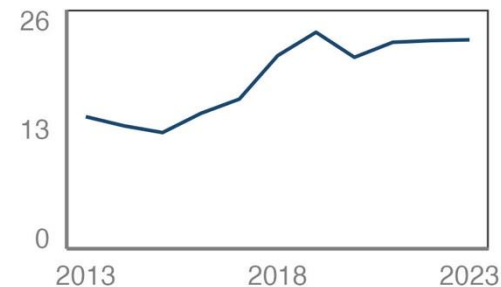
Utility Green Pricing



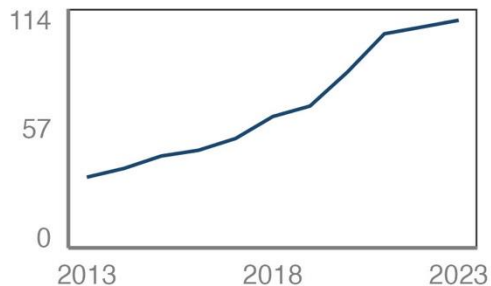
Utility Contracts



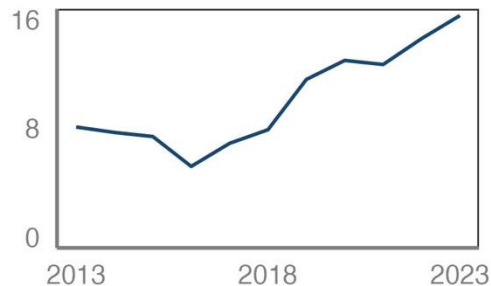
Competitive Suppliers



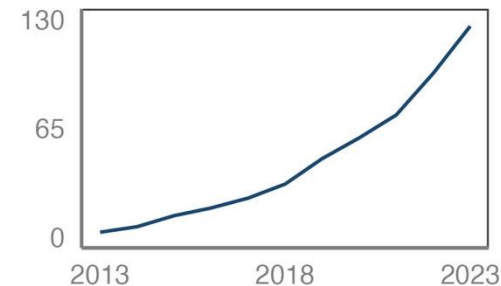
Unbundled RECs



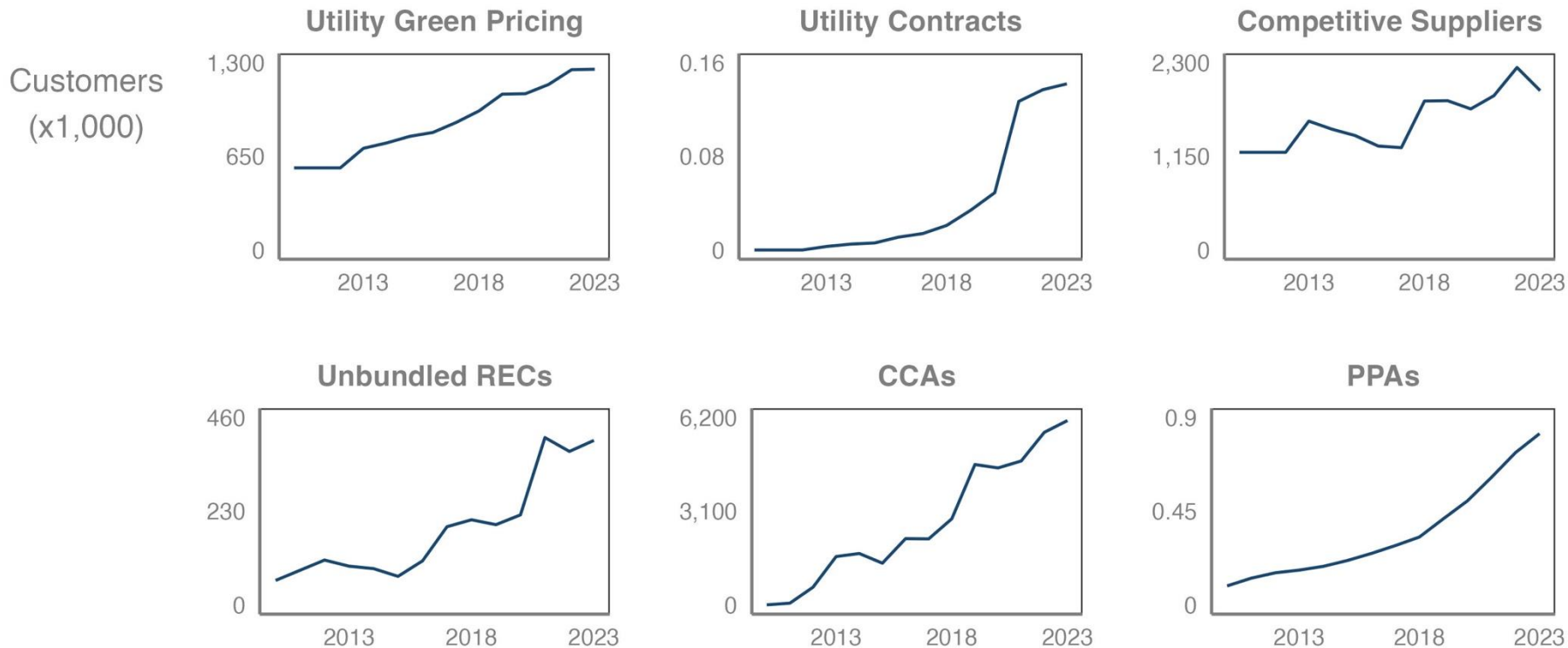
CCAs



PPAs



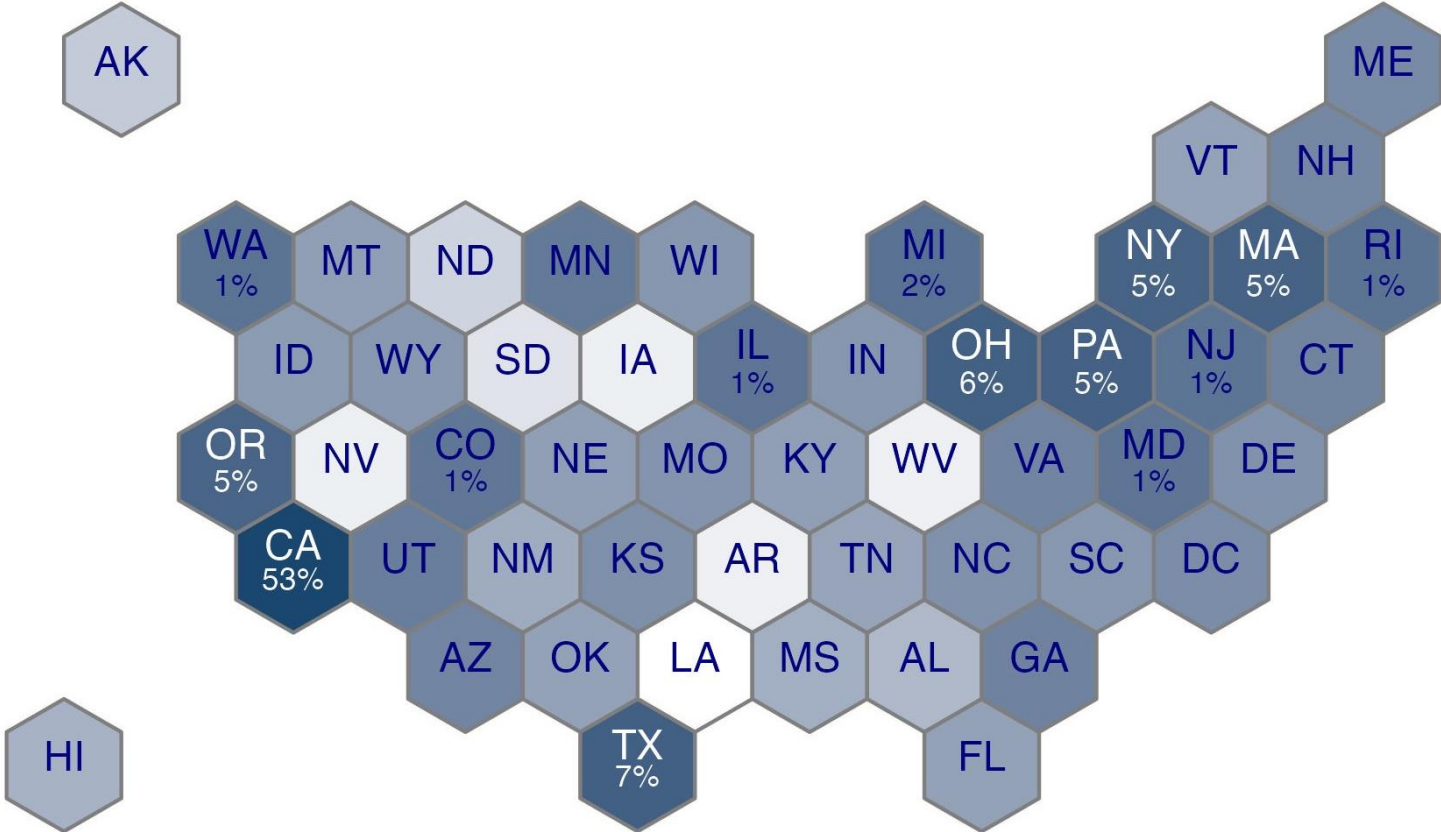
Participation: CCAs Continue to Expand



Supply is Concentrated in the Wind Belt



Demand is Concentrated in CCA States



Top 10 Program Recognition

Utility green pricing sales

1. PacifiCorp
2. Portland General Electric
3. Xcel Energy

CCA sales

1. Clean Power Alliance
2. Orange County Power
3. Ava Community Energy

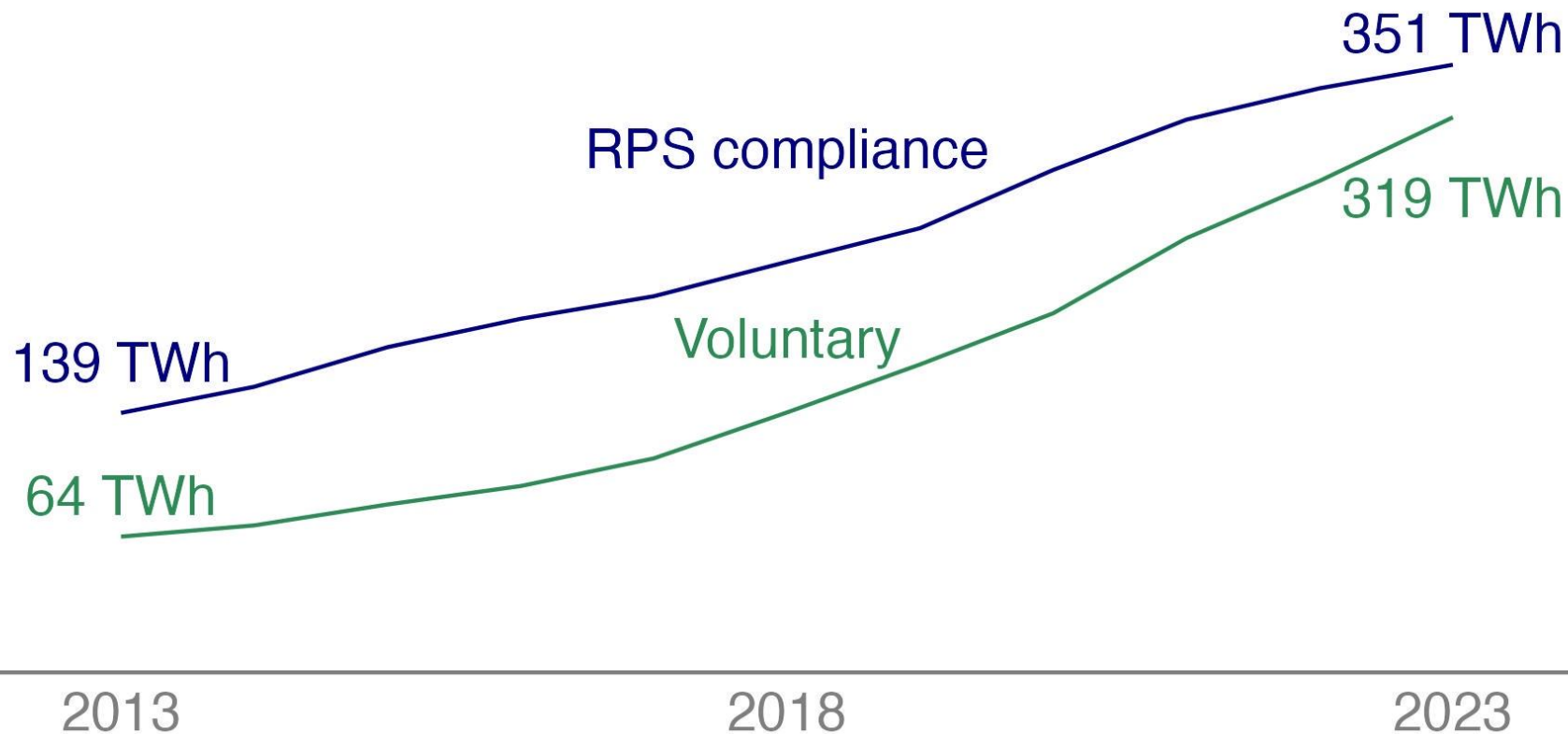
Utility green pricing customers

1. Portland General Electric
2. PacifiCorp
3. Xcel Energy

CCA customers

1. San Diego Community Power
2. Clean Power Alliance
3. Ava Community Energy

Closing the Gap with the Compliance Market



Additional NREL Resources

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

www.nrel.gov/analysis/green-power.html

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