

US Corporate Renewable Energy Procurement Market

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REvision 2017

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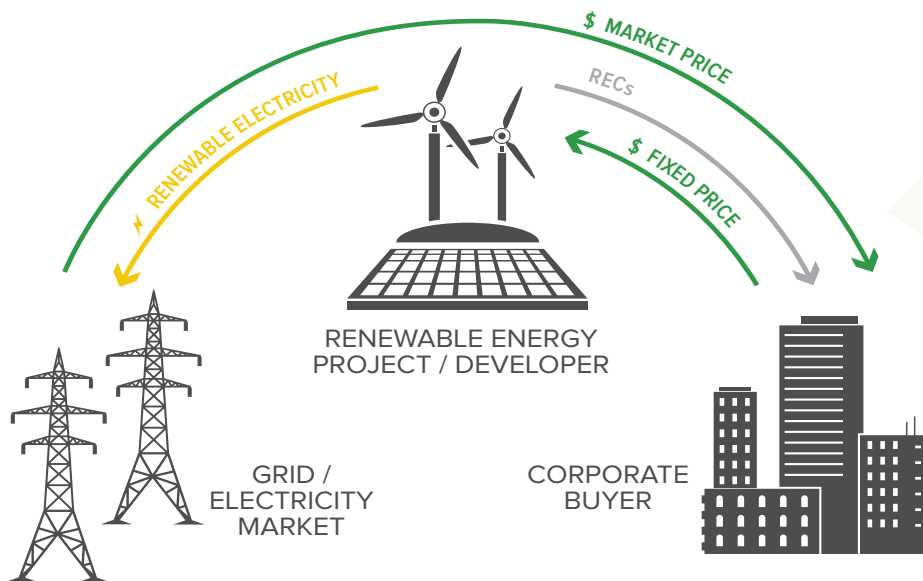


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(Virtual) Power Purchase Agreements (US)

The main instrument used by corporate buyers of renewable energy in the USA

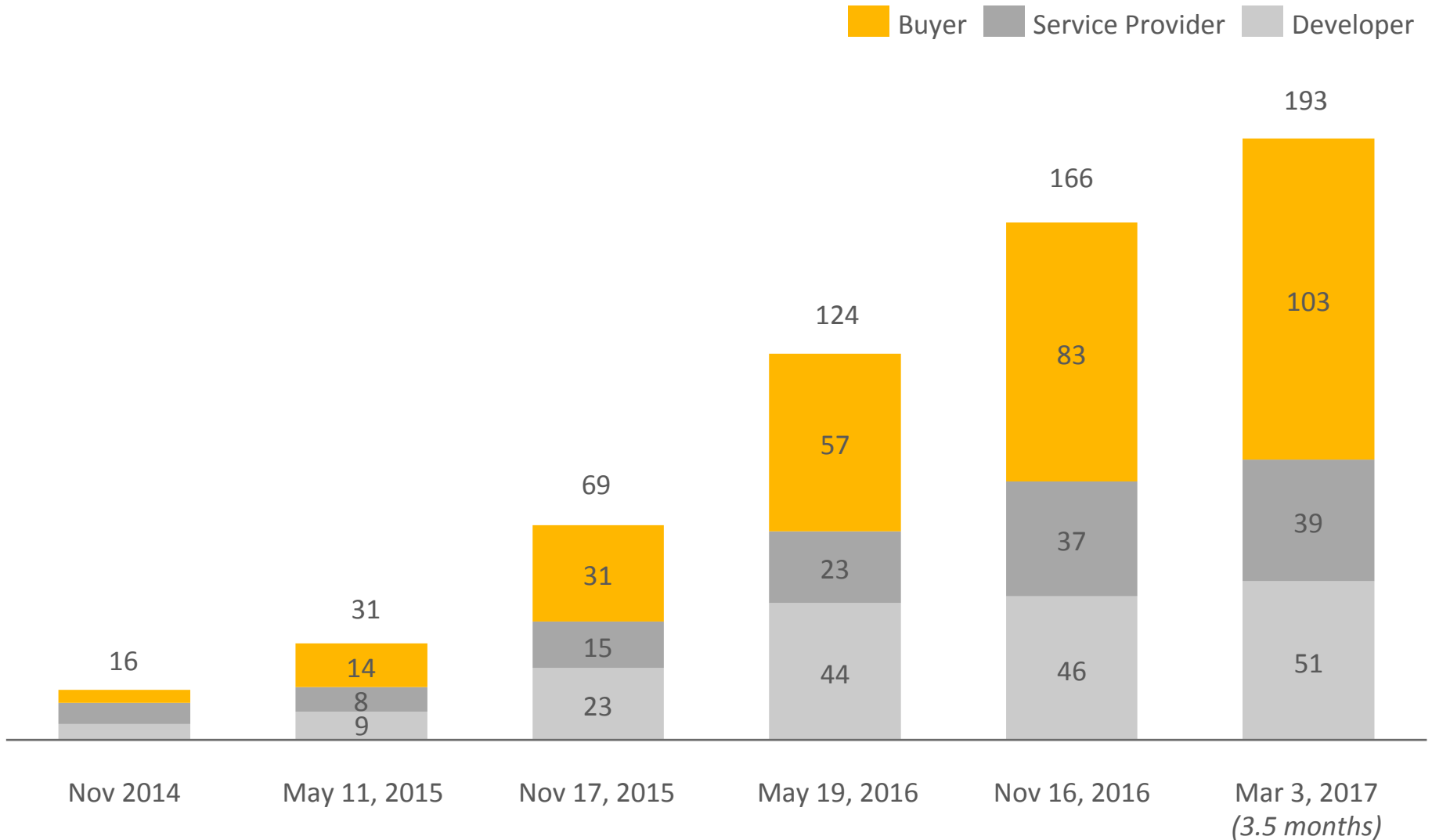


Key features of a virtual PPA

- Needs a spot wholesale electricity market
- “Contract for differences” (fixed vs. spot)
- No utility involved
- Used by developers to raise finance
- Used by corporate buyers to:
 - Source renewable energy credits
 - Claim additionality
- No interference with utility supply

What is the Business Renewable Center?

A community of buyers, sellers and intermediaries in renewable energy



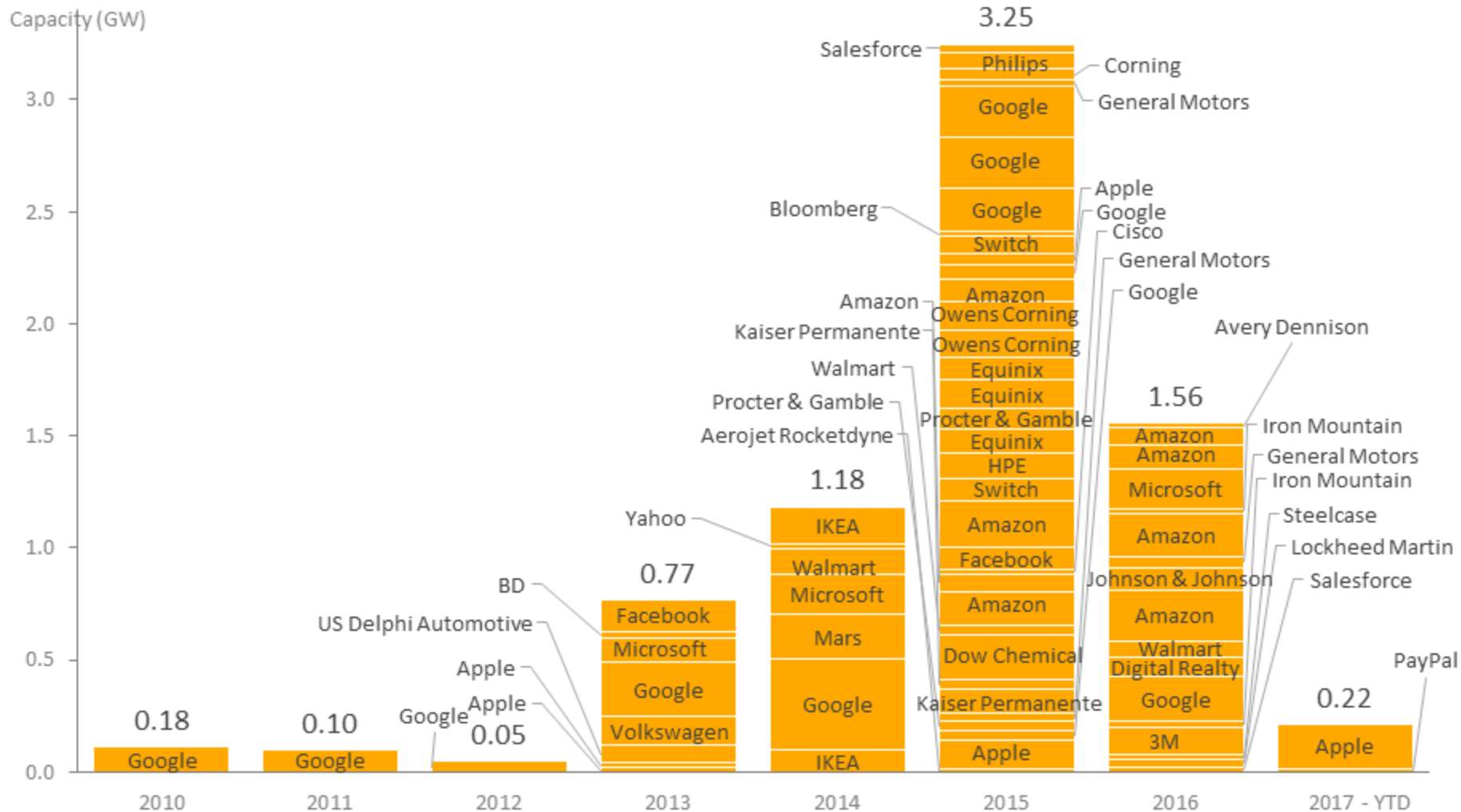
Who are the leaders?

What are the challenges?

Who can help?

A 1-3 GW US market in recent years

Off-site corporate renewable deals – 2010-2017 YTD - USA



Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US and Mexico, 2010 – 2017. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. Last updated: March 3, 2017.

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35 Corporations Have Signed Deals to date

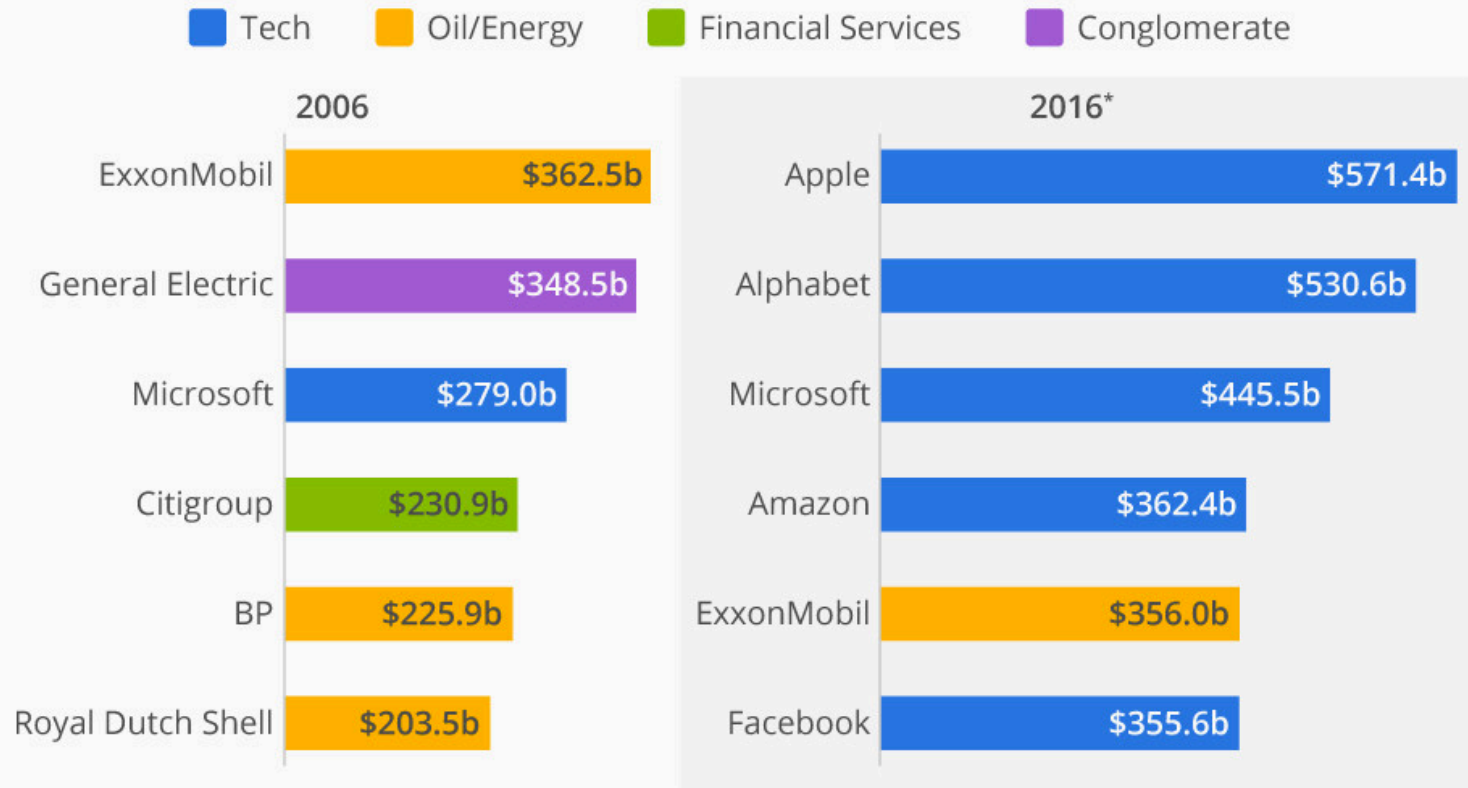
Off-site corporate renewable deals – 2010-2017 YTD - USA

Buyer		Capacity (MW)
Google	F 500	1861
Amazon	F 500	1135
Microsoft	F 500	463
Apple	F 500	420
Walmart	F 500	387
Equinix		330
IKEA		263
Owens Corning	F 500	250
Facebook	F 500	241
Dow Chemical	F 500	200
Mars		200
Switch		179
Kaiser Permanente		153
Procter & Gamble	F 500	138
Volkswagen		130
3M	F 500	120
General Motors	F 500	114

Buyer		Capacity (MW)
HPE	F 500	112
Johnson & Johnson	F 500	100
Digital Realty		88
US Delphi Automotive		80
Philips		70
Salesforce	F 500	64
Iron Mountain		52
Corning	F 500	50
BD	F 500	30
Lockheed Martin	F 500	30
Steelcase		25
Yahoo		23
Avery Dennison		20
Bloomberg		20
Cisco	F 500	20
Paypal	F 500	15
Aerojet Rocketdyn		12
SC Johnson		11

The Age of Tech

Market capitalization of the world's most valuable public companies



Tech leaders and corporate PPAs

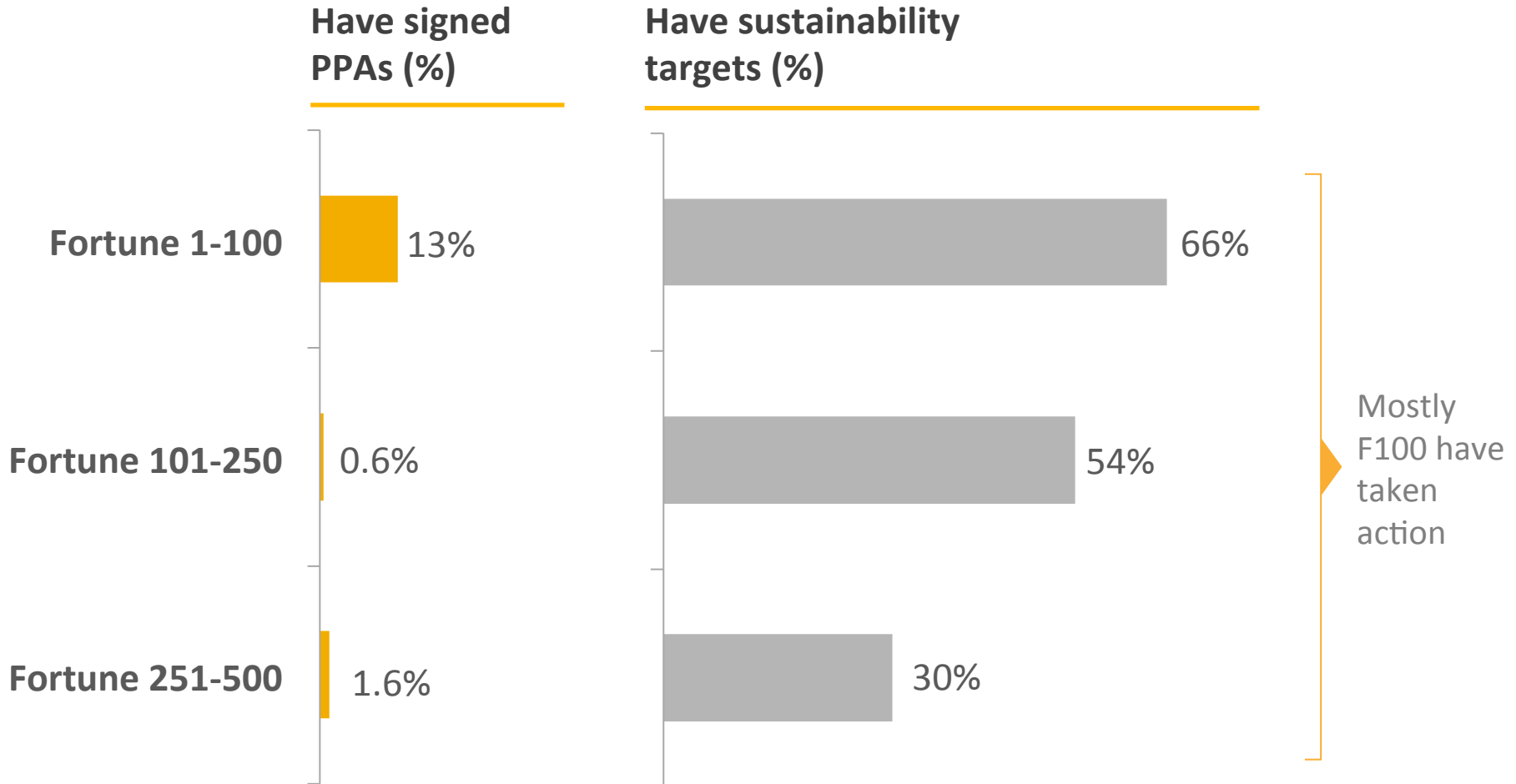
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Buyer		Capacity (MW)
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PPAs are 10x more likely with Fortune 100

US off-site corporate PPAs



Source: Power Forward 2.0 – WWF, Ceres, Calvert, DGA; RMI Analysis

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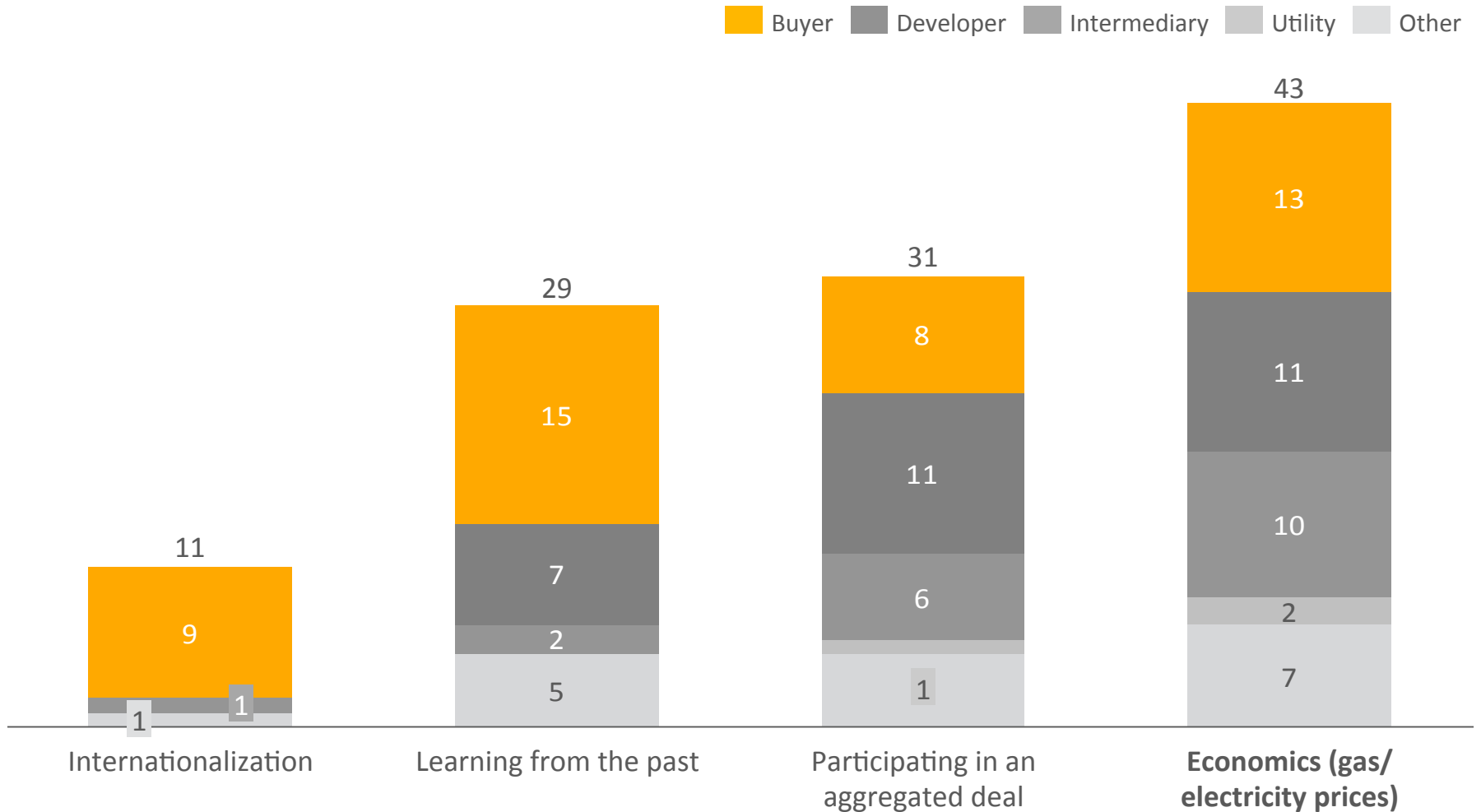
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What are the challenges?

Who can help?

Most important barriers to market growth

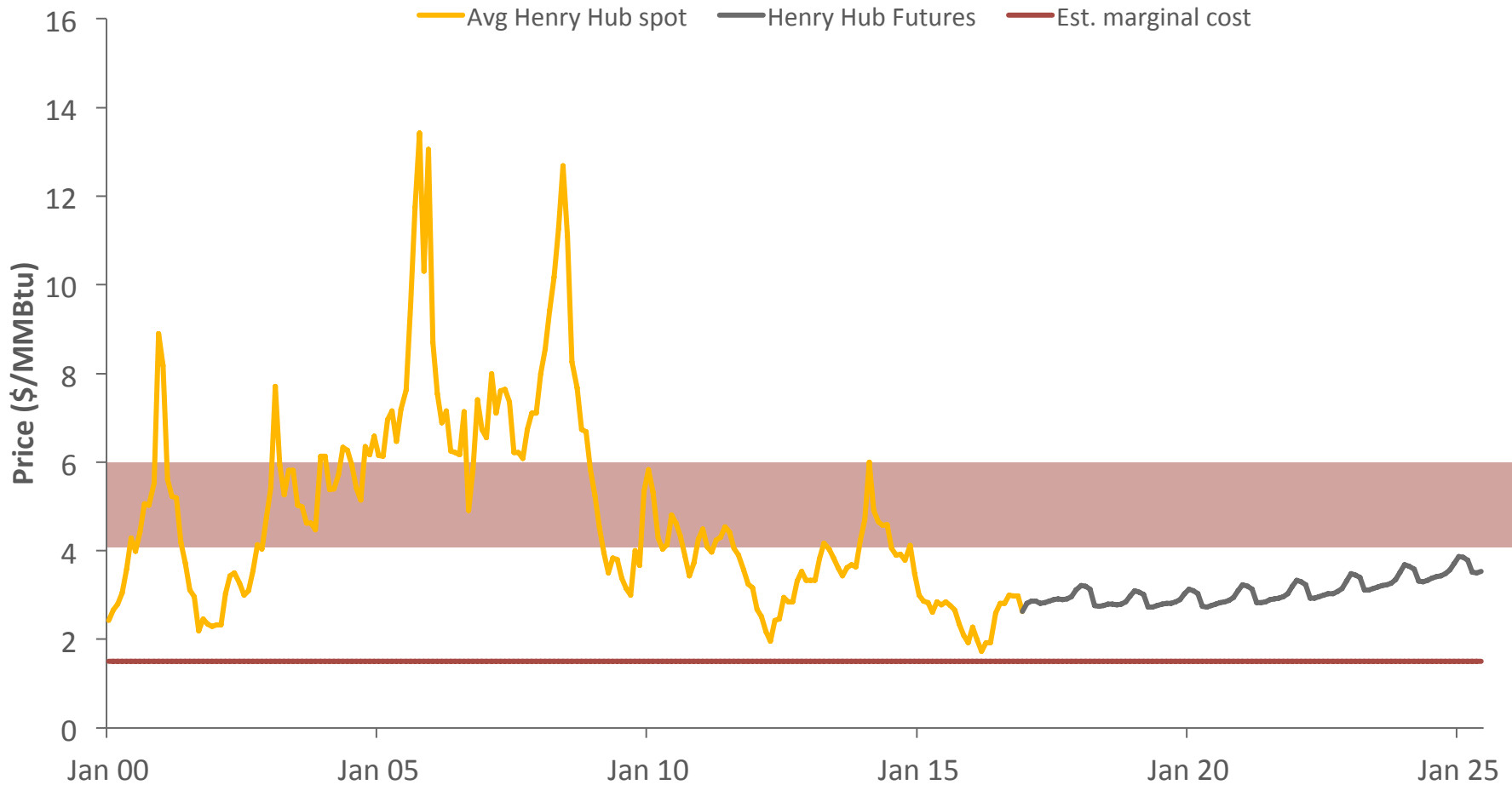
Results of electronic voting (# votes) at the BRC meeting in Detroit, Nov 2016



Historically low US gas prices

Is it really that bad a time for a buyer to sign a PPA in the US?

Henry Hub Natural Gas Prices – Historical and Futures



Source: EIA, Thomson Reuters, CME Group, Forbes

Who are the leaders?

What are the challenges?

Who can help?

Our Marketplace is global

Corporate buyers can use our platform to solicit projects anywhere on the planet



“I have received many responses to the requests posted in the Marketplace. I am very optimistic that the Marketplace will improve the speed at which we connect with suppliers.” – *BRC corporate buyer*

Thank You

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