

# STATE OF THE MARKET

# REBA

Renewable Energy Buyers Alliance

REBA *Connect:*  
VIRTUAL MEMBER SUMMIT  
**2020**

# Thank you to the Supporters of REBA and the Sponsors of REBA Connect: Virtual Member Summit



# Thank you to all our REBA members!

## REBA Leadership Circle



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Freeport-McMoRan	CustomerFirst Renewables
IBM	Morgan Stanley Capital Group
Iron Mountain	Orsted
McDonald's USA, LLC	Wilson Sonsini

# Acknowledgements

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## Third Party Data Sources

CDP  
Electric Reliability Council of Texas  
Energy Information Administration  
National Renewable Energy  
Laboratory  
RE100  
Science Based Targets  
S&P Global

# Agenda

The Buyers Journey

US Market Overview and Key Trends

Unlocking Future Procurement Options

Leadership Trends

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## The Buyers Journey

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# The Buyers Journey

From planning to action

## TRANSPARENCY

- Accounting for your carbon footprint
- Mapping your energy consumption

## COMMITMENT

- Setting carbon reduction targets
- Pledging to clean energy goals

## ACTION

- Pursuing goals with RECs, PPAs, project ownership and more
- Restarting the process for supply chain, 24/7 renewables, etc.

FEEDBACK LOOP

# The Buyers Journey

From planning to action

## TRANSPARENCY

- Accounting for your carbon footprint
- Mapping your energy consumption

COMMITMENT

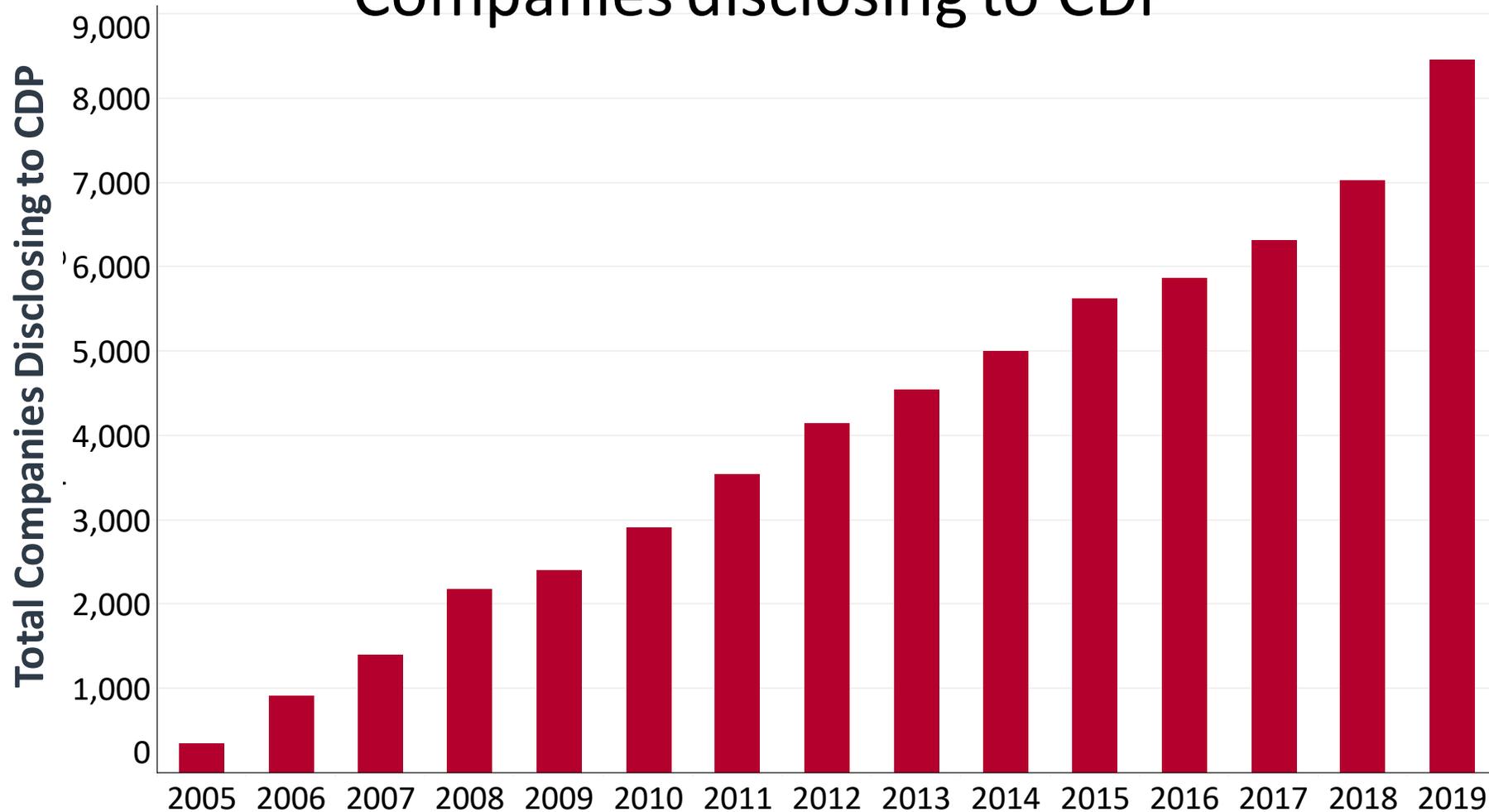
ACTION

FEEDBACK LOOP

# The Buyers Journey – Transparency

Reporting is a key first step to managing a path forward

## Companies disclosing to CDP



Source: <https://www.cdp.net/en/companies/companies-scores>



# The Buyers Journey

From planning to action

TRANSPARENCY

## COMMITMENT

- Setting carbon reduction targets
- Pledging to clean energy goals

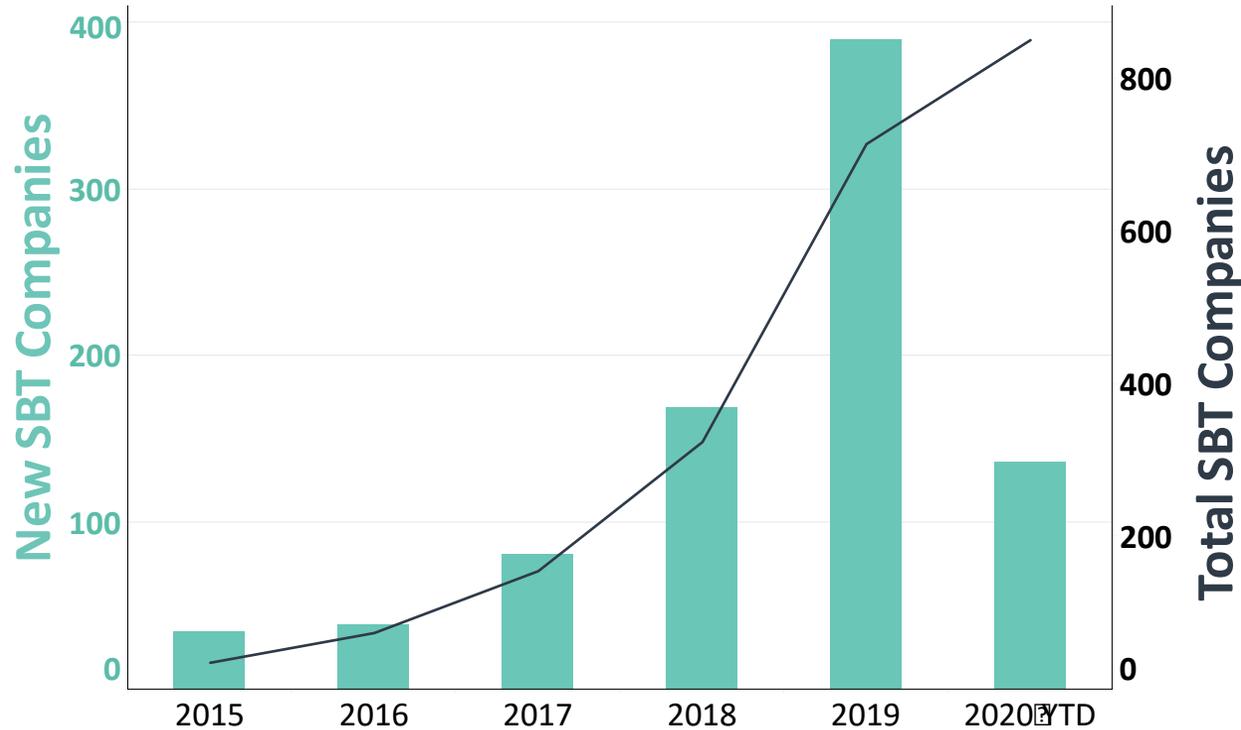
ACTION

FEEDBACK LOOP

# The Buyers Journey – Commitments

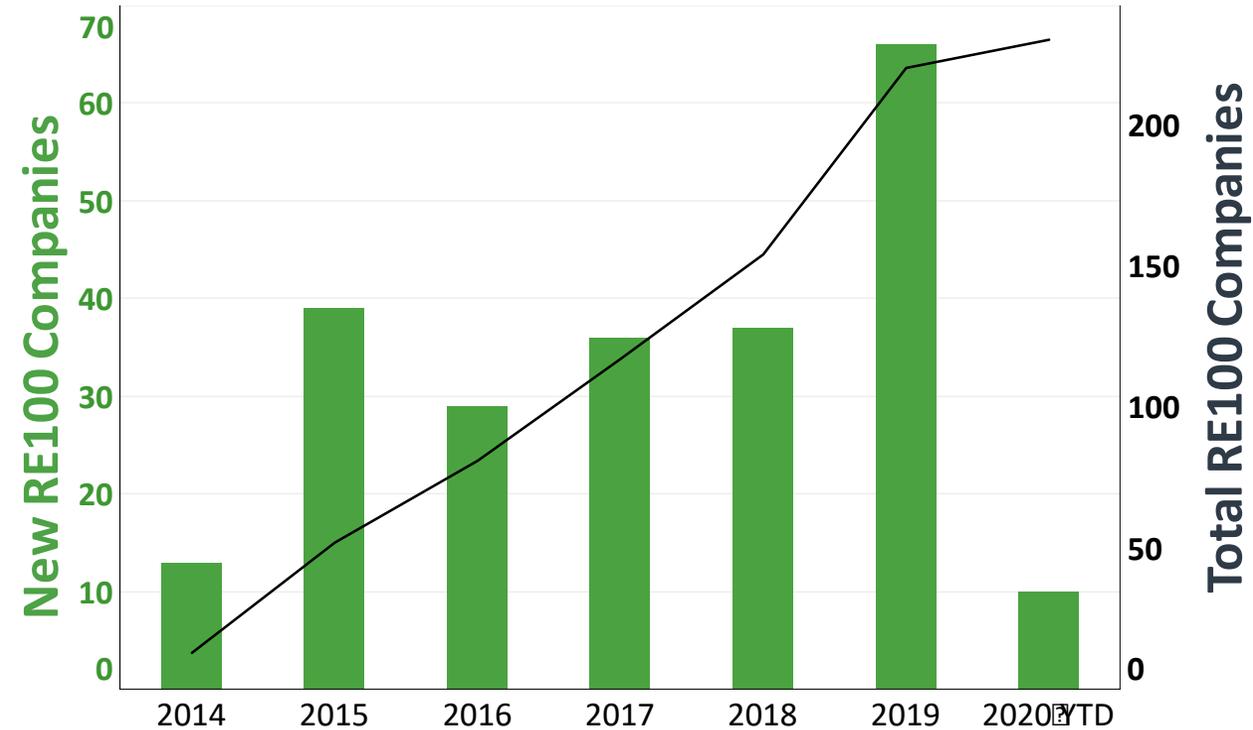
Increases in goal setting with both an emissions and energy focus

## Science Based Targets Companies



Source: <https://sciencebasedtargets.org/companies-taking-action/#>

## RE100 Companies

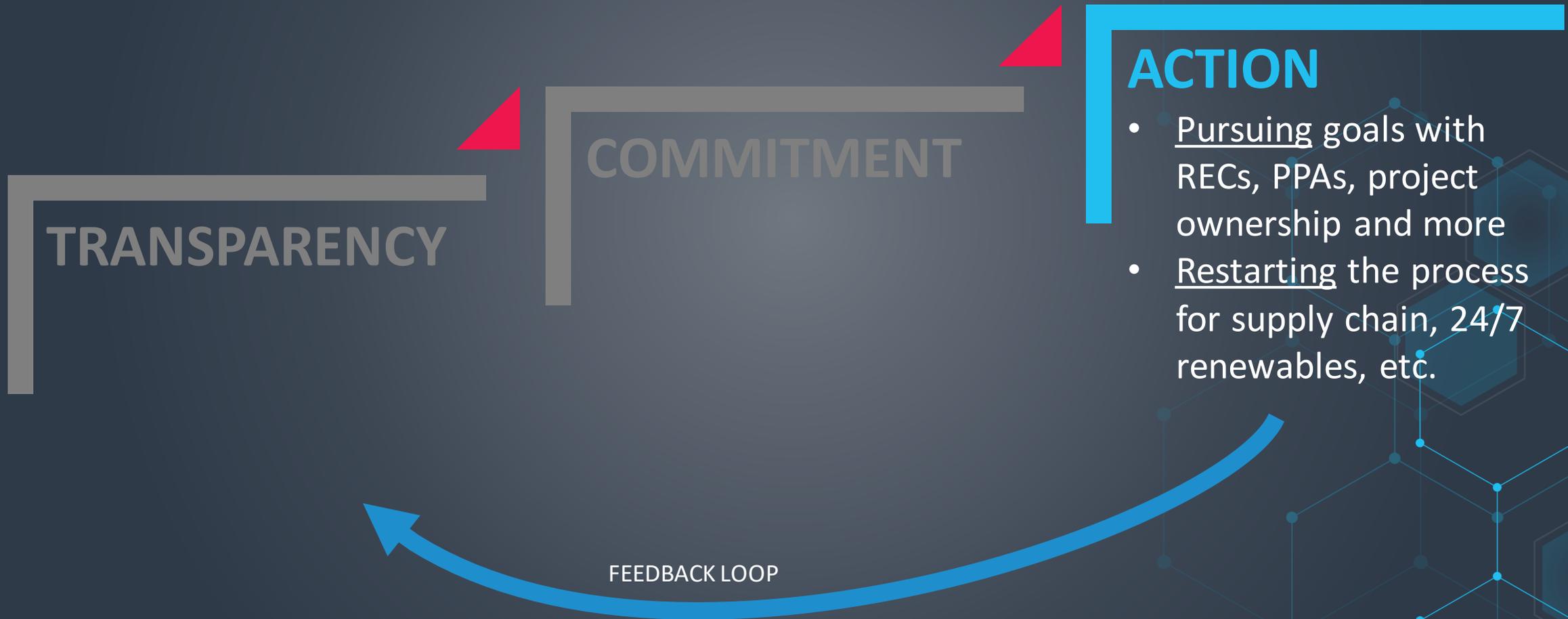


Source: <http://there100.org/companies>



# The Buyers Journey

From planning to action

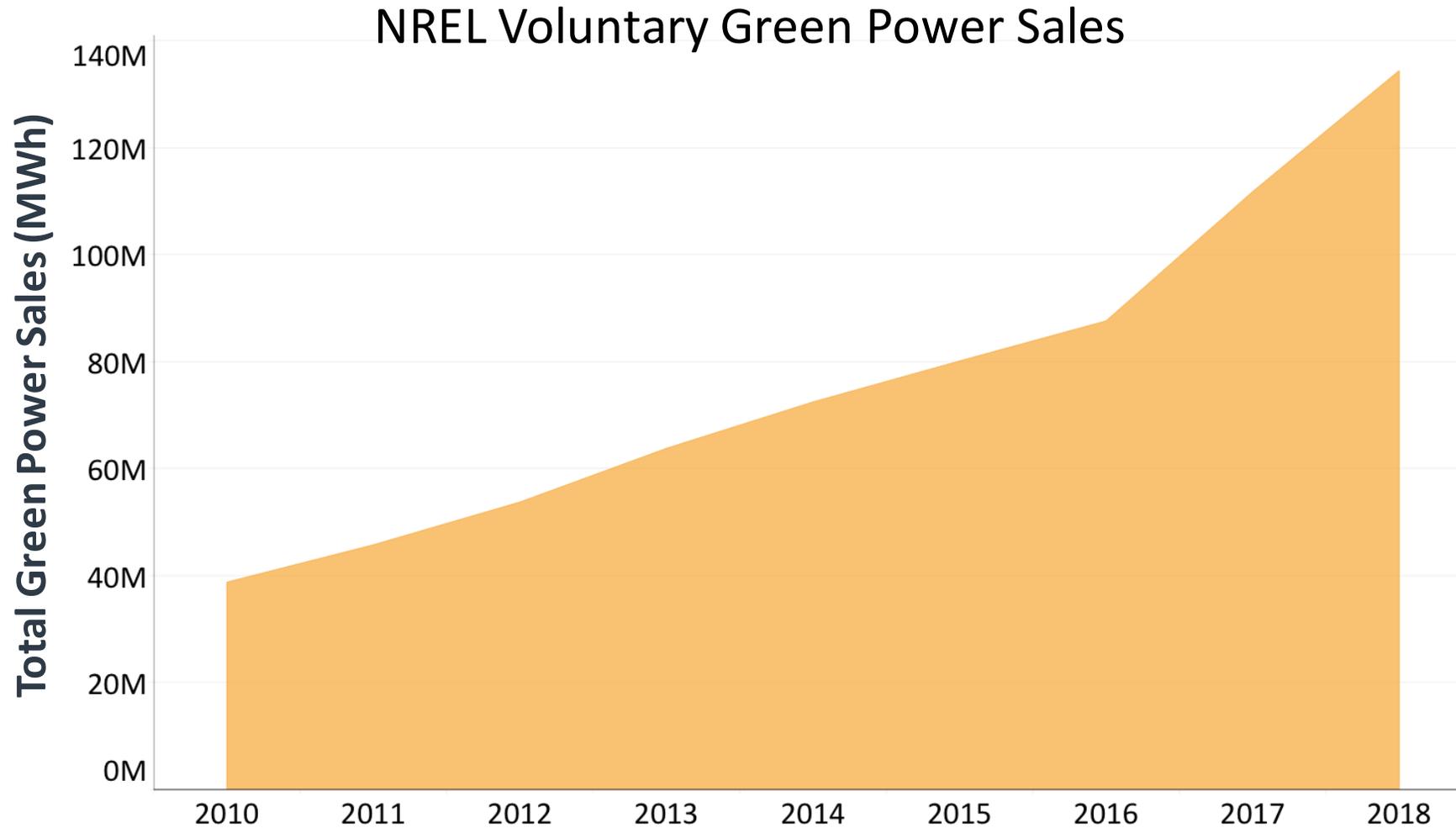


## ACTION

- Pursuing goals with RECs, PPAs, project ownership and more
- Restarting the process for supply chain, 24/7 renewables, etc.

# The Buyers Journey – Action

Consistent growth in voluntary market sales



Source: <https://www.nrel.gov/docs/fy20osti/74862.pdf>



# Agenda

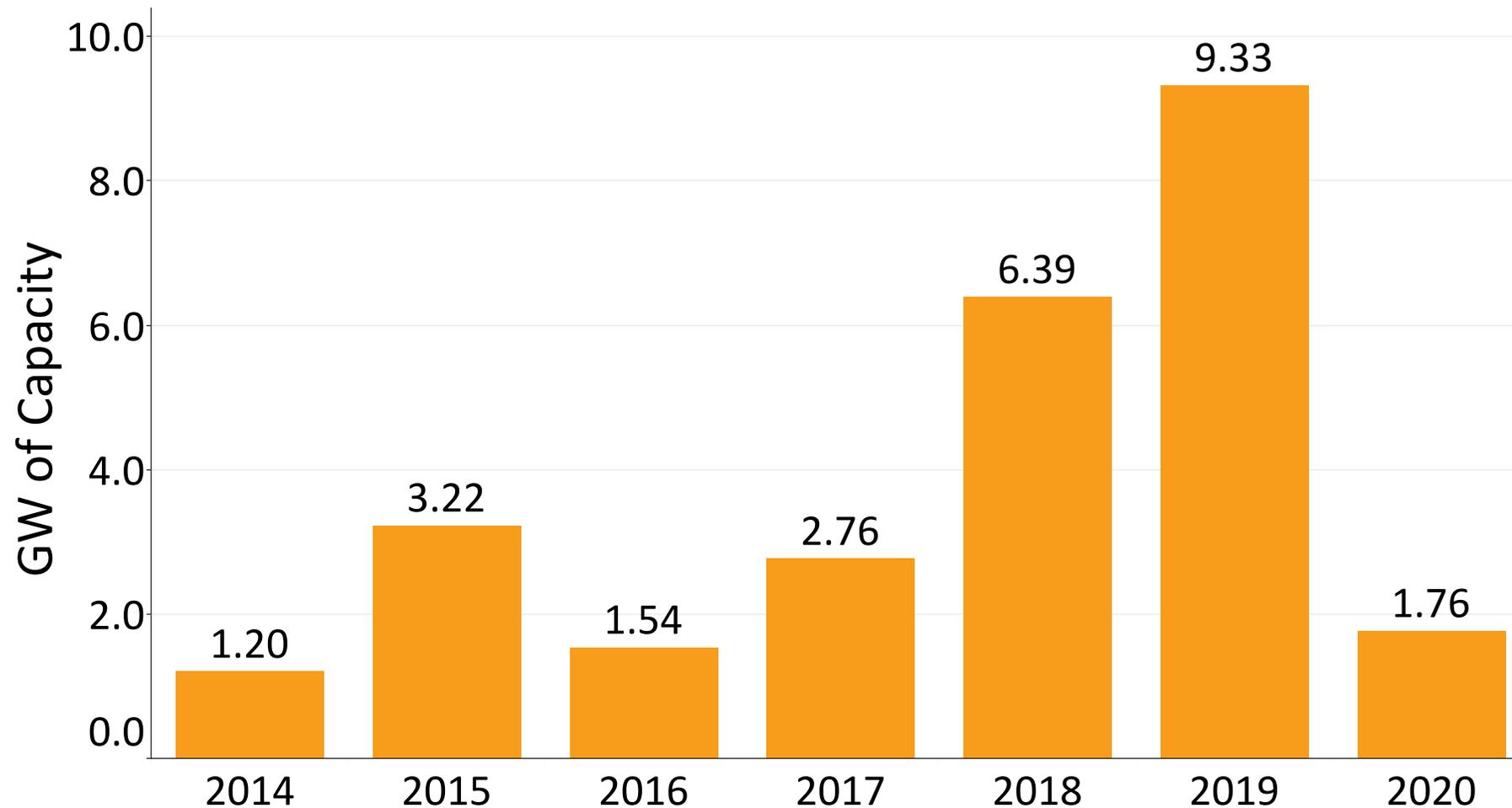
The Buyers Journey

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Leadership Trends

# Announced Corporate Renewable Deals in the U.S.

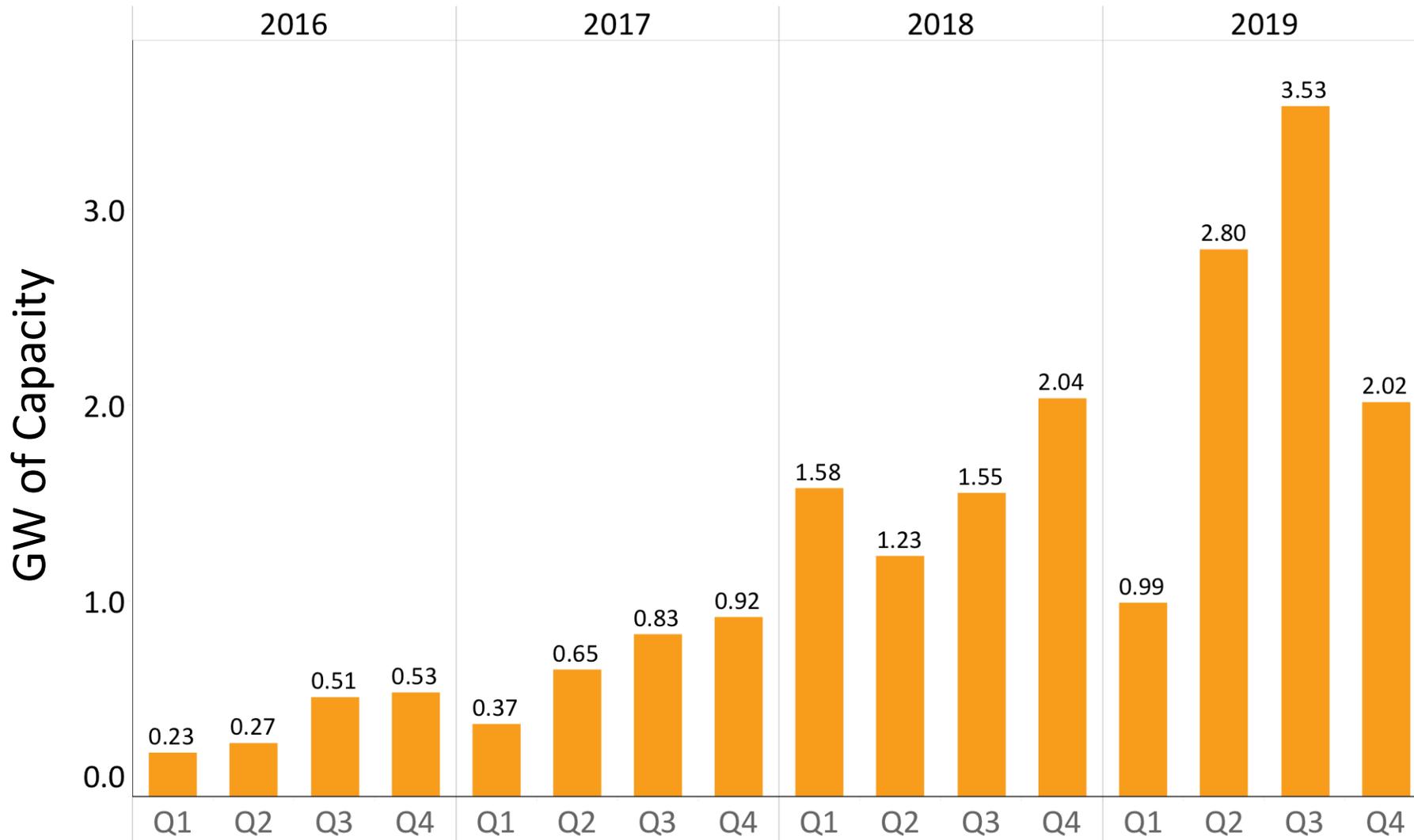


Over 26GW announced in the last 10 years

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Announced Corporate Renewable Deals in the U.S. by Quarter

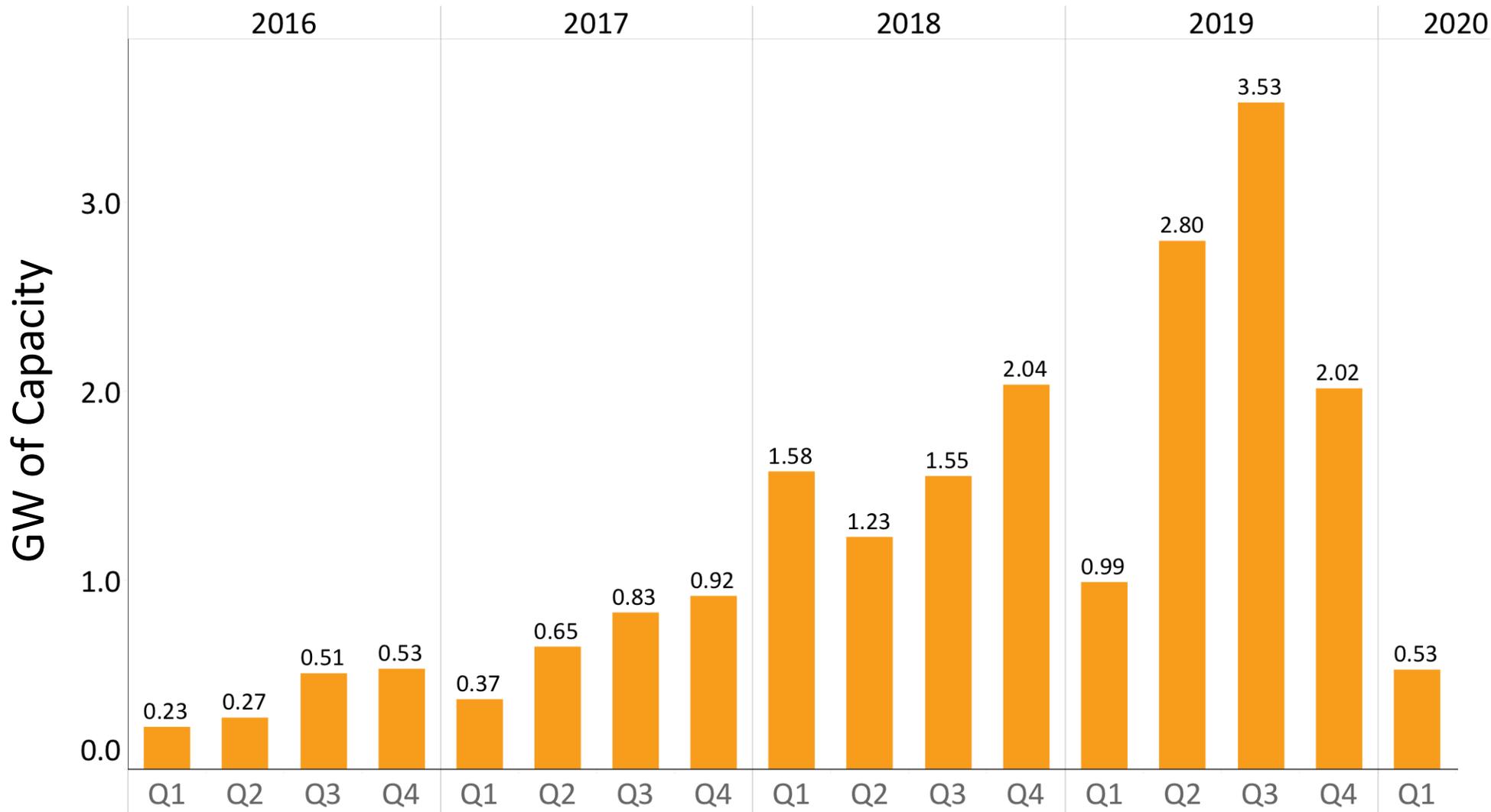


Over 15GW announced in the last 2 calendar years

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Announced Corporate Renewable Deals in the U.S. by Quarter

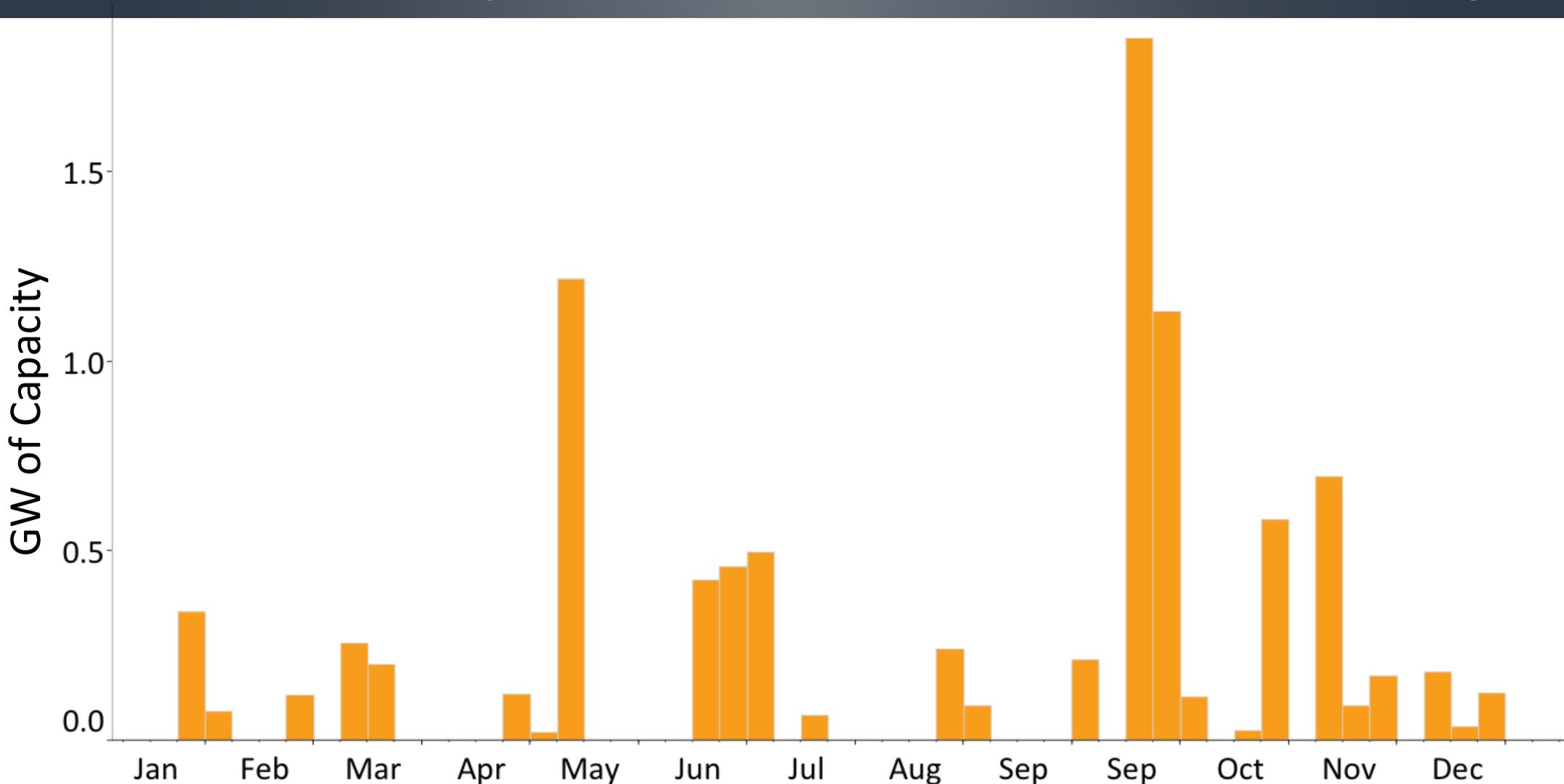


Q1 2020 is down for a few reasons

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# 2019 Announced Corporate Renewable Deals in the U.S. by Week

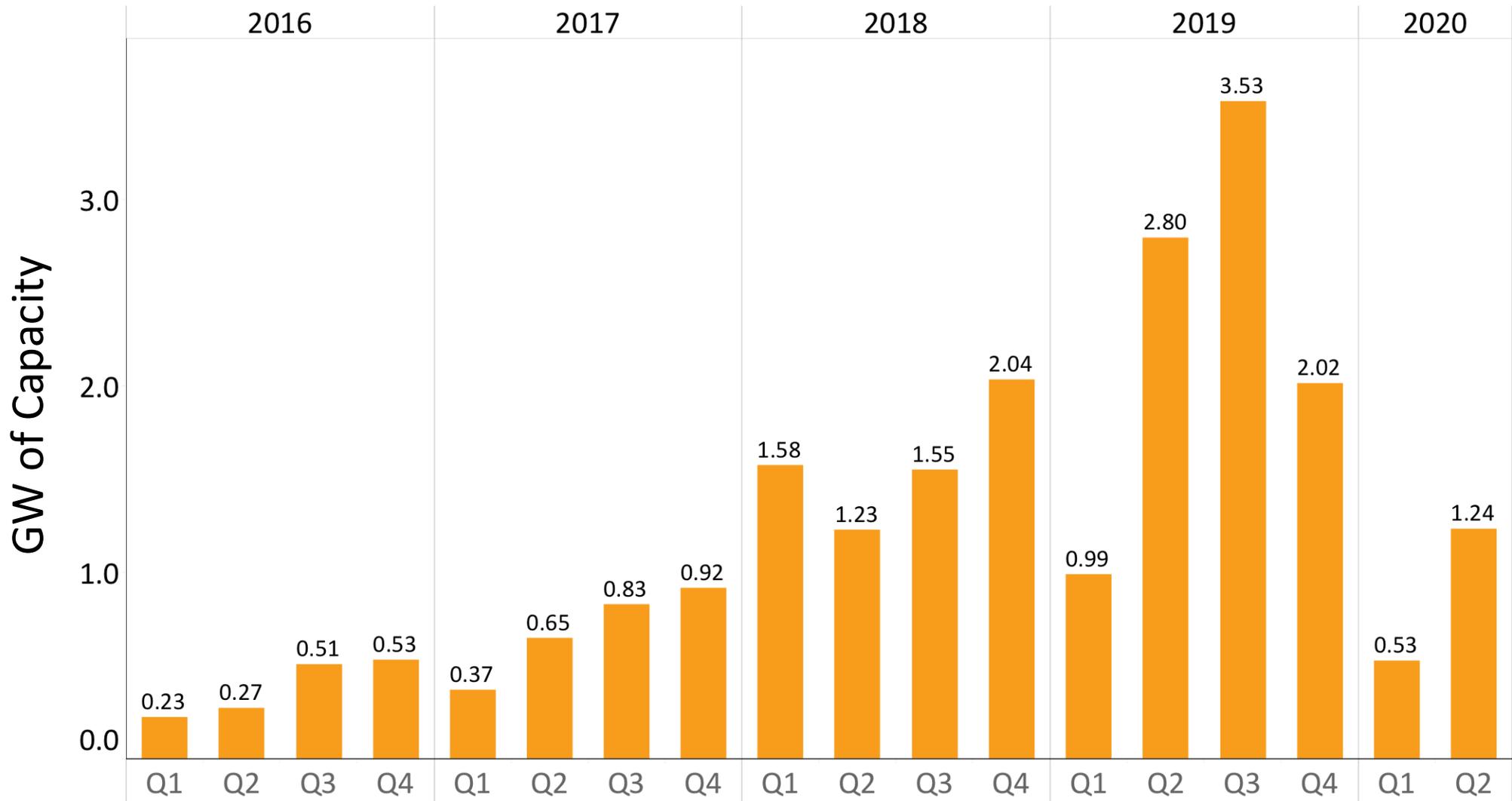


~3 GWs announced within 8 days in September

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Announced Corporate Renewable Deals in the U.S. by Quarter

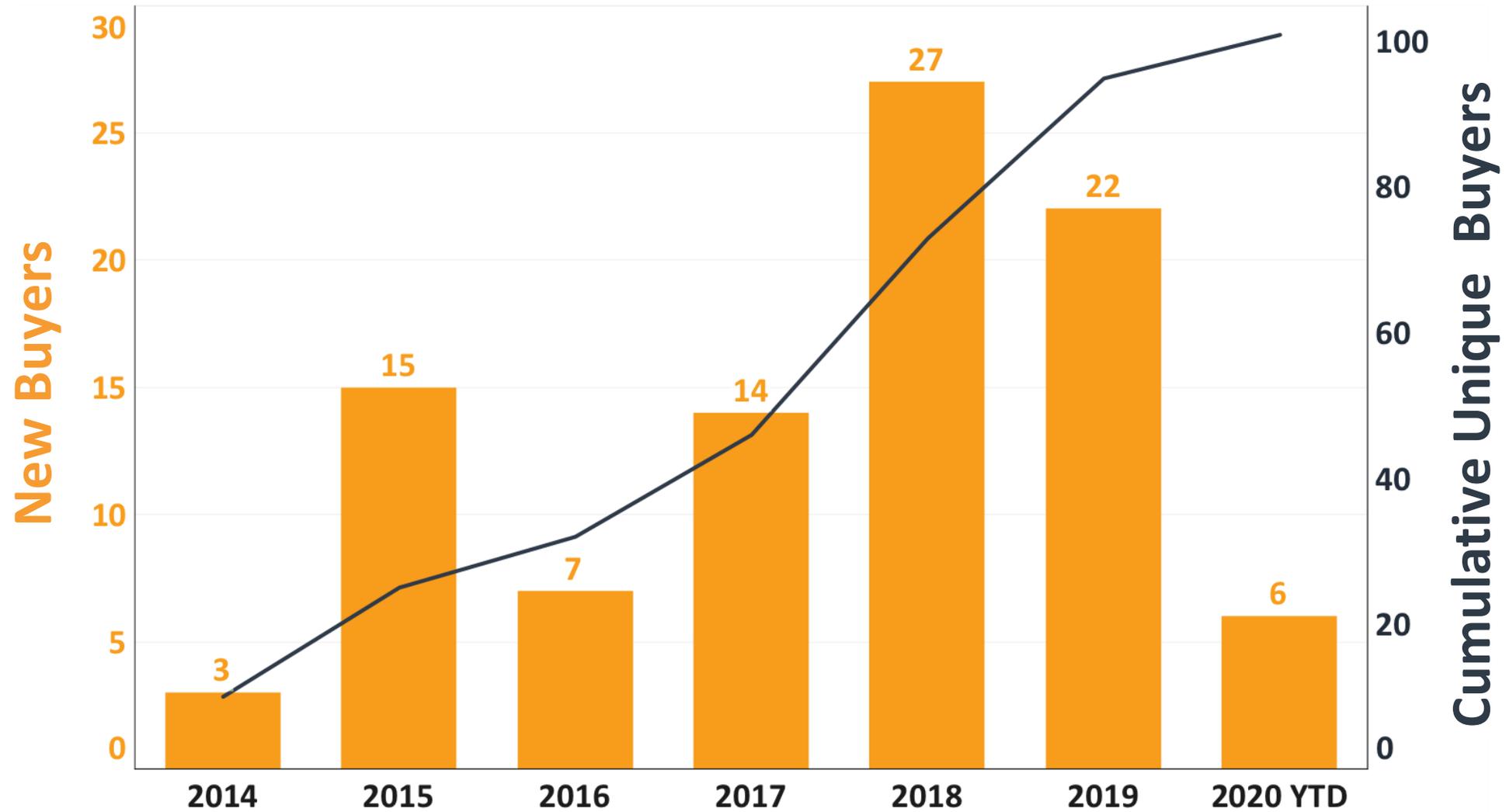


Q2 2020 to date has already surpassed Q2 2018

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Market Expansion: New Buyers

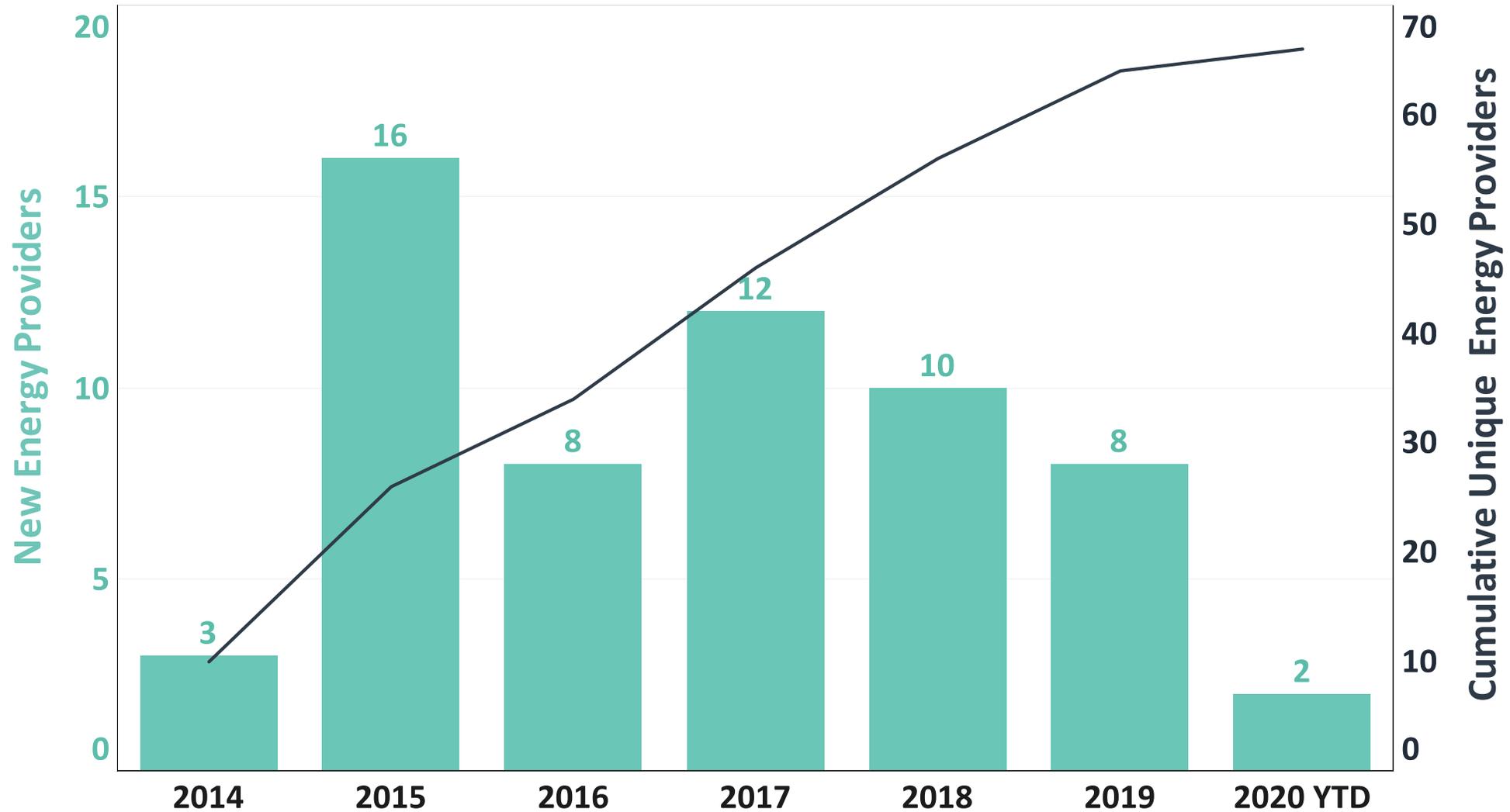


Over 100 companies have transacted in utility-scale renewable energy market since 2008

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



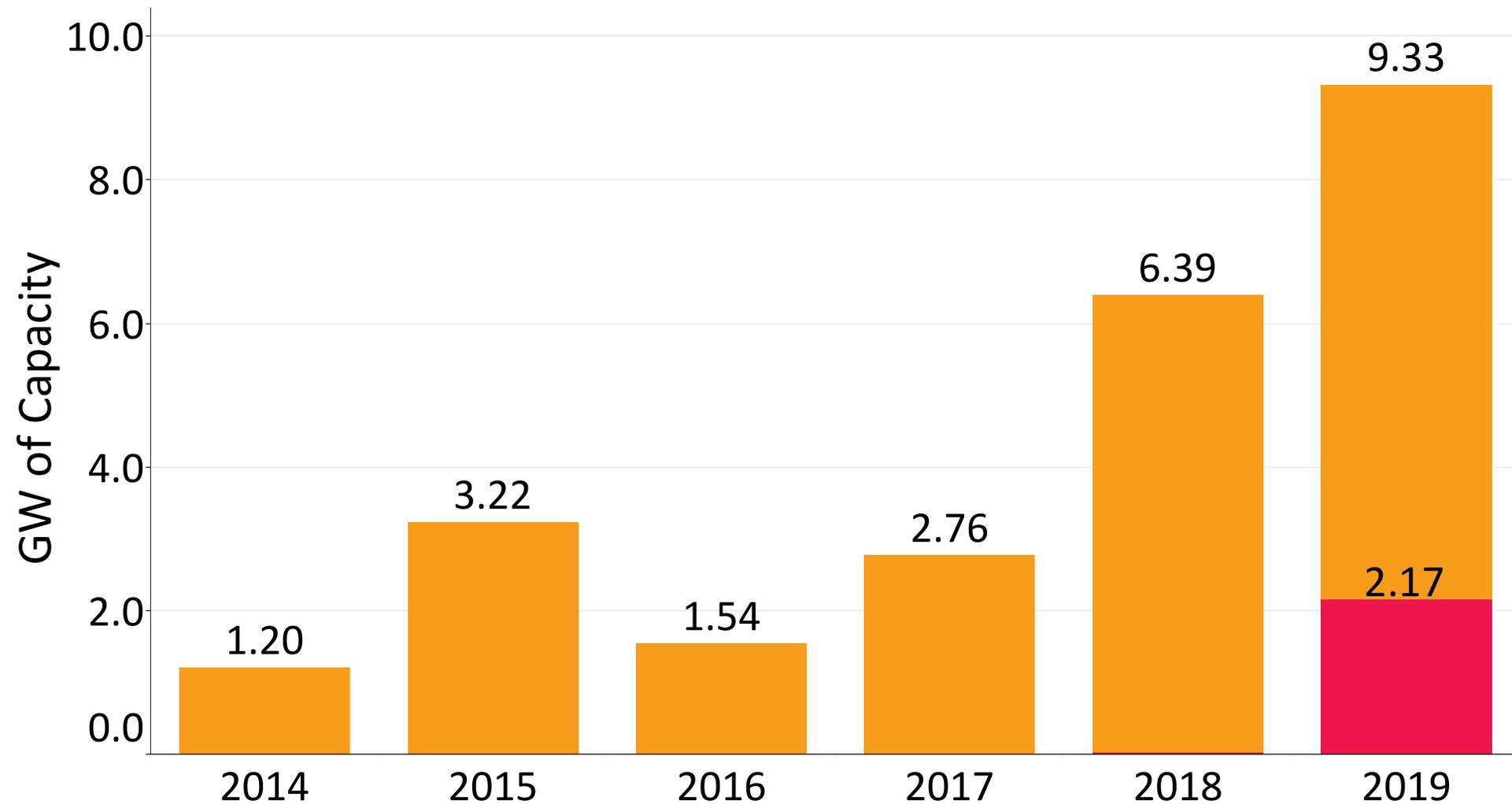
# Market Expansion: New Energy Providers



As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Increase In Unknown Deal Counterparties



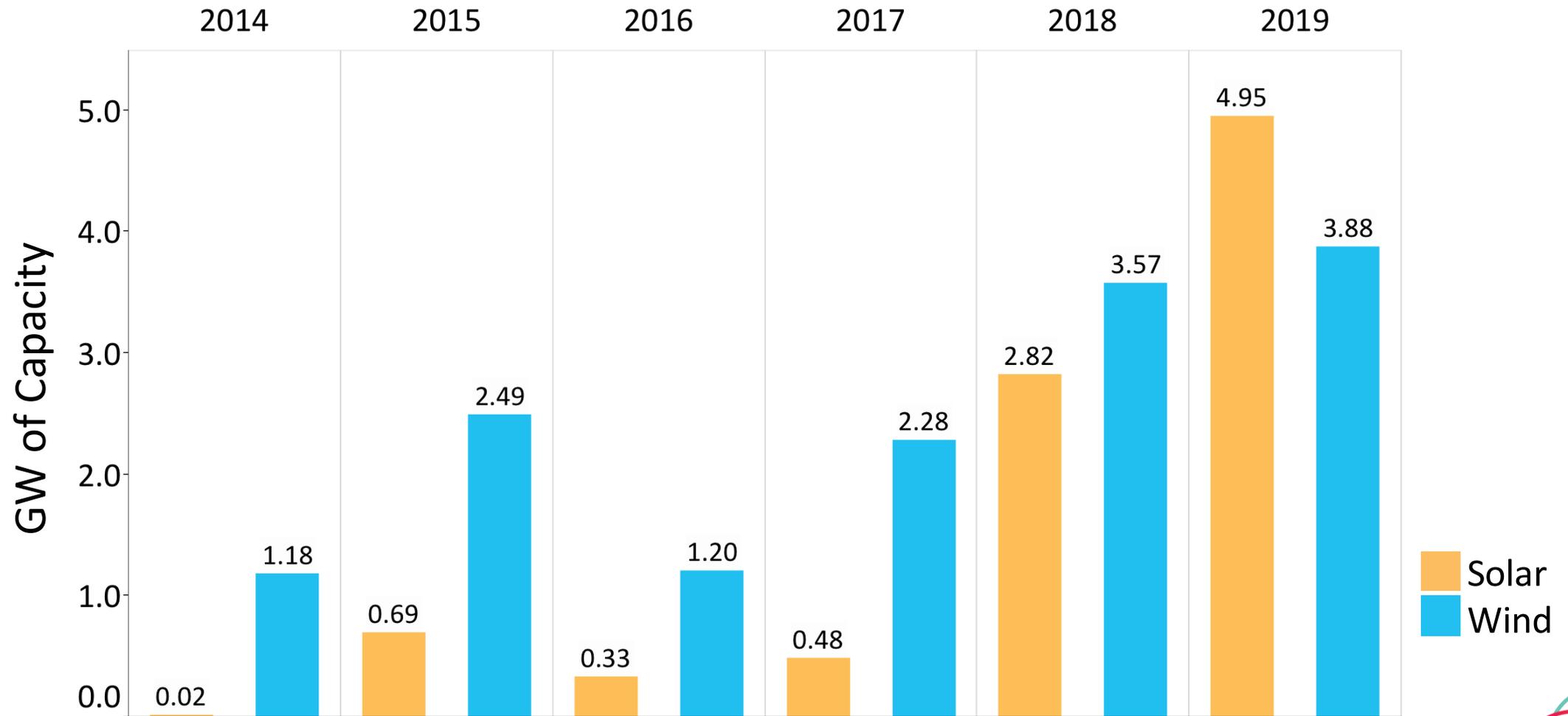
In 2019, 2+ GWs from ~12 announced deals did not make energy provider public

As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Technology Evolution

*\* This does not include ~800 MWs of deals in which the technology is not known*

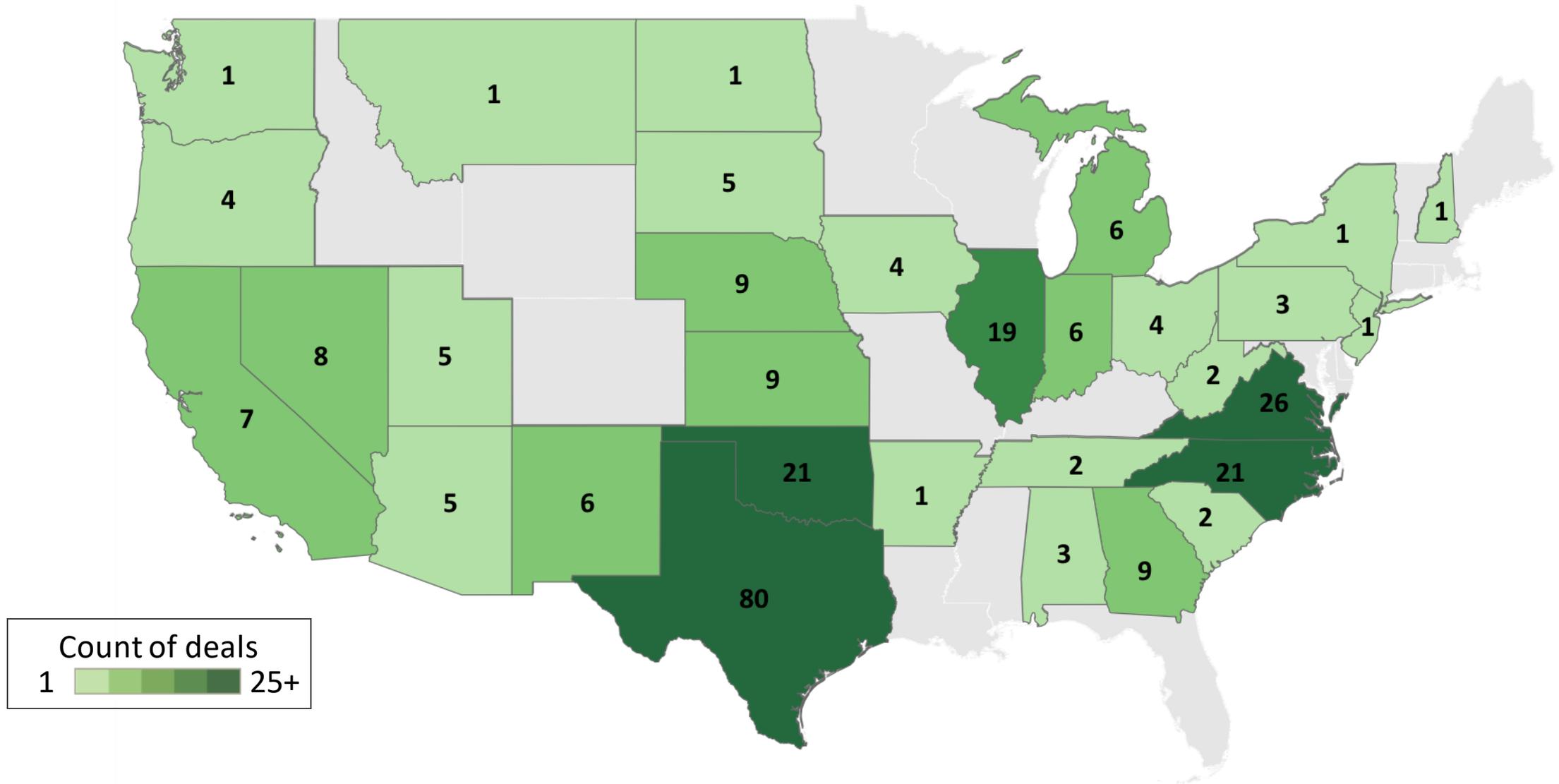


**At least 2.5 GW of ~5 GW of solar announced in 2019 was in ERCOT**

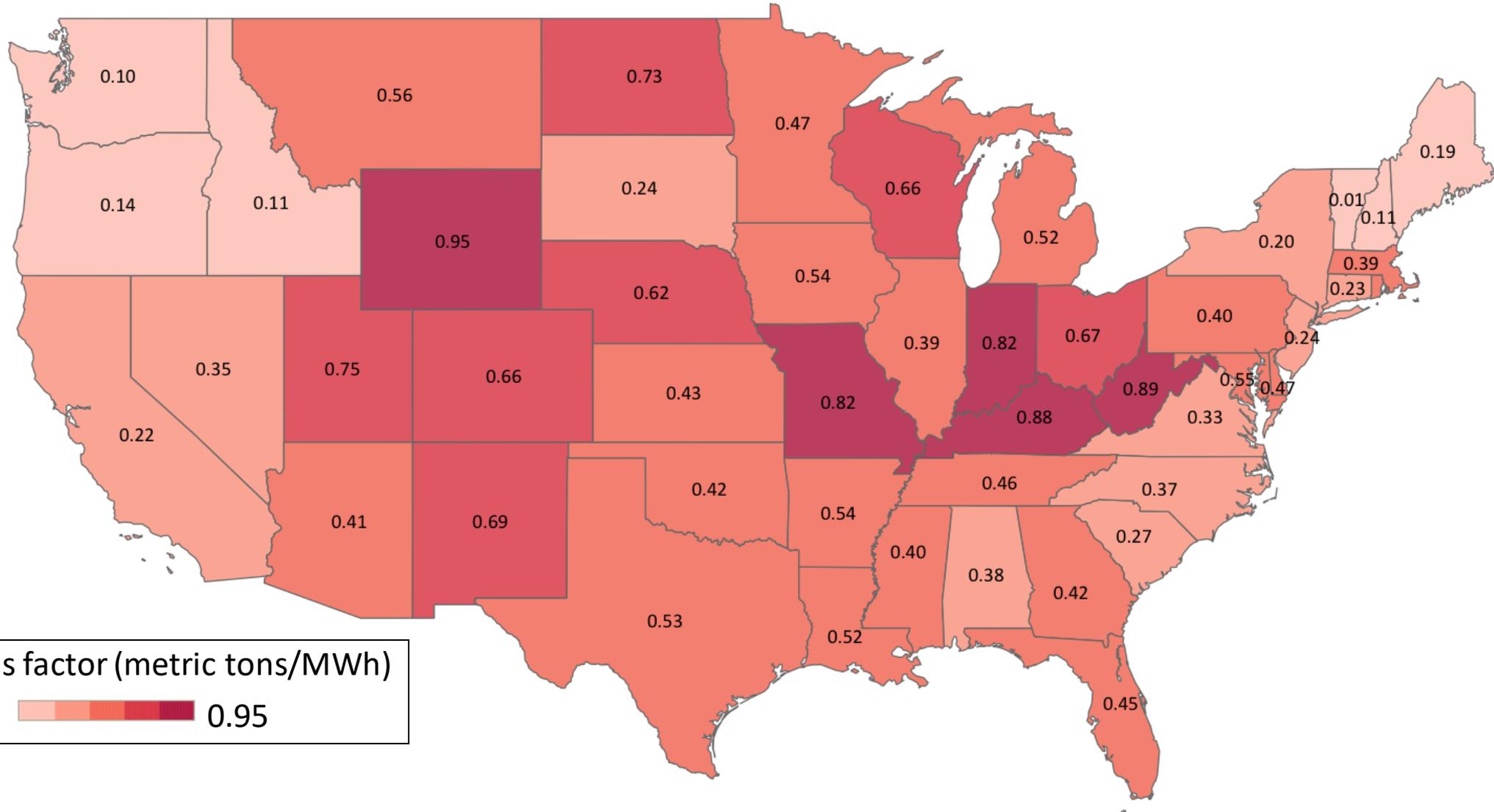
As of April 24, 2020. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015-2020 by quarter. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2020 Renewable Energy Buyers Alliance. Produced in part using data from S&P Global Market Intelligence, Copyright © 2020.



# Where are Corporates Signing Deals? – Until 2020YTD



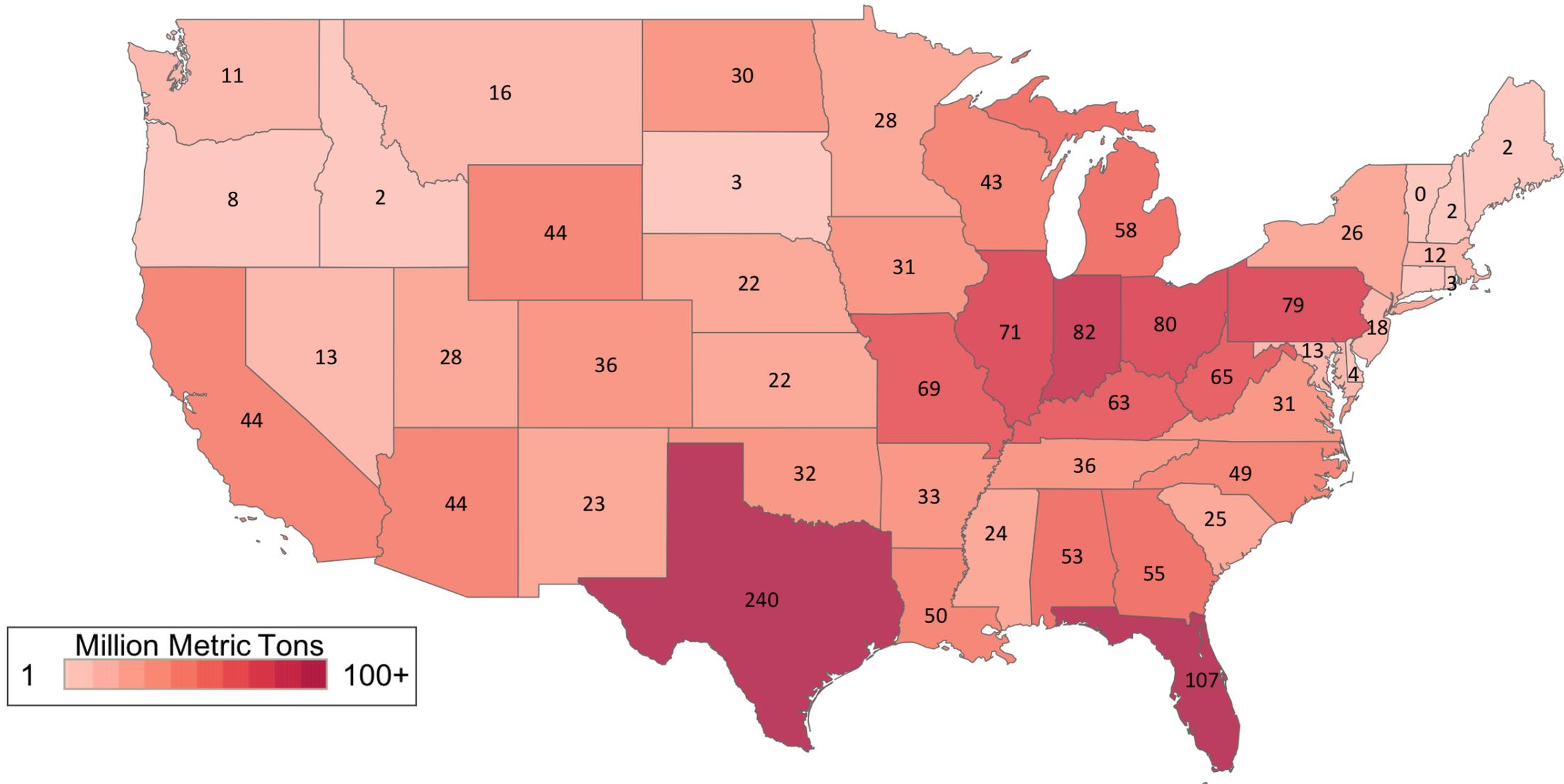
# CO<sub>2</sub> Emission Factors From Electric Power



Source: 2017 Total Electric Industry Power Data – EIA.com



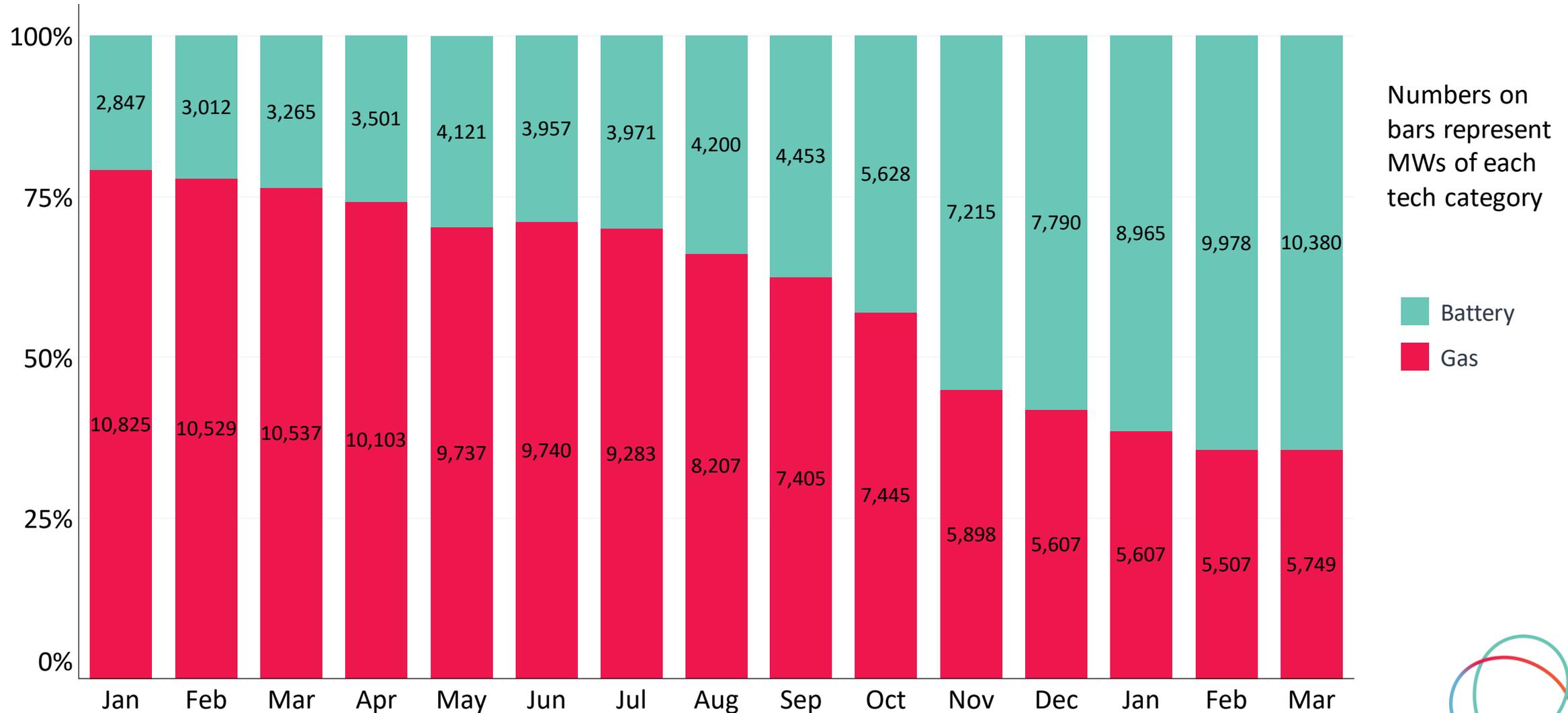
# CO<sub>2</sub> Emissions From Electric Power



Source: 2017 Total Electric Industry Power Data – EIA.com



# Battery Capacity in the ERCOT Interconnection Queue Now Exceeds Gas Capacity



Source: <http://mis.ercot.com/misapp/GetReports.do?reportTypeId=15933&reportTitle=GIS%20Report&showHTMLView=&mimicKey>



# Agenda

The Buyers Journey

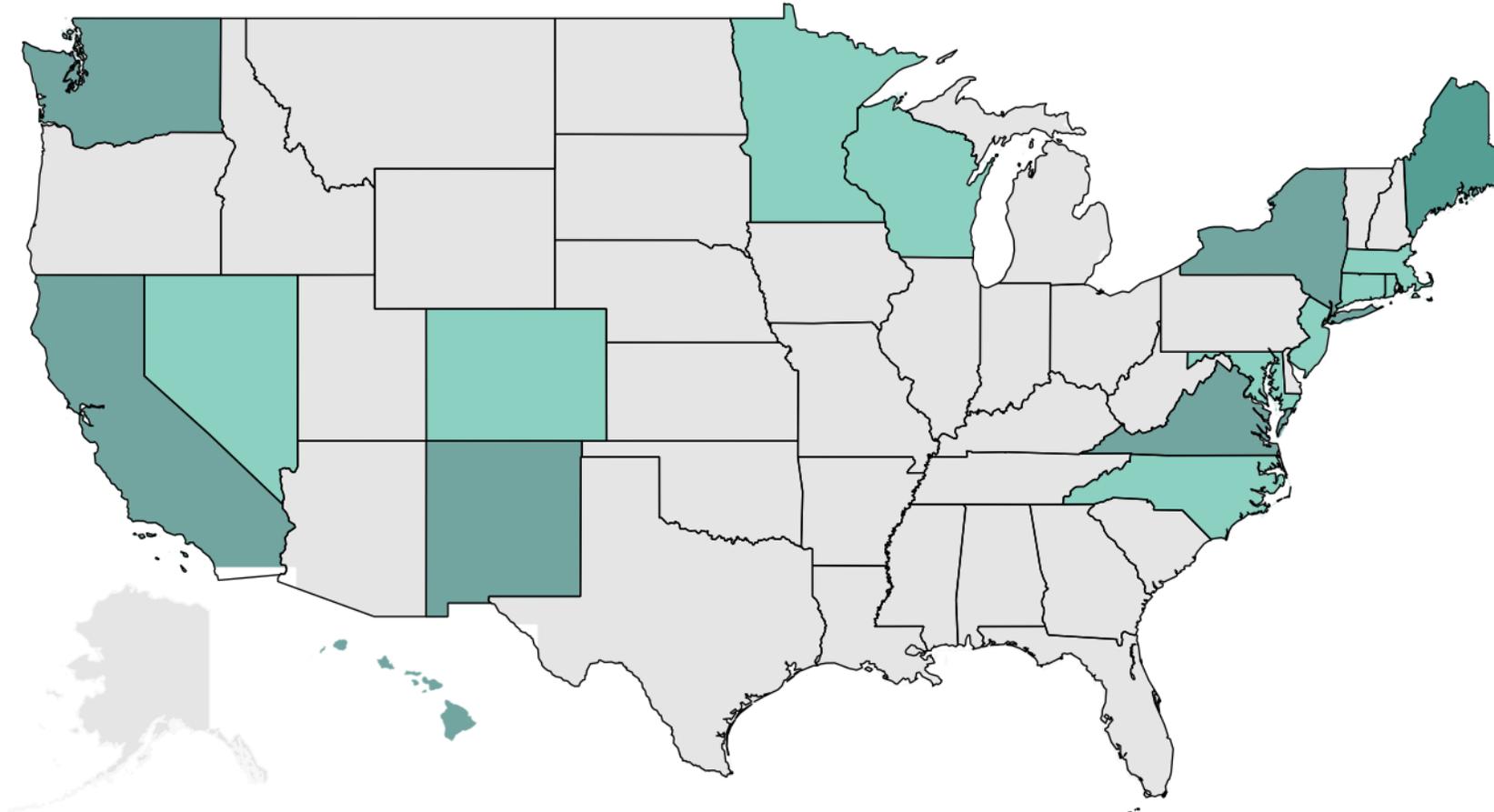
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# Pathway 1: Greening the Grid for All

## States Driving Decarbonization

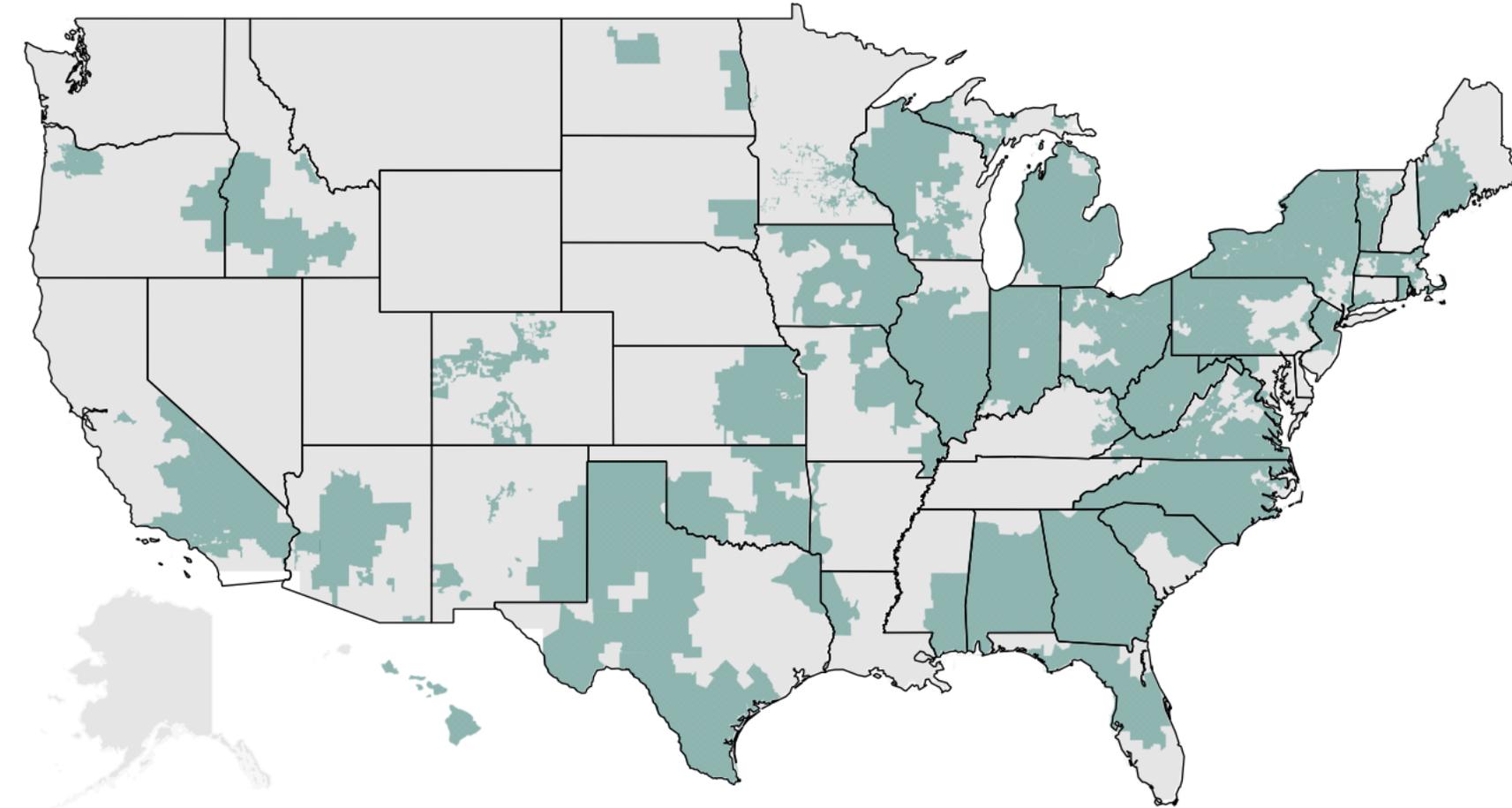


- 100% Renewable Portfolio Standard or Clean Energy Standard
- 100% Carbon-Free Executive Order or Goal



# Pathway 1: Greening the Grid for All

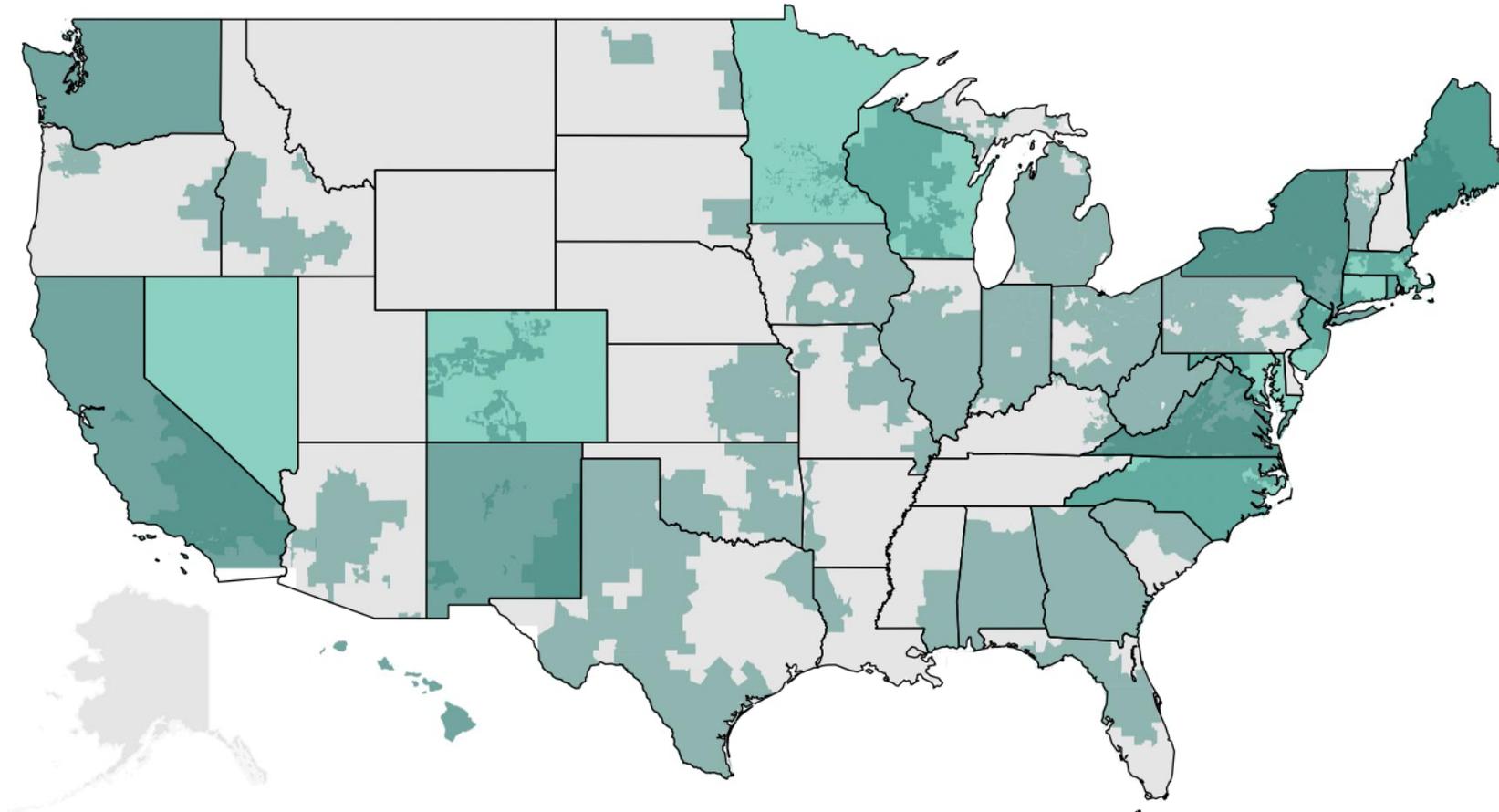
## Utilities Setting Decarbonization Commitments



■ Utility 80%-100% Decarbonization Commitments



# Pathway 1: Where is the Grid Greening for All?



- Utility 80%-100% Decarbonization Commitments
- State 100% RPS/CES Laws
- State 100% Carbon-Free Executive Order or Goal



# Pathway 2: Increase and Improve Customer Options

## RTO Expansion

ISO/RTO Growth before 1996



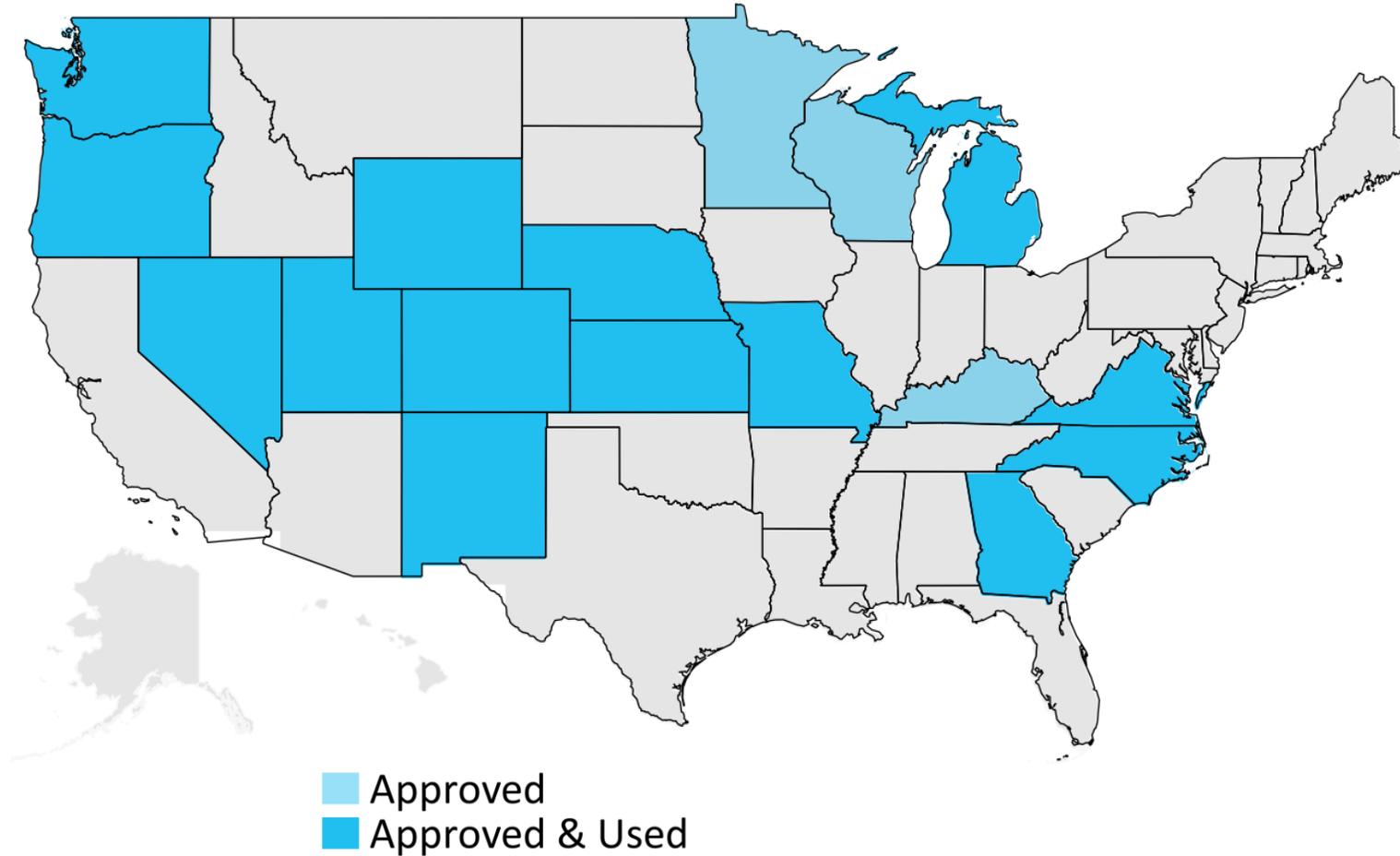
ISO/RTO Growth Today



Source: isorto.org

# Pathway 2: Increase and Improve Customer Options

States with Green Tariffs Approved and Used



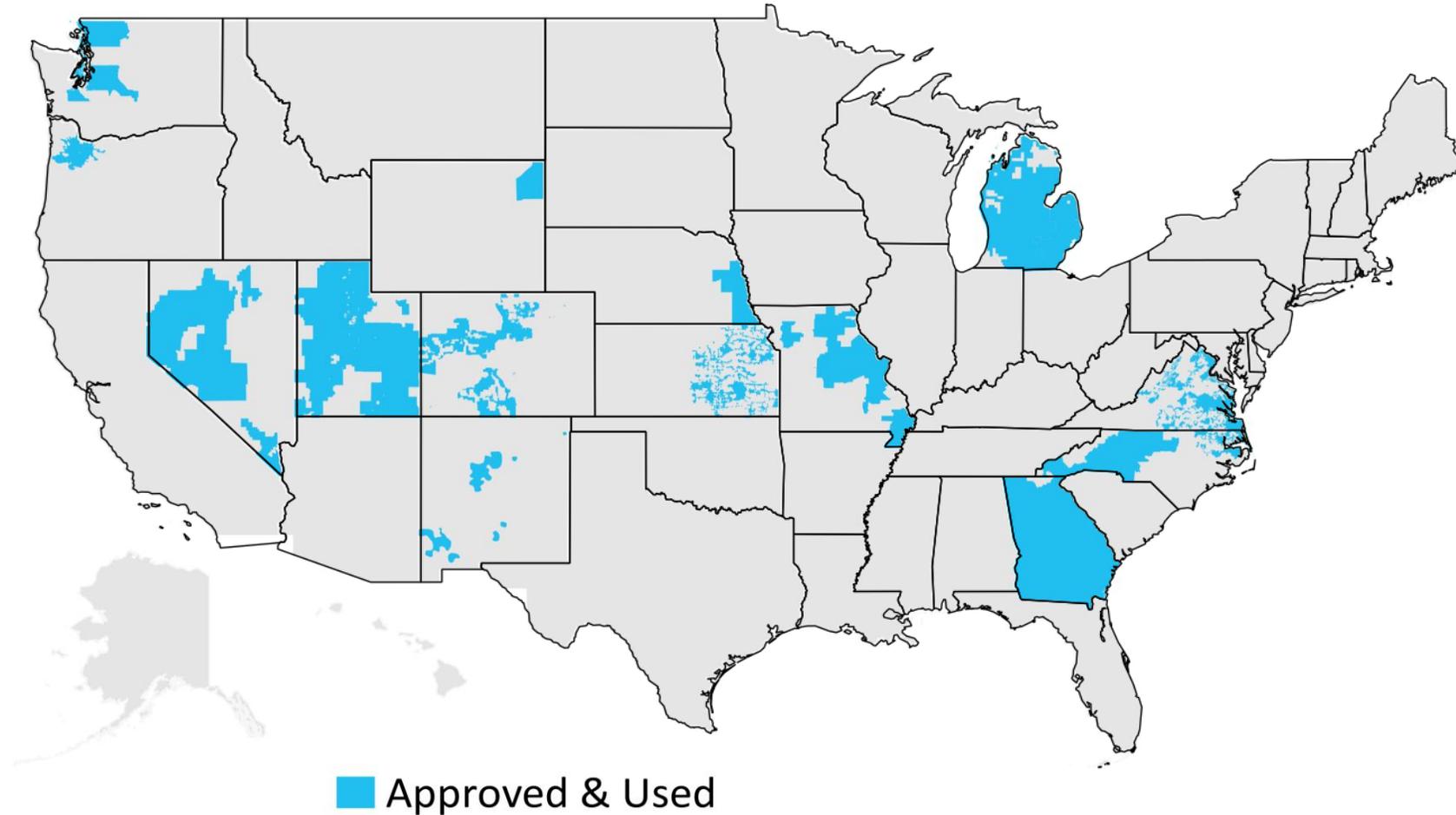
17 states have green tariffs available, 14 have active C&I customers

Data from REBA Green Tariff tracking and only includes deals that involve build of new generation and corporate commitments



# Pathway 2: Increase and Improve Customer Options

## Utility Territories with Approved Green Tariffs Used by Corporates



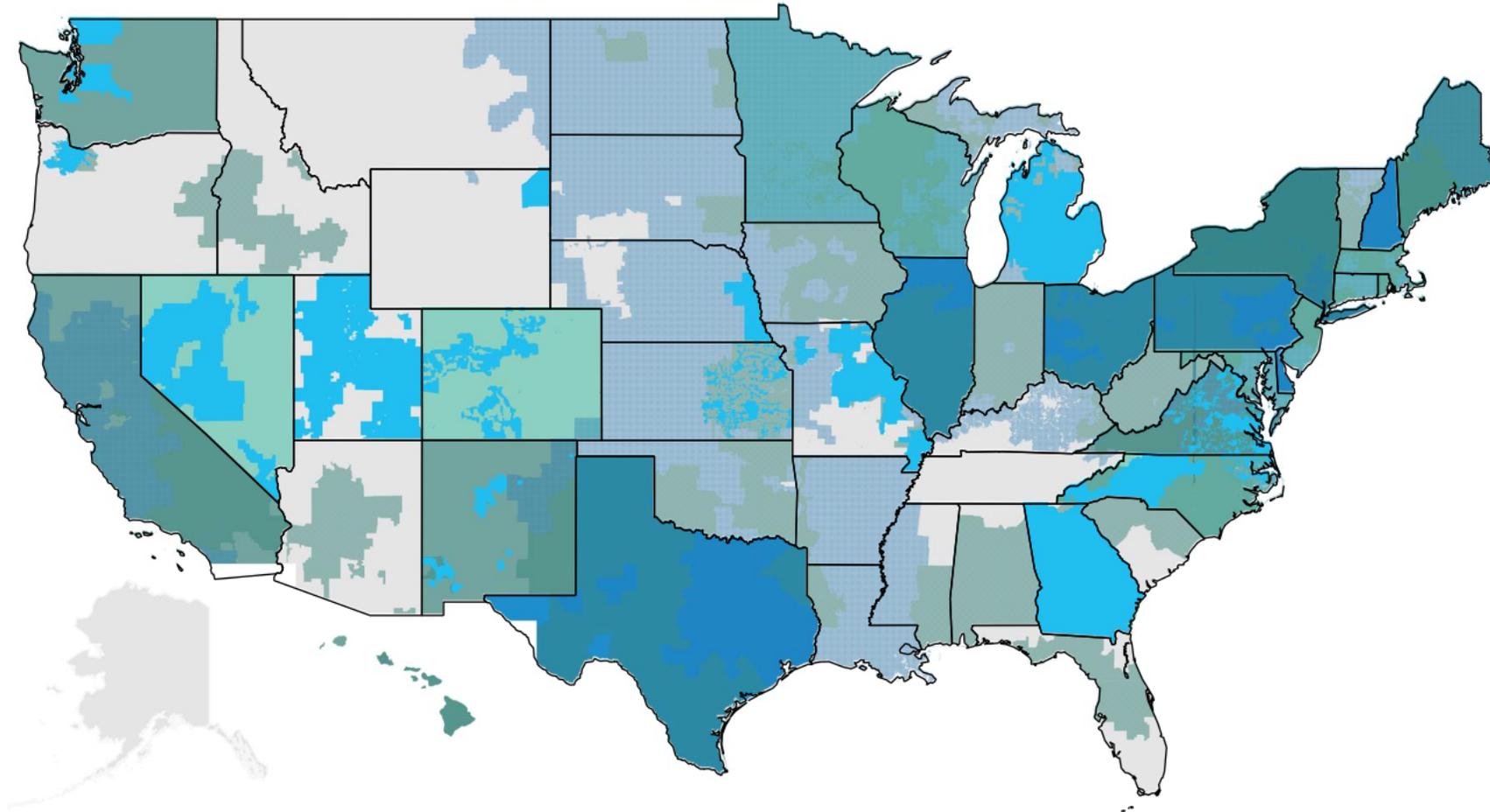
Narrowing deployed green tariffs to utility service territories further highlights their limited availability

Data from REBA Green Tariff tracking and only includes deals that involve build of new generation and corporate commitments





# Bringing It All Together...

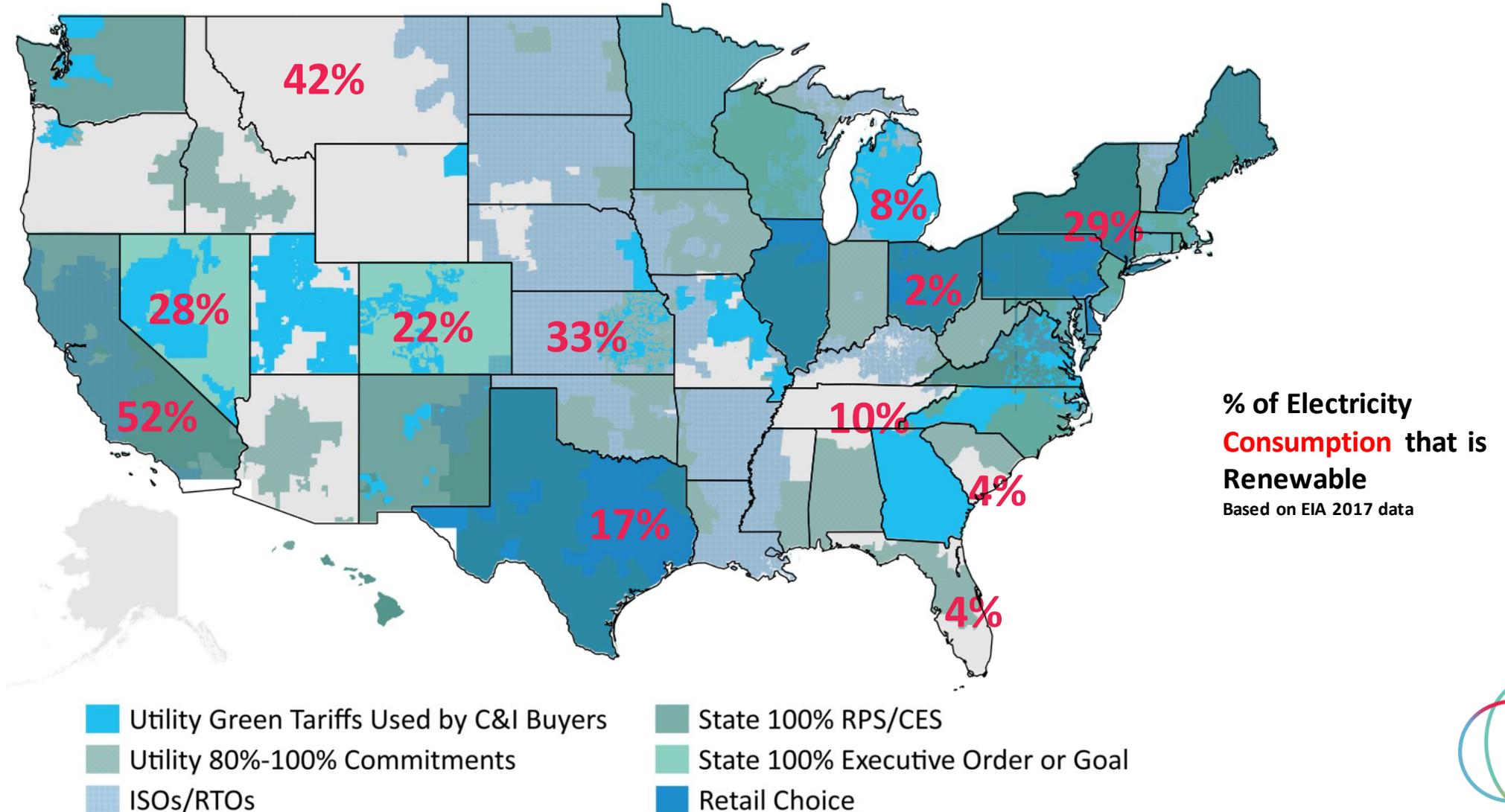


- Utility Green Tariffs Used by C&I Buyers
- Utility 80%-100% Commitments
- ISOs/RTOs

- State 100% RPS/CES
- State 100% Executive Order or Goal
- Retail Choice



# Bringing It All Together...



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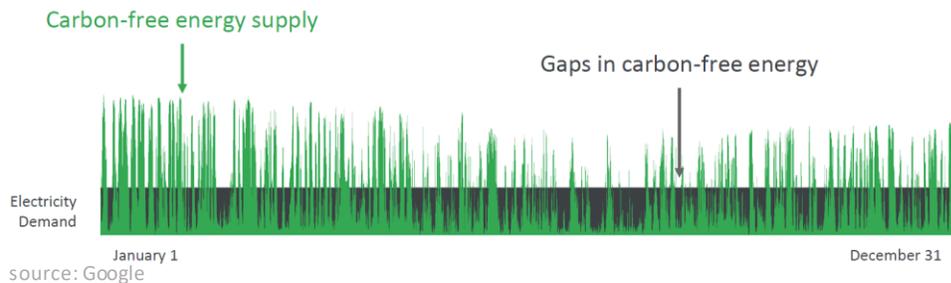
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# Trends Where Large Energy Consumers Want to Lead

1

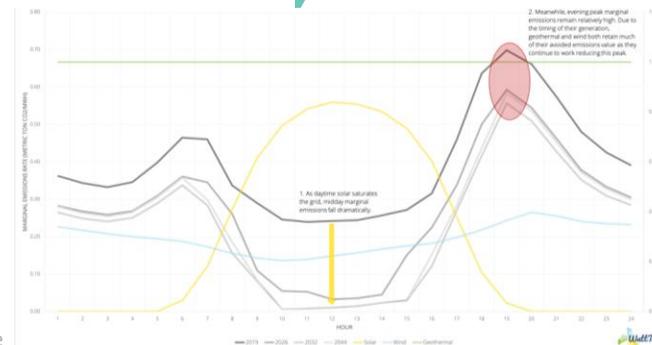
**Transitioning from 100% RE goals  
to  
24-7/365 zero carbon**



2

**New/Additional  
Projects**

**Material Impact  
Projects**



3

**Policy & Regulatory  
Engagement**



4

**More International  
Procurement**



5

**Focus on Supply  
Chain Partners**



6

**Impact Beyond  
Carbon**



Thank you!

