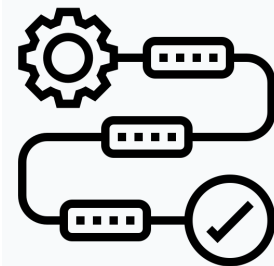


Status and Trends in the Voluntary Market (2022 Data)

Sushmita Jena
Renewable Energy Researcher
September 20, 2023

Renewable Energy Markets Conference 2023
Washington DC

Methods & Output

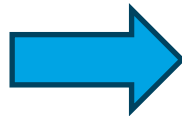


Data Collection

Primary Surveys

Partner Data

Public Resources



Knowledge Products

Technical Report

Databook

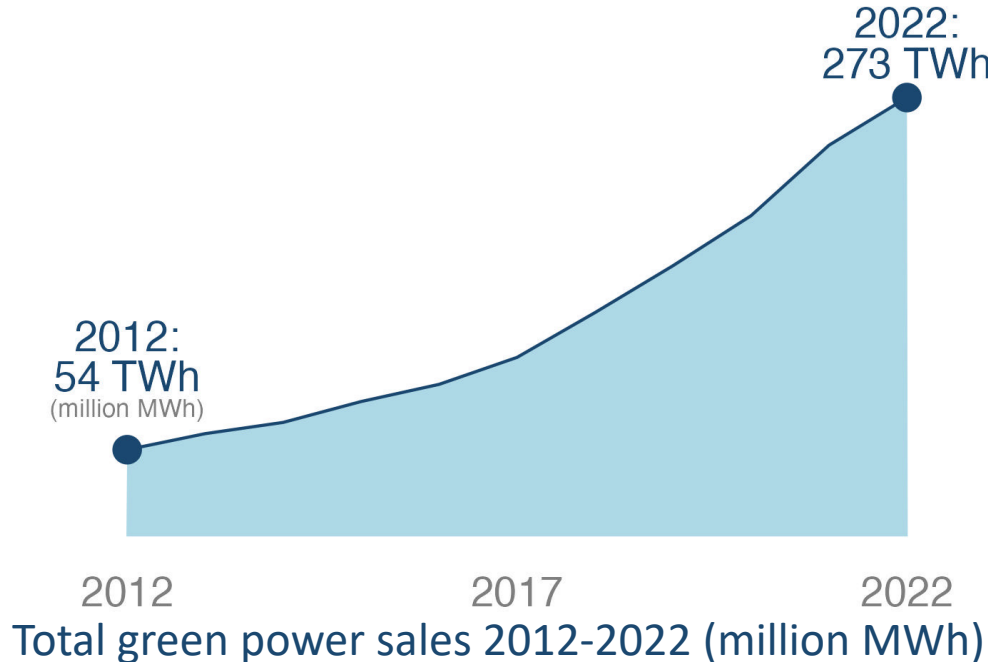
Report Slide Deck

Green Power Program Top
10 Lists

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

The Big Picture

In 2022, about **9.6 million customers** procured about **273 million MWh** of renewable energy through green power markets



That represents about:

1 in 17

U.S. retail electricity customers

6%

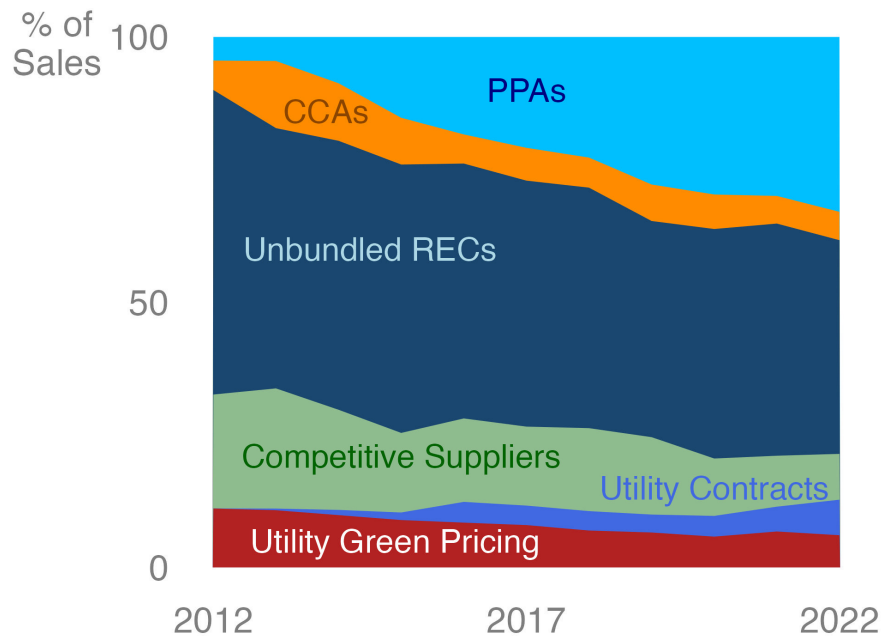
of U.S. retail electricity sales

38%

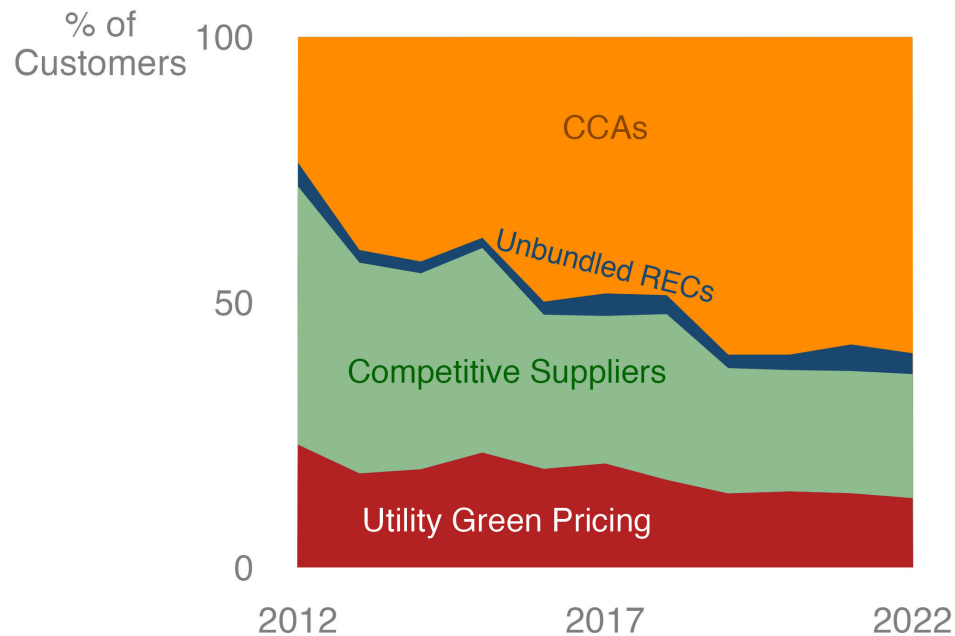
of U.S. non-hydro renewable energy generation

Green Power Sales and Customers by Mechanism

Sales

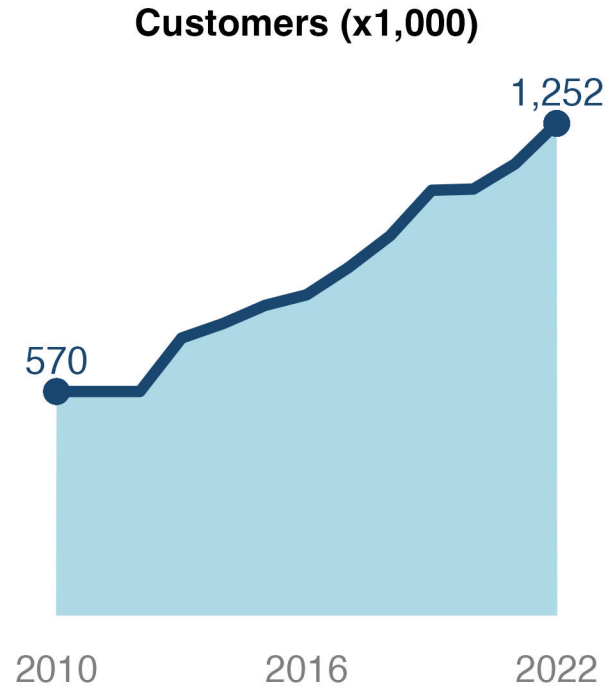
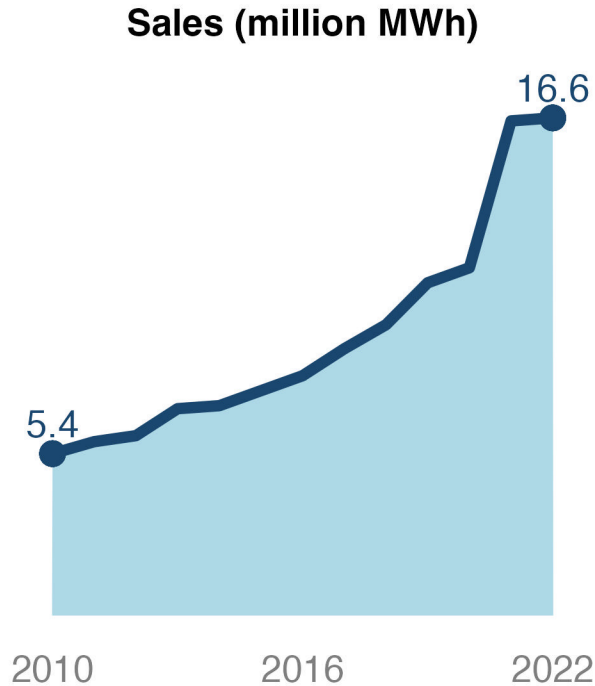


Participation

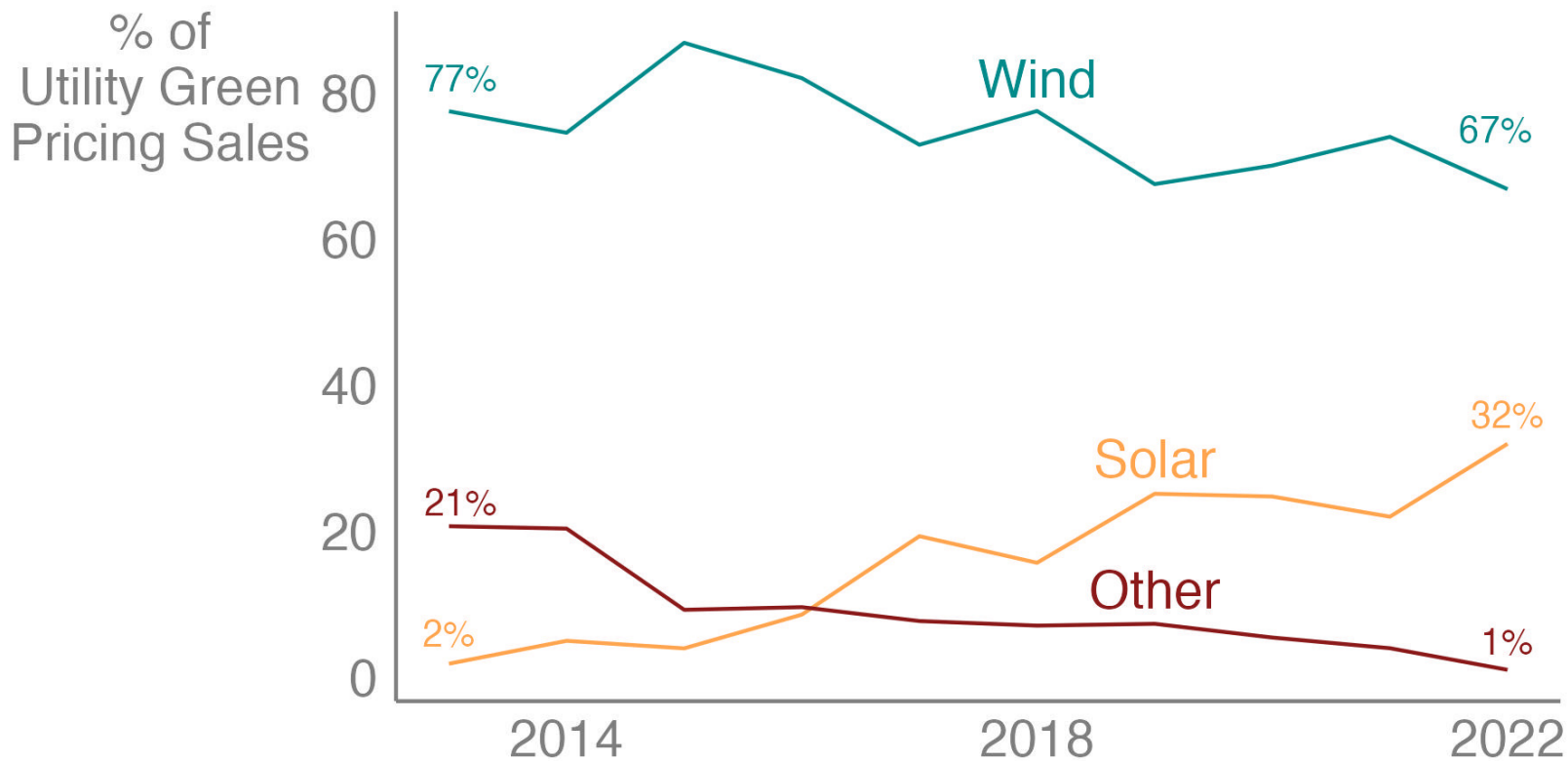


Utility Green Pricing Trends

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

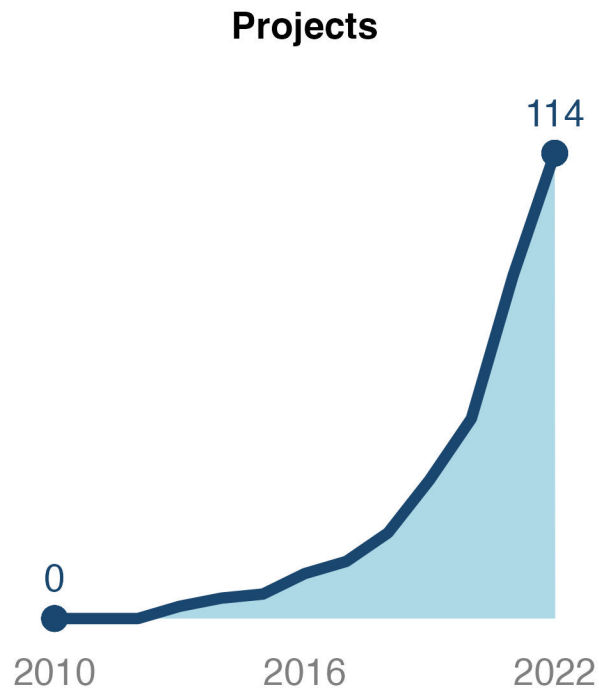
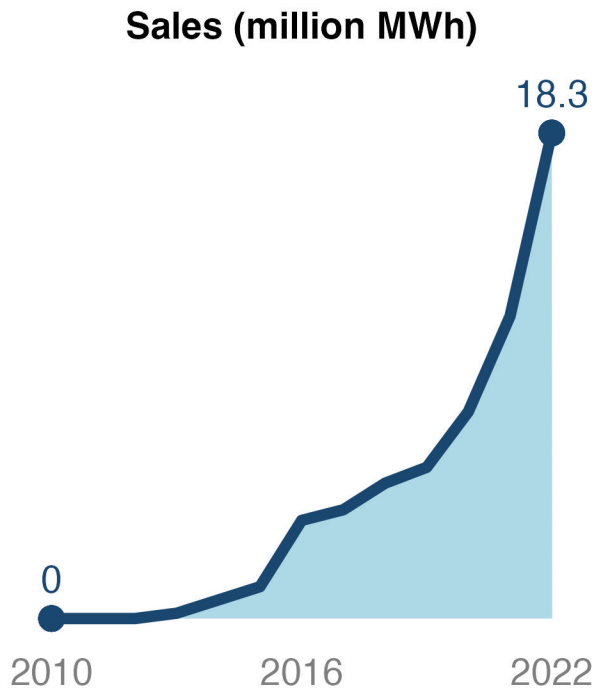
Rank	Utility	Green Power Customers
1	Portland General Electric	235,369
2	PacifiCorp	176,897
3	Puget Sound Energy	82,601
4	DTE Electric	78,441
5	Dominion Energy	34,082
6	Austin Energy	28,714
7	PG&E	21,989
8	Consumers Energy	16,461
9	We Energies	11,855
10	TVA	9,416

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

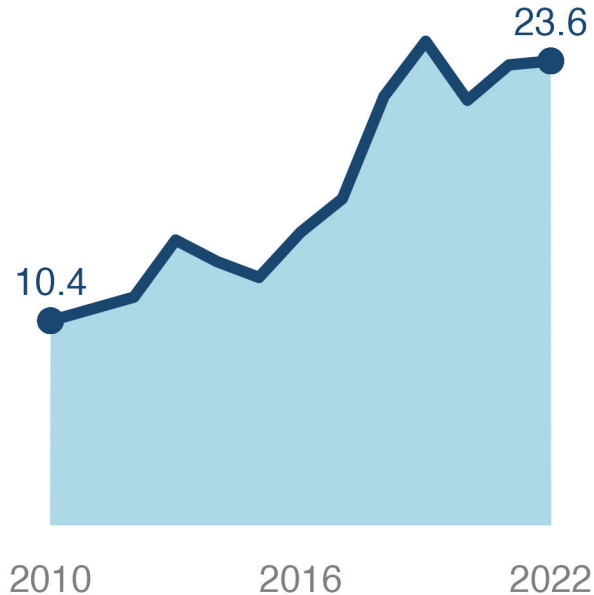
About **18.3 million MWh** of renewable energy was procured through **114 utility renewable contracts** through utility green pricing programs in 2022.



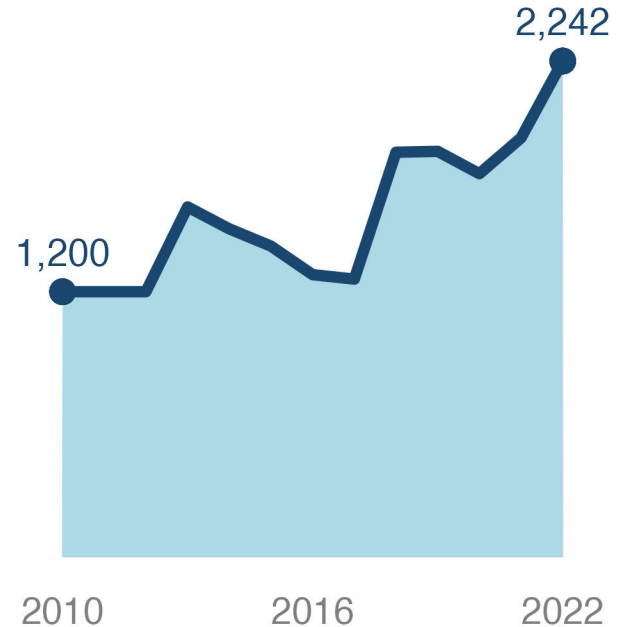
Competitive Supplier Trends

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

Sales (million MWh)

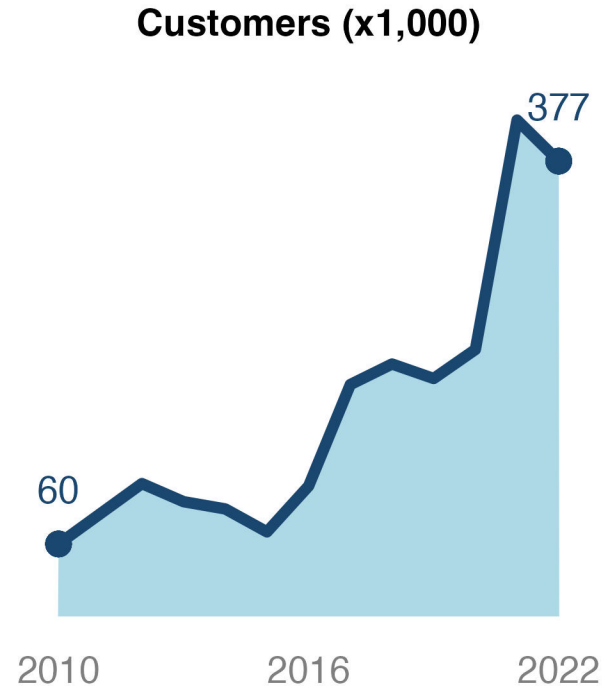
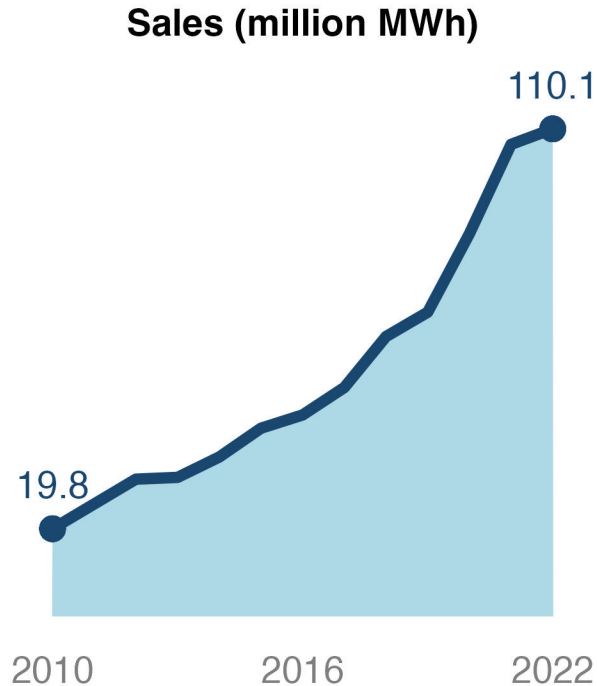


Customers (x1,000)



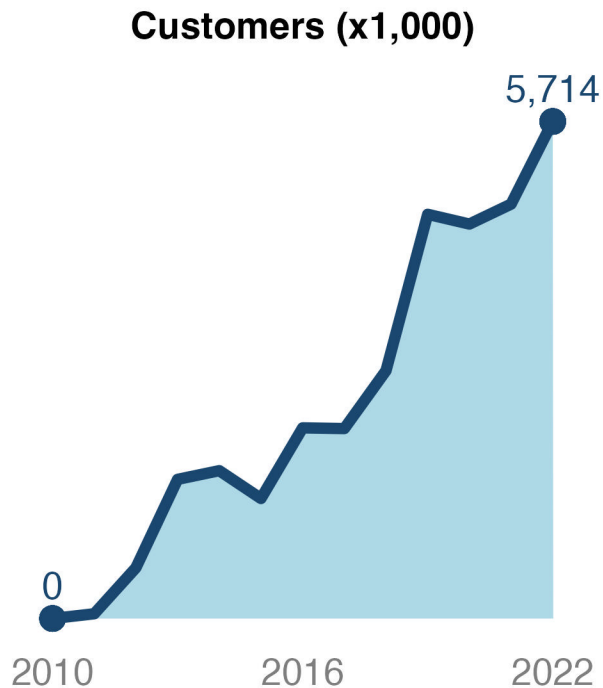
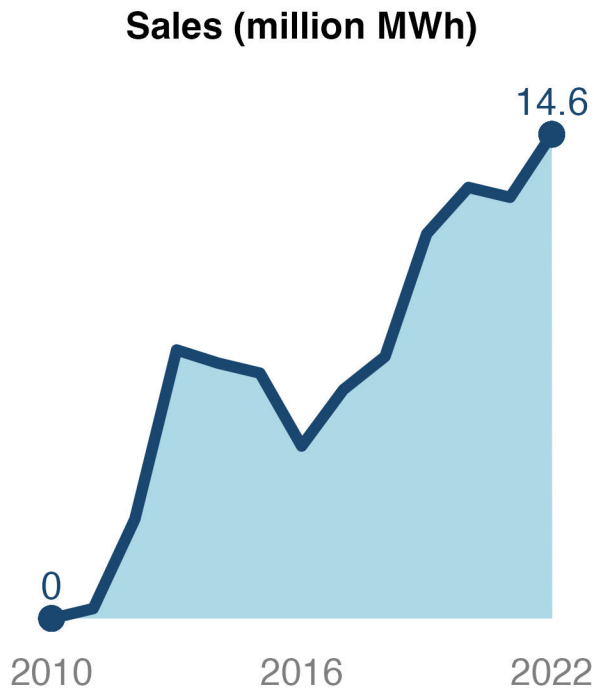
Unbundled RECs

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

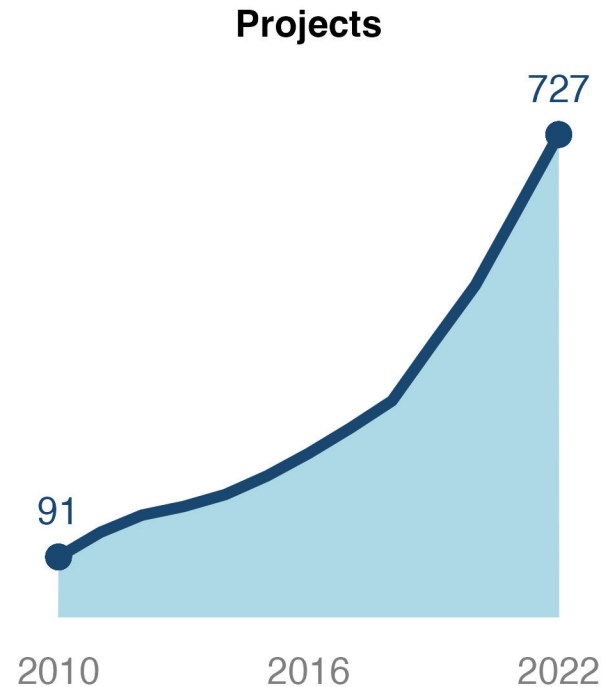
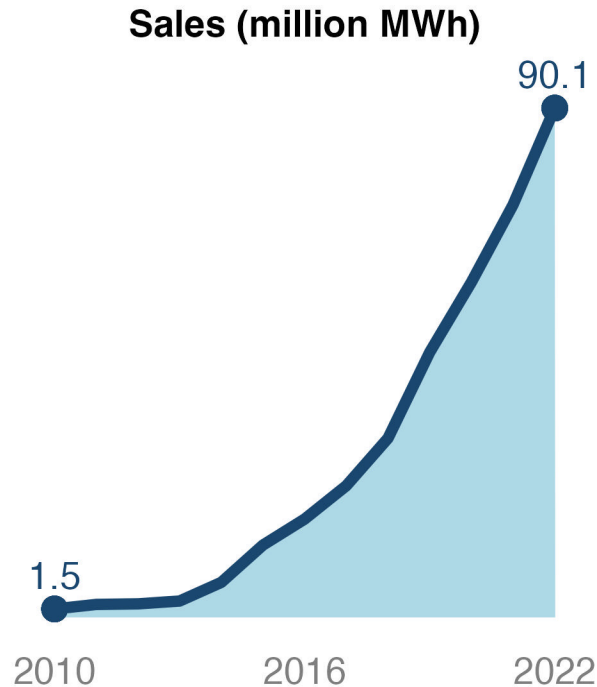


Rank	CCA	Sales (MWh)
1	Clean Power Alliance	3,570,040
2	East Bay Community Energy	1,361,466
3	MCE	1,258,013
4	San Diego Community Power	1,075,258
5	CleanPowerSF	695,035
6	Orange County Power Authority	691,901
7	Peninsula Clean Energy	591,570
8	Cape Light Compact	511,519
9	Silicon Valley Clean Energy	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

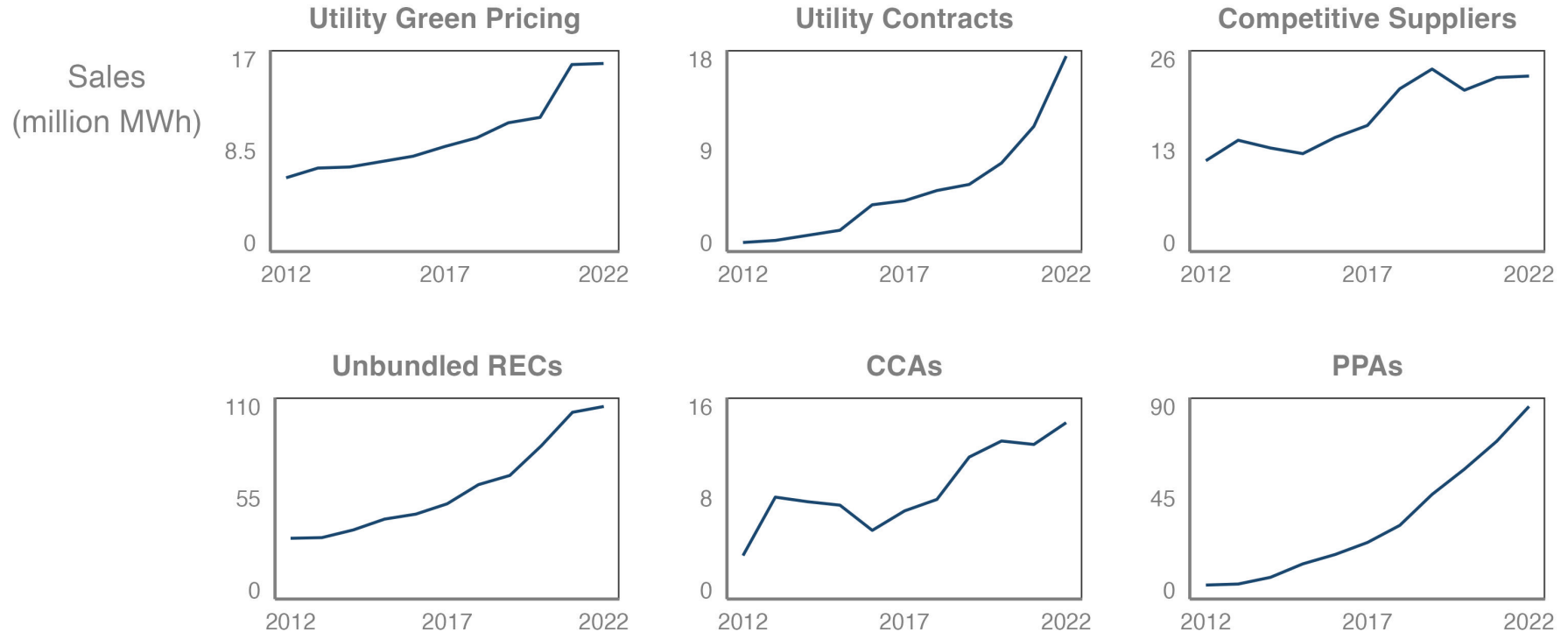
PPA Trends

About **727 oftakers** procured about **90.1 million MWh** of voluntary green power through PPAs in 2020. These figures include only PPA sales where we estimate that the purchaser has retained the RECs.

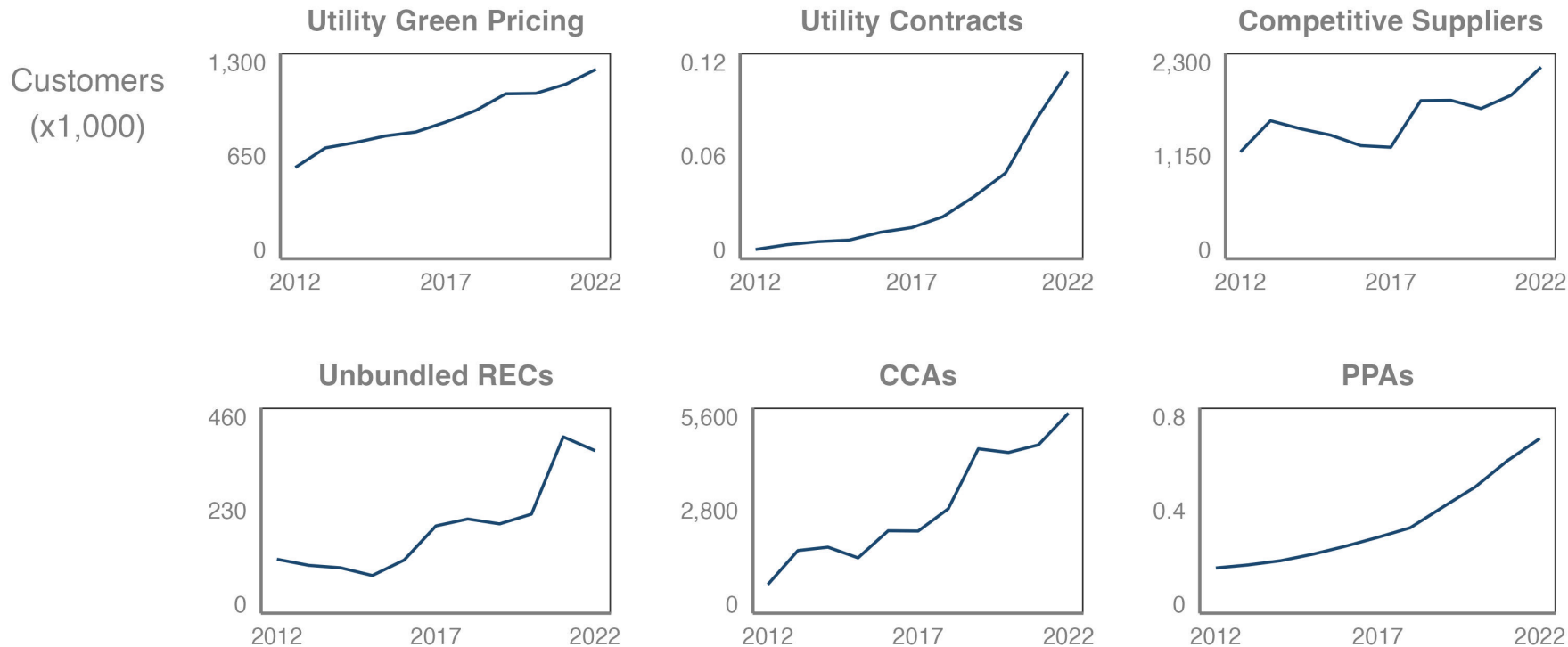


Summary

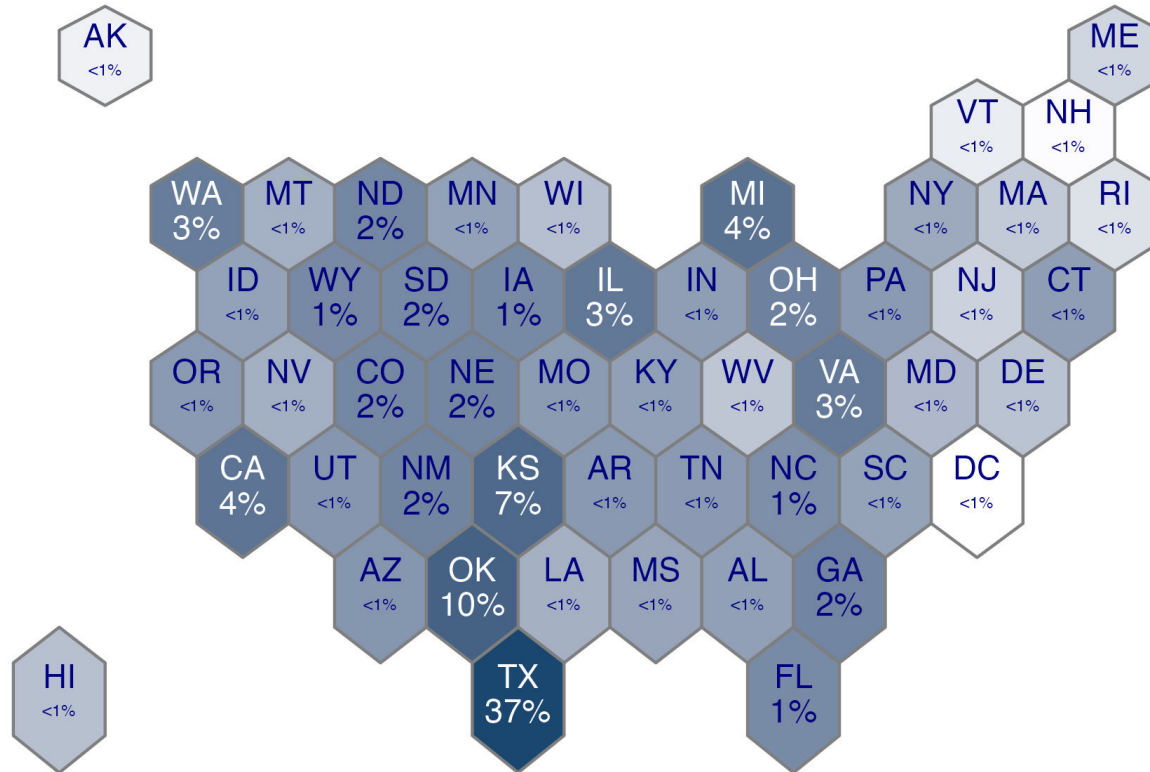
Sales: Bundling Up



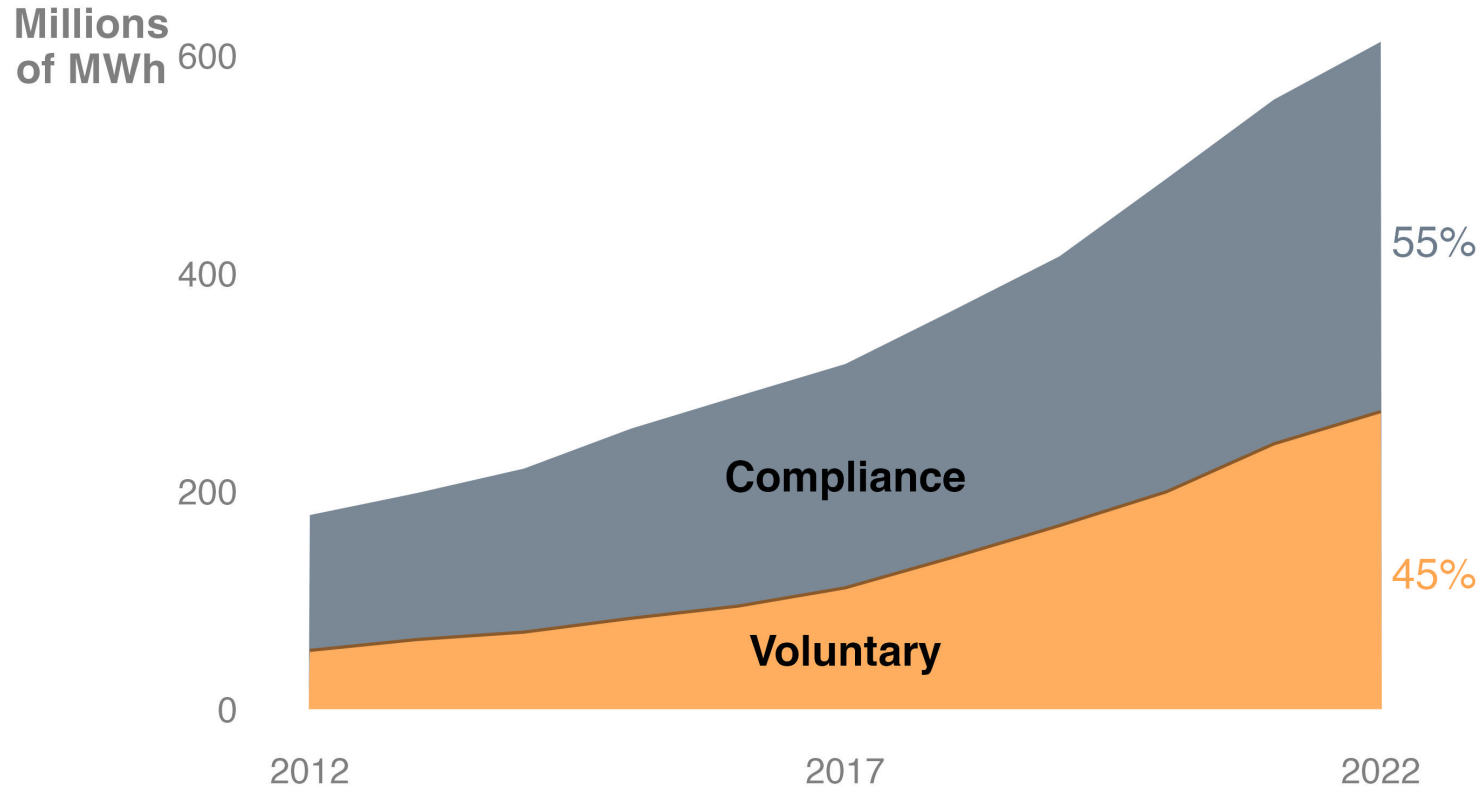
Participation: Another Big Year for CCAs



Texas Remains the Capital of Voluntary Green Power



Could Voluntary Sales Overtake RPS Sales?



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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Extra Slides

Corporate Renewable Energy Targets

