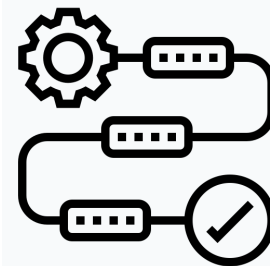


Status and Trends in the Voluntary Market (2022 Data)

Sushmita Jena
Renewable Energy Researcher
September 20, 2023

Renewable Energy Markets Conference 2023
Washington DC

Methods & Output

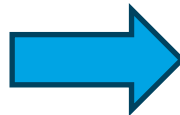


Data Collection

Primary Surveys

Partner Data

Public Resources



Knowledge Products

Technical Report

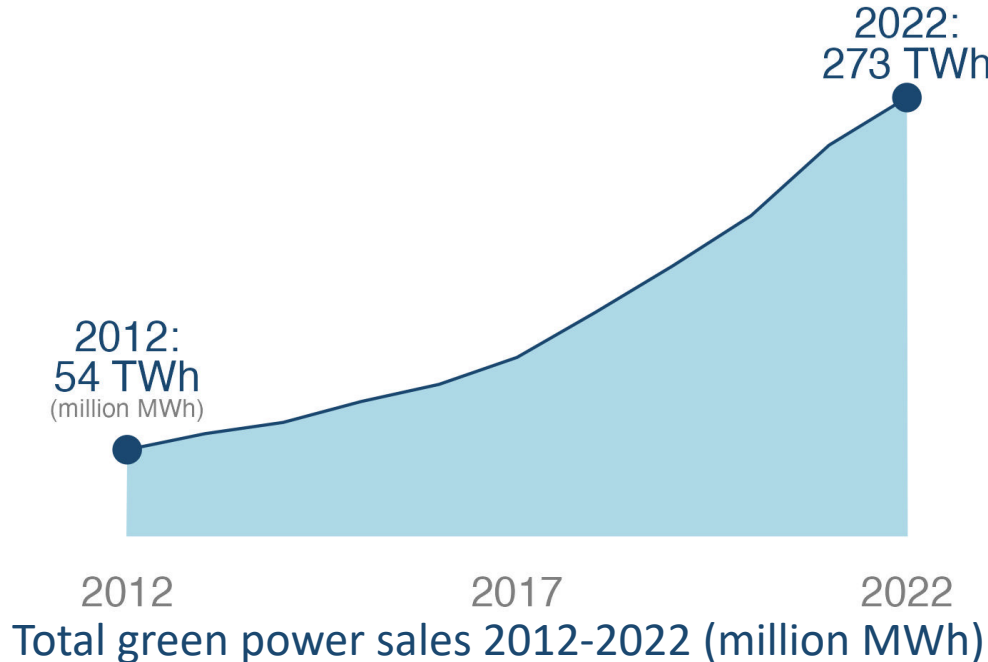
Databook

Report Slide Deck

Green Power Program Top
10 Lists

The Big Picture

In 2022, about **9.6 million customers** procured about **272 million MWh** of renewable energy through green power markets



That represents about:

1 in 17

U.S. retail electricity customers

6%

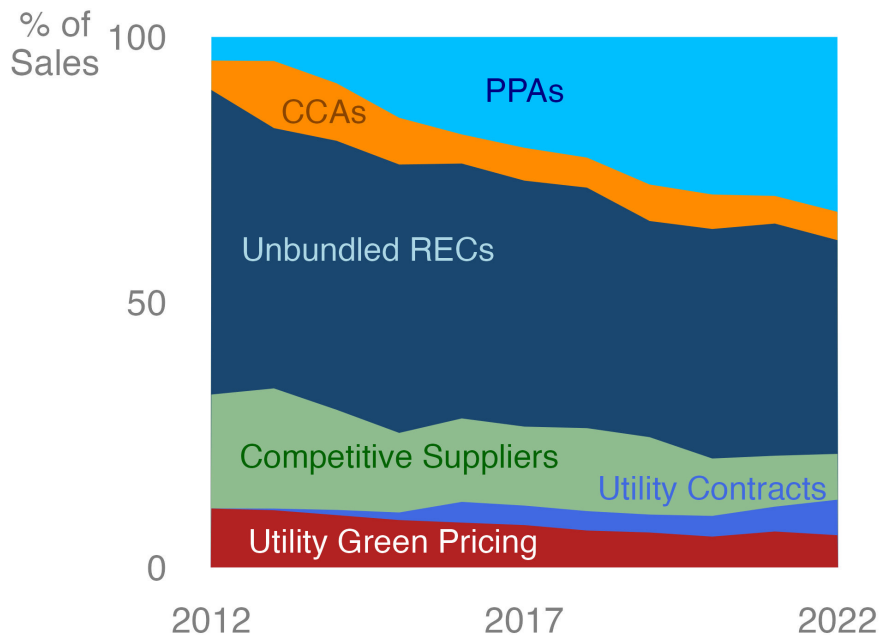
of U.S. retail electricity sales

38%

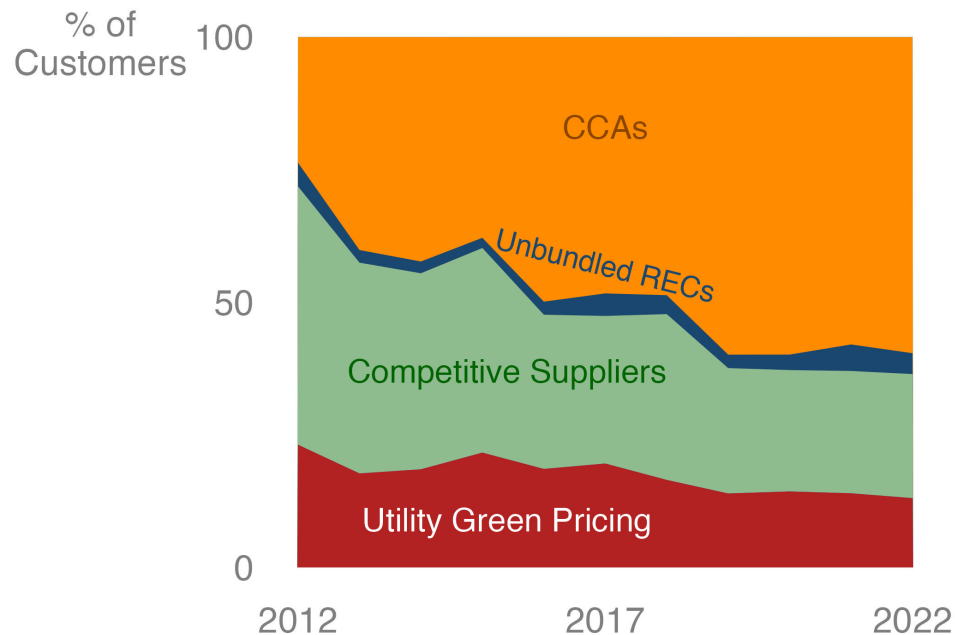
of U.S. non-hydro renewable energy generation

Green Power Sales and Customers by Mechanism

Sales

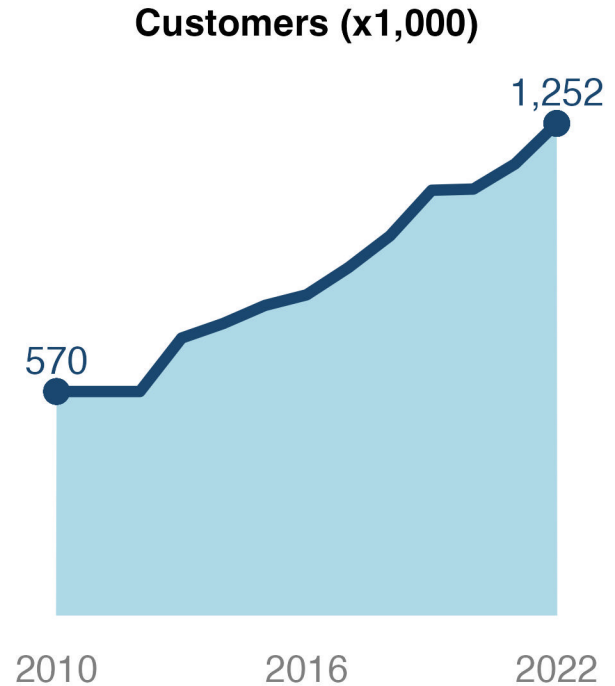
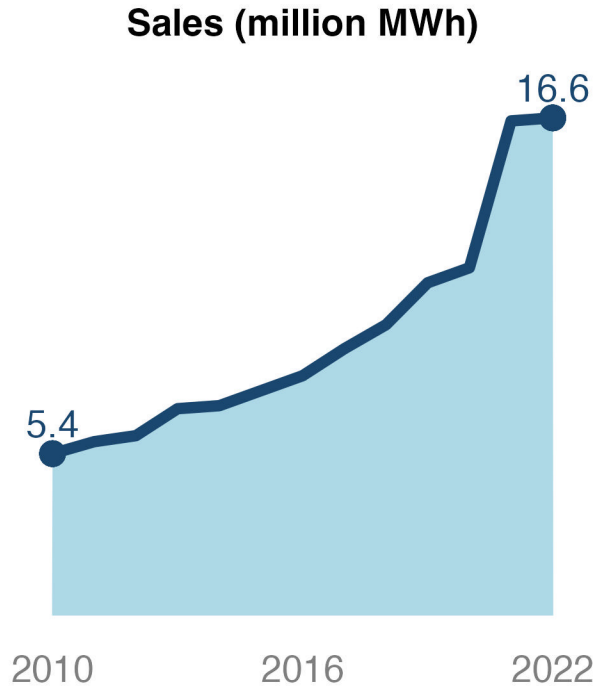


Participation

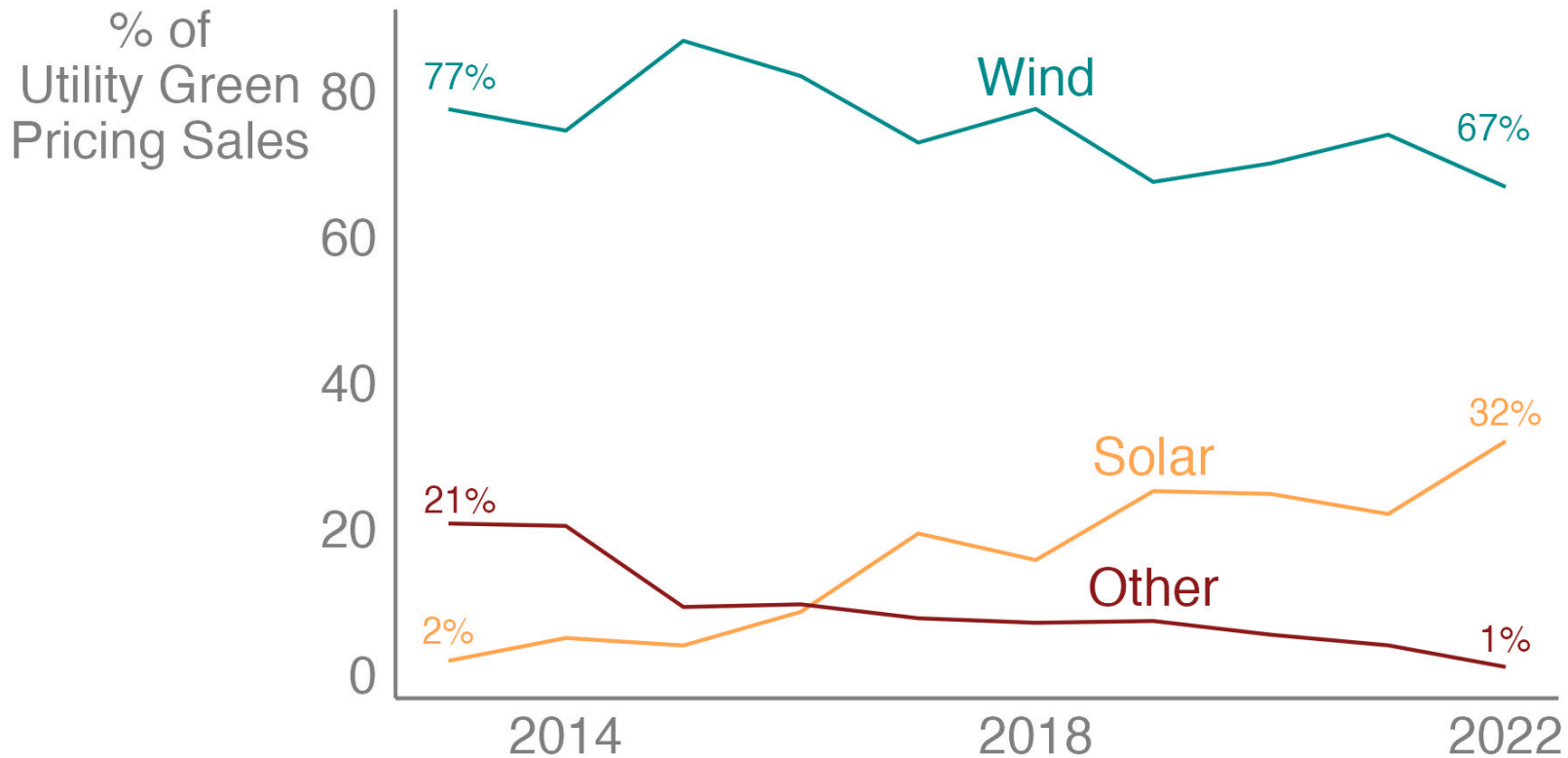


Utility Green Pricing Trends

About **1,252,000 customers** procured about **16.6 million MWh** of voluntary green power through utility green pricing programs in 2022.



Utility Green Pricing Programs Are Going Solar



Utility Green Pricing Top 10



Rank	Utility	Green Power Sales (MWh)
1	PacifiCorp	2,690,329
2	Portland General Electric	2,599,177
3	DTE Electric	1,054,368
4	Austin Energy	988,049
5	Puget Sound Energy	745,420
6	Tennessee Valley Authority (TVA)	633,215
7	Pacific Gas & Electric (PG&E)	550,099
8	AES Indiana	430,057
9	Dominion Energy	380,617
10	Consumers Energy	119,843

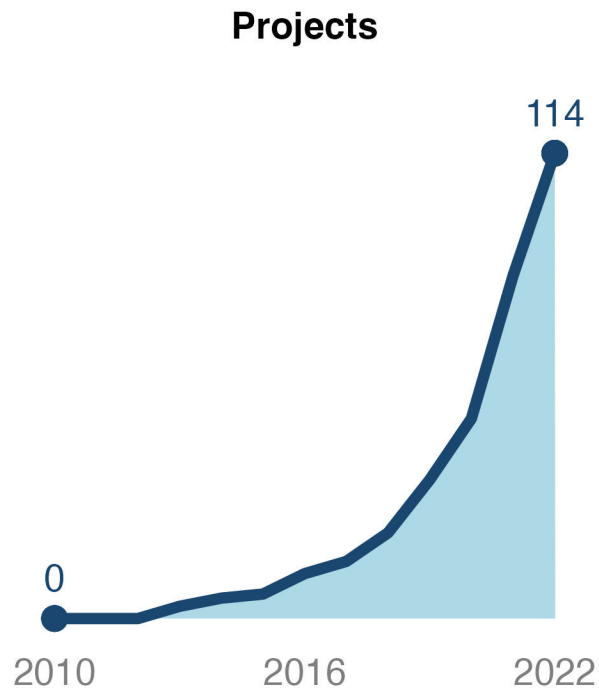
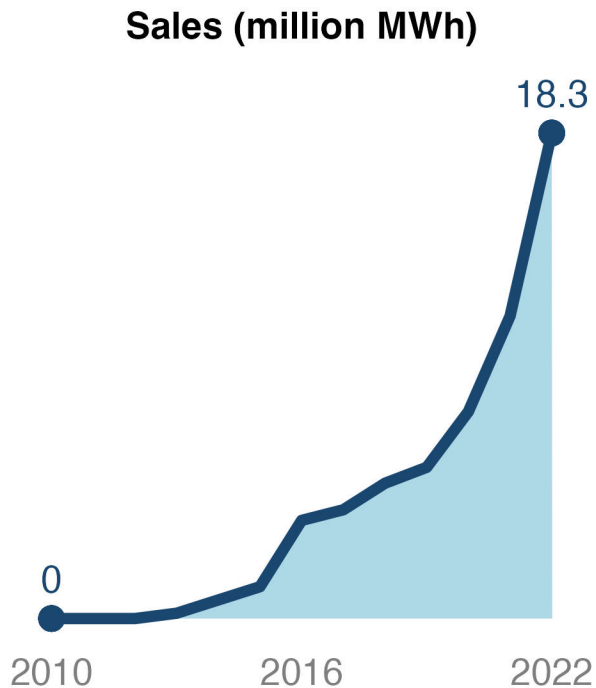
Rank	Utility	Green Power Customers
1	Portland General Electric	235,369
2	PacifiCorp	176,897
3	Puget Sound Energy	82,601
4	DTE Electric	78,441
5	Dominion Energy	34,082
6	Austin Energy	28,714
7	PG&E	21,989
8	Consumers Energy	16,461
9	We Energies	11,855
10	TVA	9,416

Rank	Utility	Green Power Sales Rate
1	Portland General Electric	21.8%
2	River Falls	14.8%
3	PacifiCorp (Blue Sky Usage & Habitat)	8.0%
4	Austin Energy	6.9%
5	Muscoda	5.1%
6	PacifiCorp (Blue Sky Block)	5.0%
7	Puget Sound Energy	5.0%
8	Stoughton	4.9%
9	Portland General Electric	4.2%
10	Farmers Electric Cooperative - Kalona	3.9%

Rank	Utility	Participation Rate (%)
1	Portland General Electric	28.5%
2	Waterloo	16.7%
3	PacifiCorp (Blue Sky Usage & Habitat)	14.3%
4	Farmers Electric Cooperative - Kalona	14.0%
5	River Falls	8.3%
6	Puget Sound Energy	7.0%
7	Naperville Public Utilities	6.1%
8	Austin Energy	5.9%
9	PacifiCorp (Blue Sky Block)	5.2%
10	Stoughton	3.9%

Utility Renewable Contract Trends

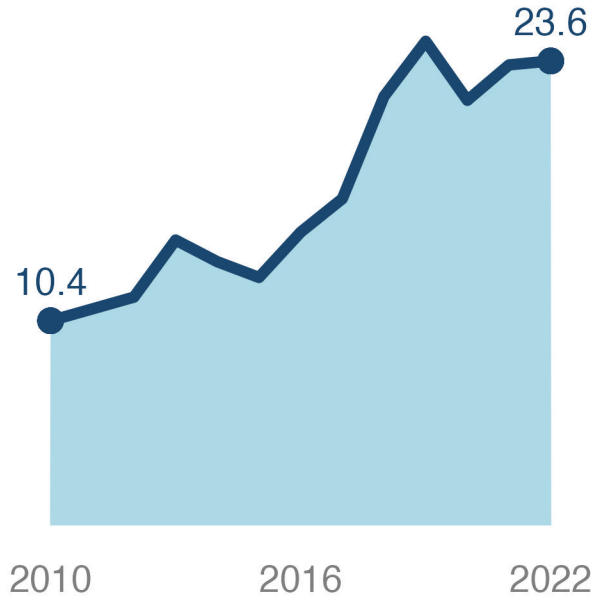
About **18.3 million MWh** of renewable energy was procured through **114 utility renewable contracts** in 2022.



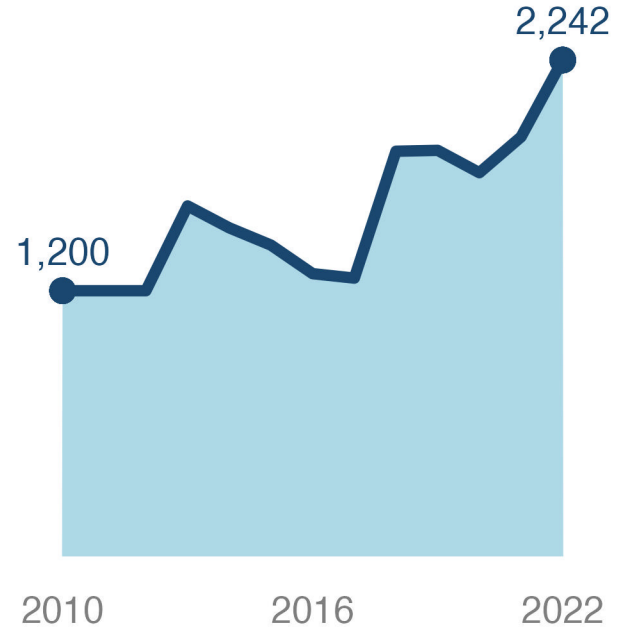
Competitive Supplier Trends

About **2.2 million customers** procured about **23.6 million MWh** of voluntary green power through competitive suppliers in 2022.

Sales (million MWh)

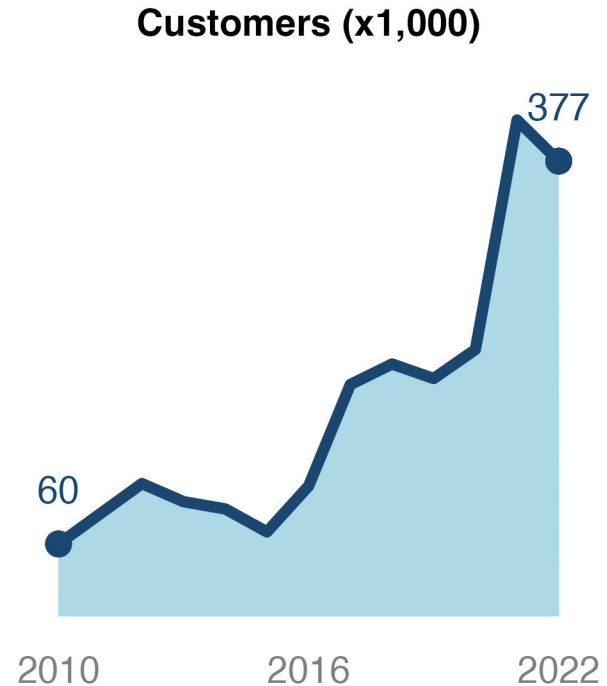
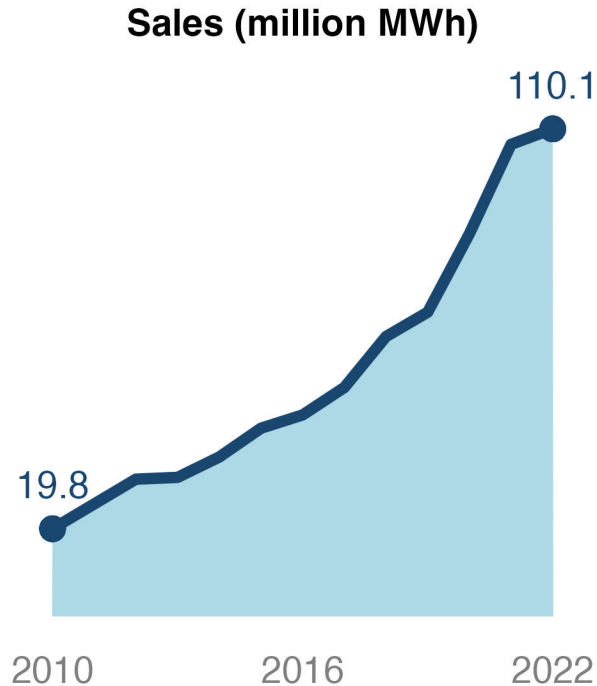


Customers (x1,000)



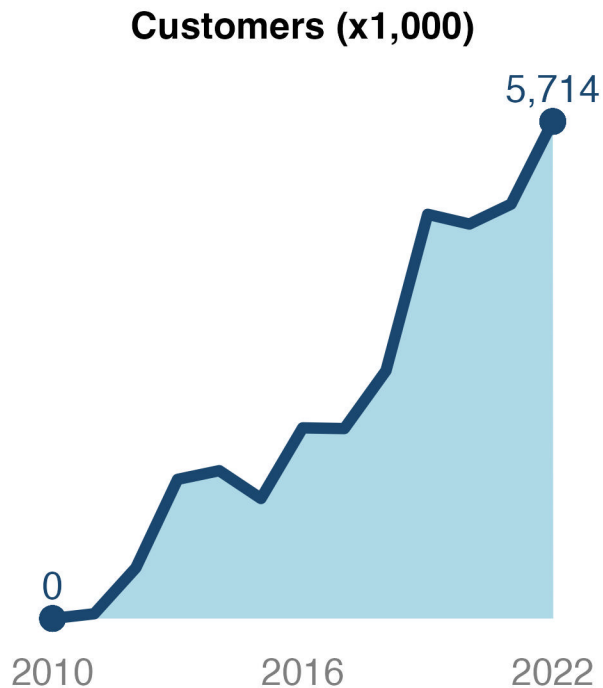
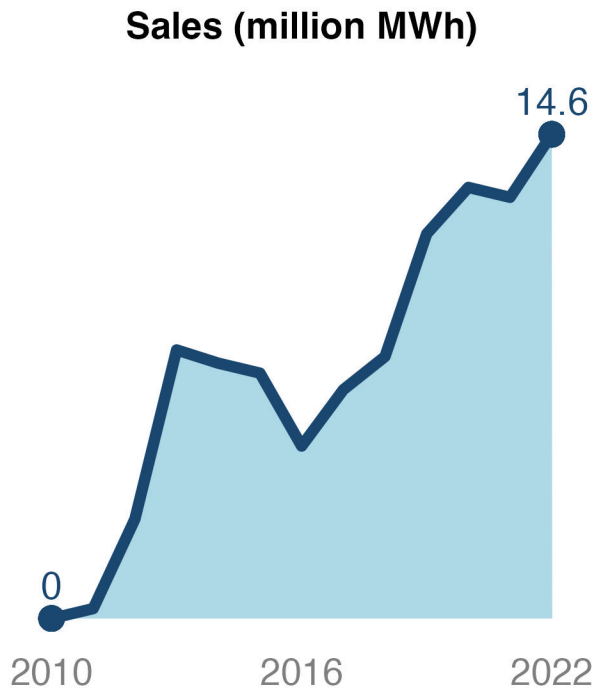
Unbundled RECs

About **377,000 customers** procured about **110 million MWh** of voluntary green power through unbundled RECs in 2022.



CCA Trends

About **5.7 million customers** procured about **14.6 million MWh** of voluntary green power through CCAs in 2022.



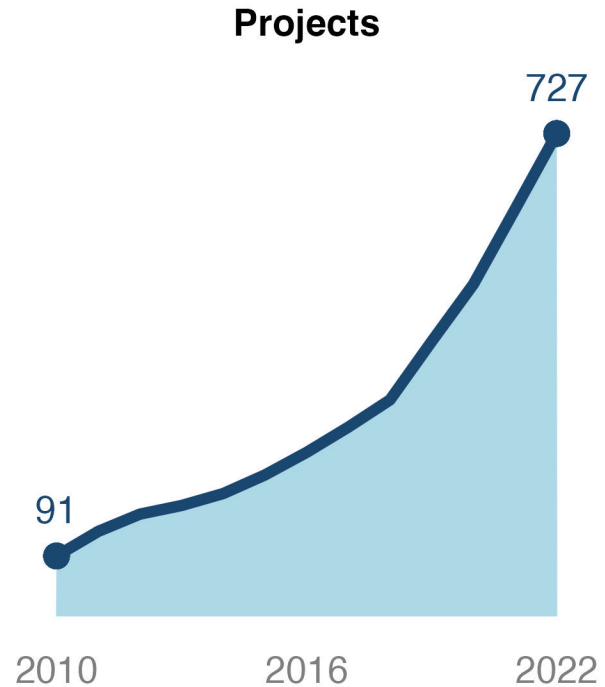
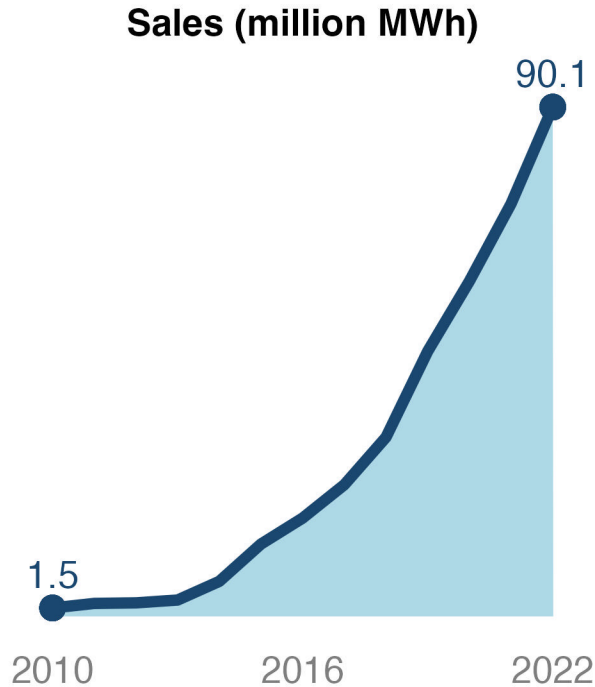
New: CCA Green Power Top 10



Rank	CCA	Sales (MWh)
1	Clean Power Alliance	3,570,040
2	East Bay Community Energy	1,361,466
3	MCE	1,258,013
4	San Diego Community Power	1,075,258
5	CleanPowerSF	695,035
6	Orange County Power Authority	691,901
7	Peninsula Clean Energy	591,570
8	Cape Light Compact	511,519
9	Silicon Valley Clean Energy	333,951
10	Sonoma Clean Power Authority	305,265
Rank	CCA	Customers
1	Clean Power Alliance	881,572
2	San Diego Community Power	713,633
3	East Bay Community Energy	641,532
4	MCE	584,576
5	CleanPowerSF	383,756
6	Peninsula Clean Energy	310,901
7	Silicon Valley Clean Energy	278,106
8	Orange County Power Authority	236,000
9	Sonoma Clean Power Authority	229,954
10	Cape Light Compact	150,374

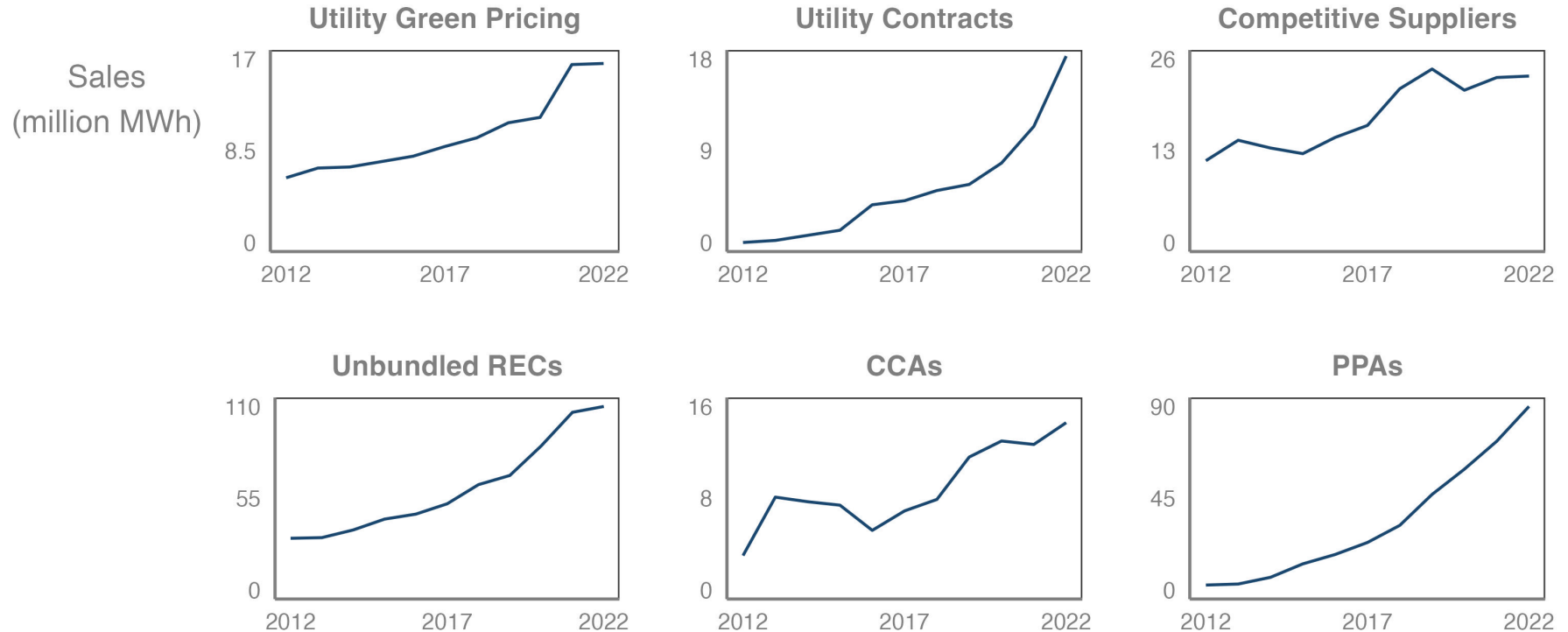
PPA Trends

About **727 off takers** procured about **90.1 million MWh** of voluntary green power through PPAs in 2022. These figures include only PPA sales where we estimate that the purchaser has retained the RECs.

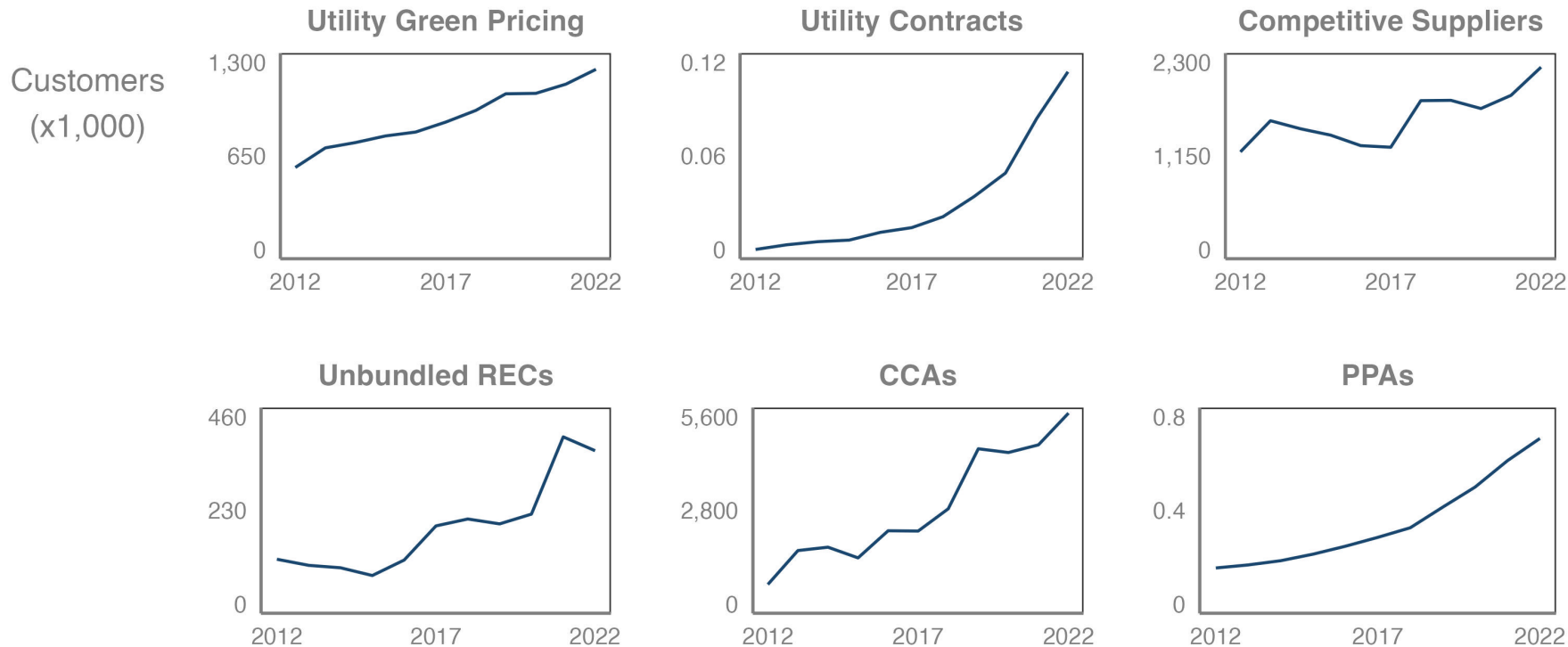


Summary

Sales: Bundling Up

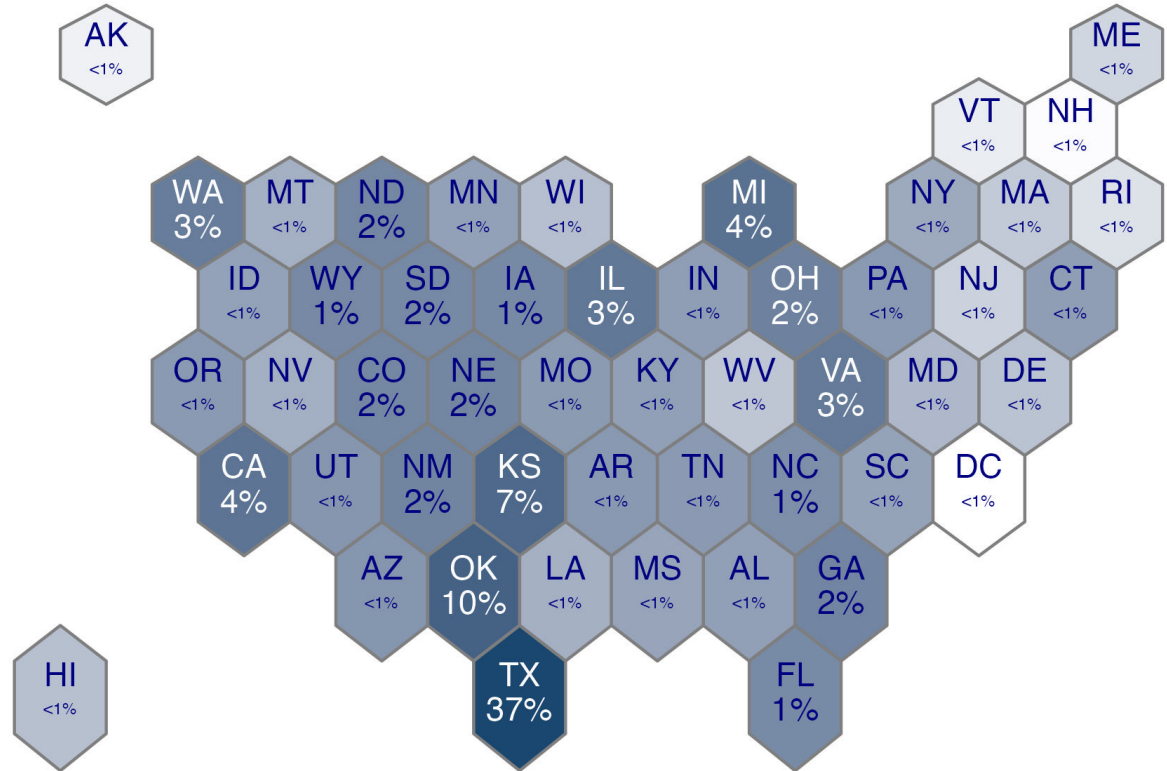


Participation: Another Big Year for CCAs

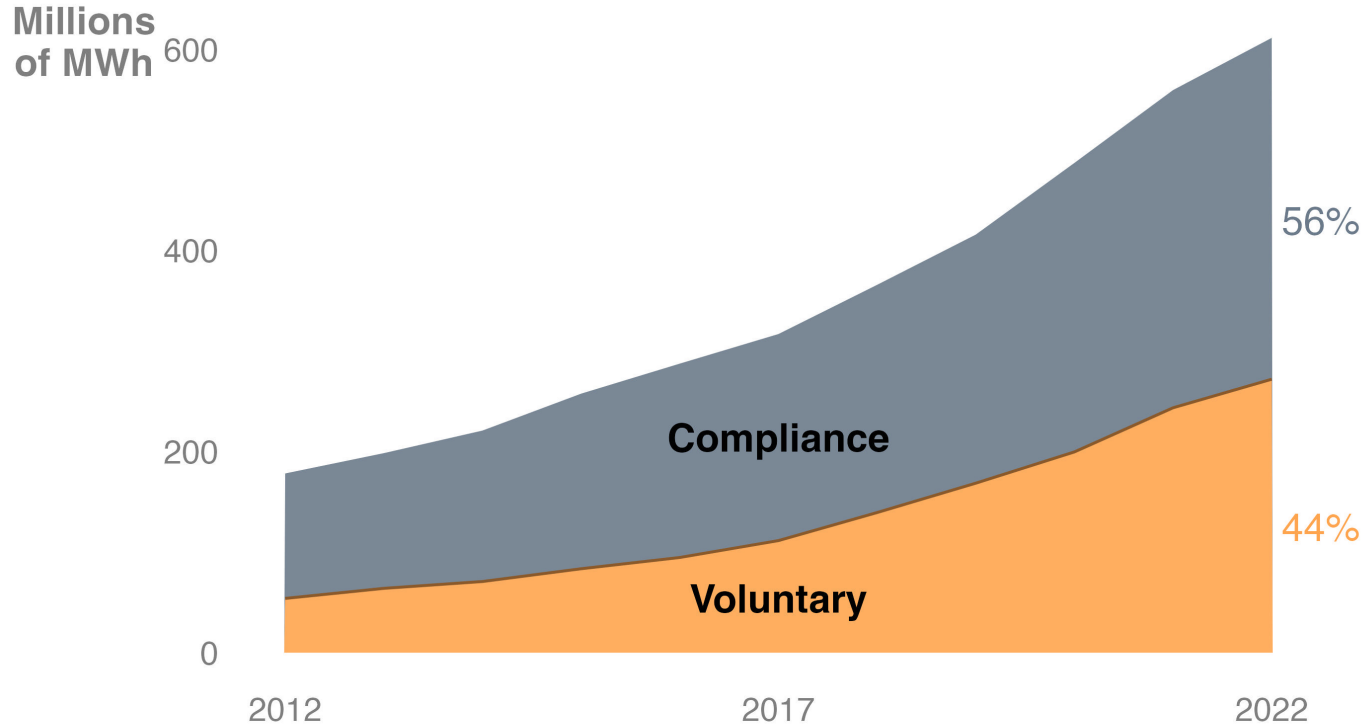


Texas Remains the Capital of Voluntary Green Power

- These are percentages of total 2022 voluntary green power generation by state
- This data is compiled using various publicly available sources and our own primary data collection



Could Voluntary Sales Overtake RPS Sales?



Compliance: <https://emp.lbl.gov/projects/renewables-portfolio>

Voluntary: <https://www.nrel.gov/analysis/green-power.html>

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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