October 2023

REI workshop: Corporate procurement

Lessons learned from the US market

CEBA
Clean Energy Buyers Association

Today’s meeting objectives and agenda

Objectives

- To develop a shared understanding of best practices in corporate renewable energy procurement from US experience
- To meet others who are thinking about the same challenges

Agenda

- Welcome; the use of our time today
- US market trends
- VPPA accounting and risk concerns (US GAAP and IFRS)
- Supply chain & aggregation

Appendix A: Balance of US market negotiation power

Appendix B: Move towards purpose-driven procurement

Appendix C: VPPA cash flow structure

Appendix D: Additional accounting details

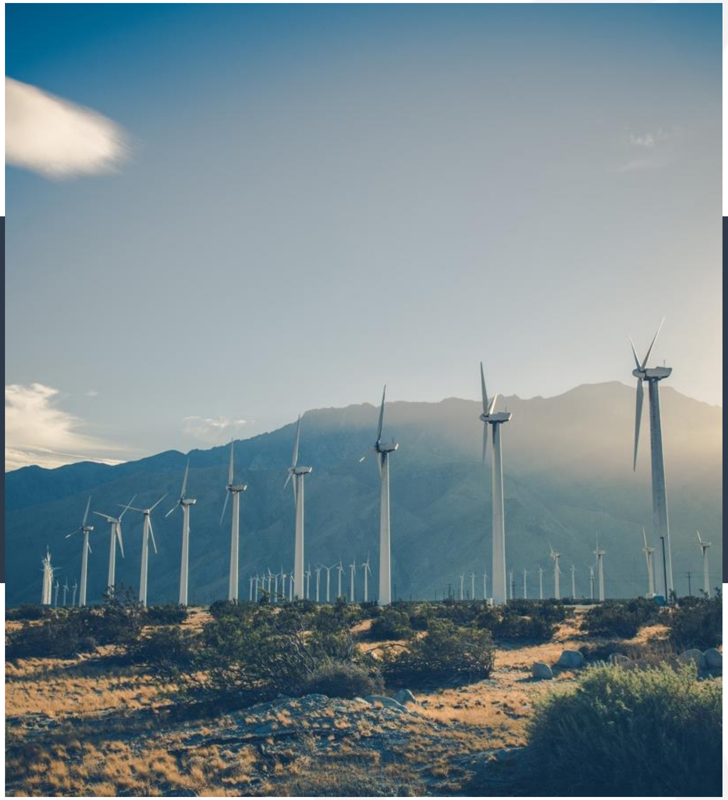
Appendix E: Lessons learned from US deals

Appendix F: Highlight supplier selection insights

Presenting

Mark Porter

Vice President

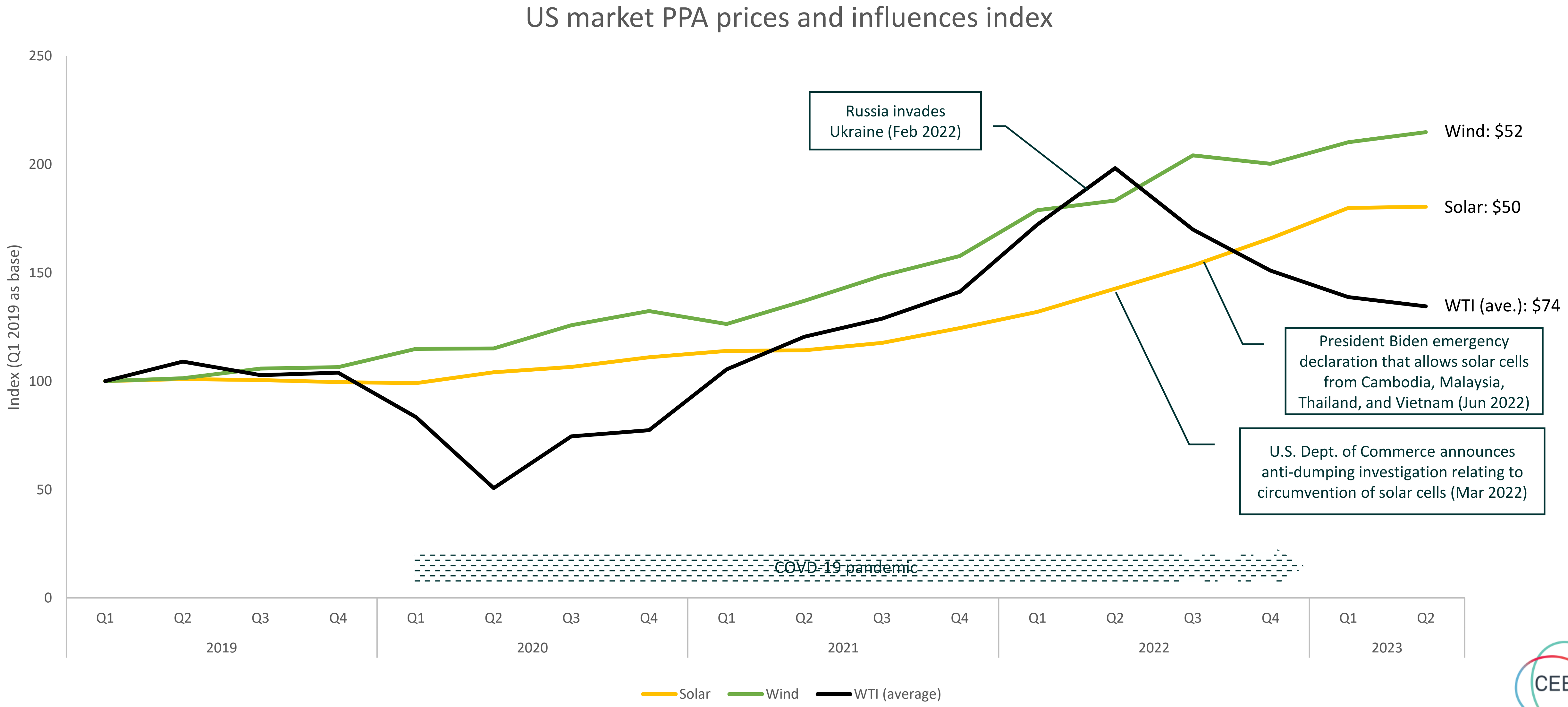


US market trends

VPPA accounting and risk concerns

Supply chain & aggregation

While US solar PPA rates have been remarkable resilient to the market shocks and tracked the market, flat Q2 2023



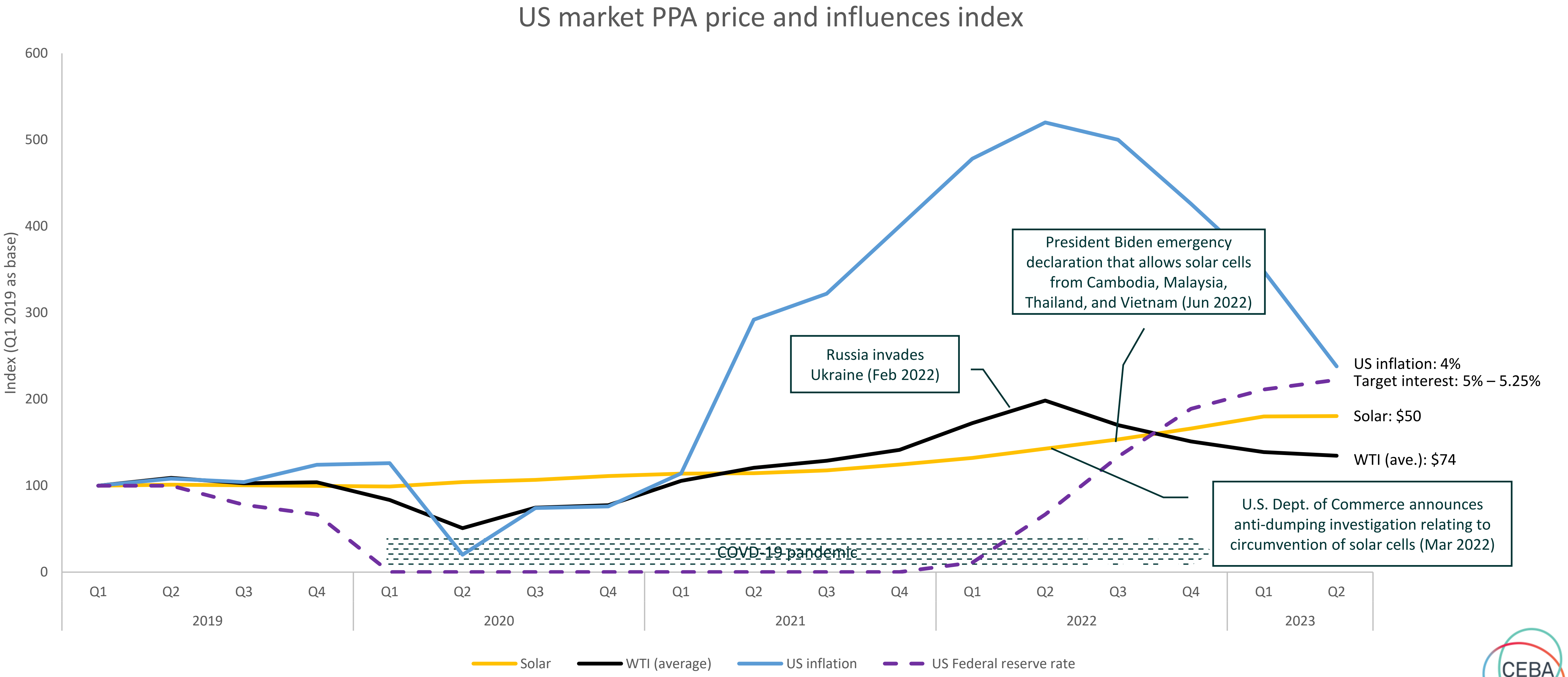
Russia invades Ukraine (Feb 2022)

President Biden emergency declaration that allows solar cells from Cambodia, Malaysia, Thailand, and Vietnam (Jun 2022)

U.S. Dept. of Commerce announces anti-dumping investigation relating to circumvention of solar cells (Mar 2022)

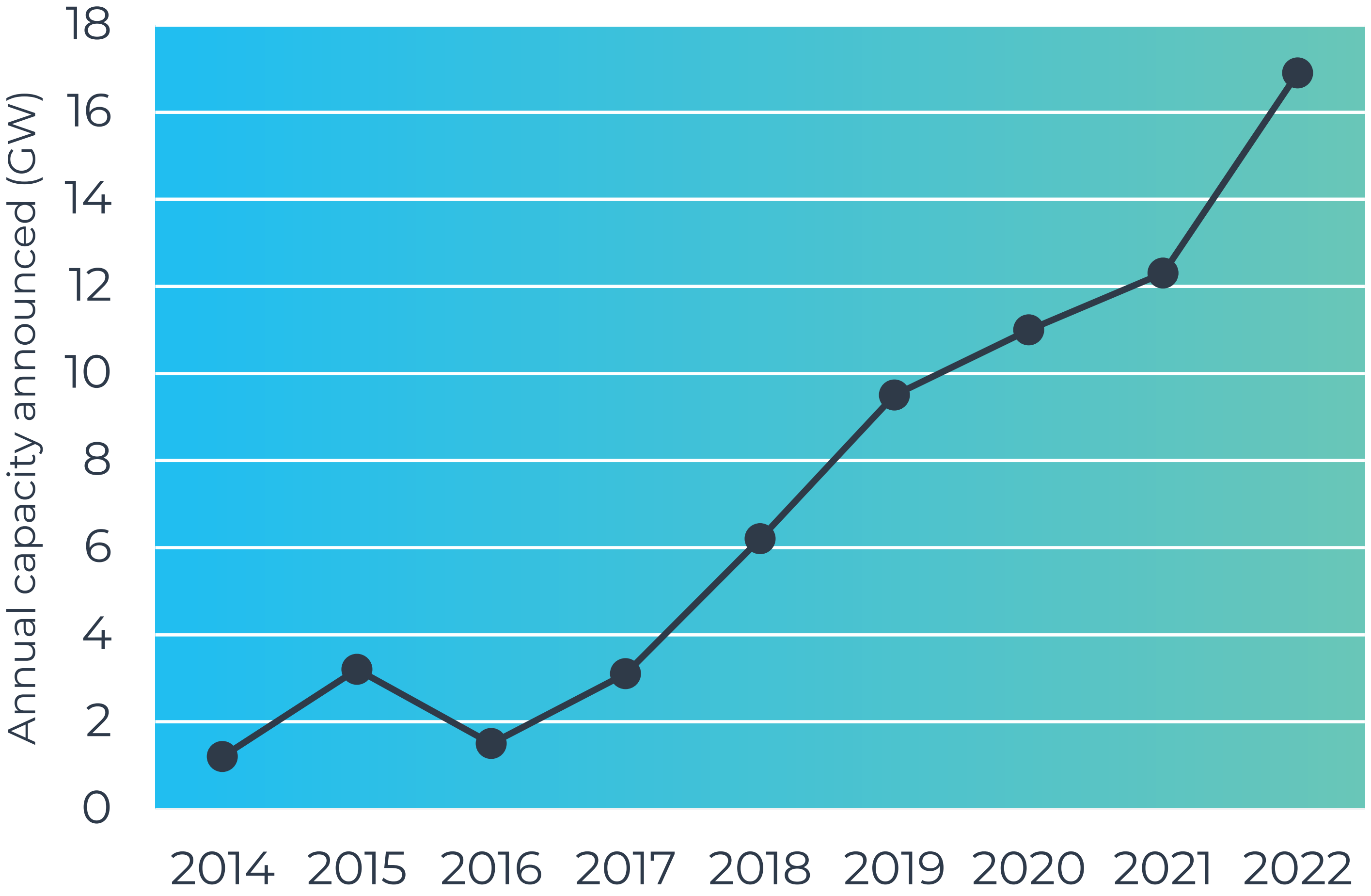
Sources: LevelTen Energy (PPA prices), EIA (West Texas Intermediate prices), U.S Department of Commerce website (solar cell investigation), US Inflation Calculator (US inflation), Federal Reserve Board of Governors meeting minutes (Federal reserve rates)

Relatively gradual US PPA-rate increases have occurred during a volatile macro environment



Sources: LevelTen Energy (PPA prices), EIA (WTI prices), U.S Department of Commerce website (solar cell investigation)

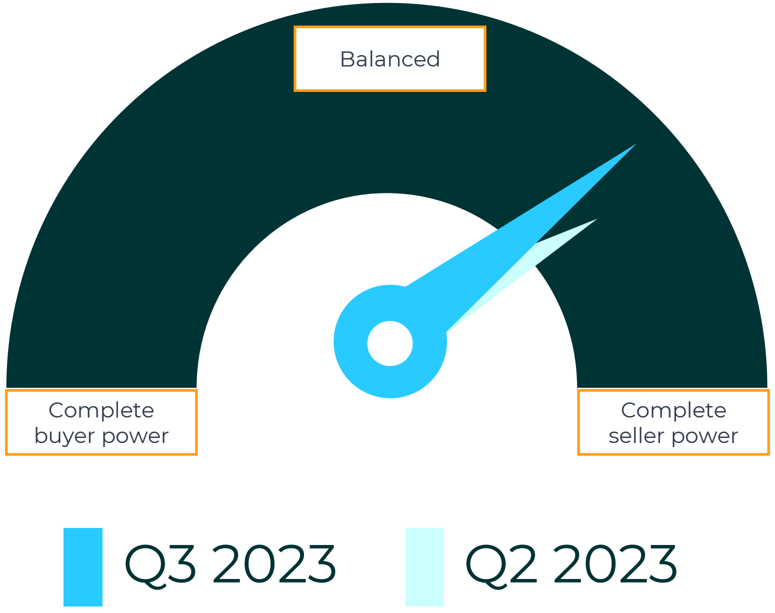
The GW volume of announced transactions in the US increased in 2022 despite being a sellers' market



2022: **17 GW** contracted capacity announced, exceeding 2021 by **38%**

68 GW contracted to Q1 2023

Sellers' market



Over 180 companies have announced utility-scale clean energy deals since 2014 in the US

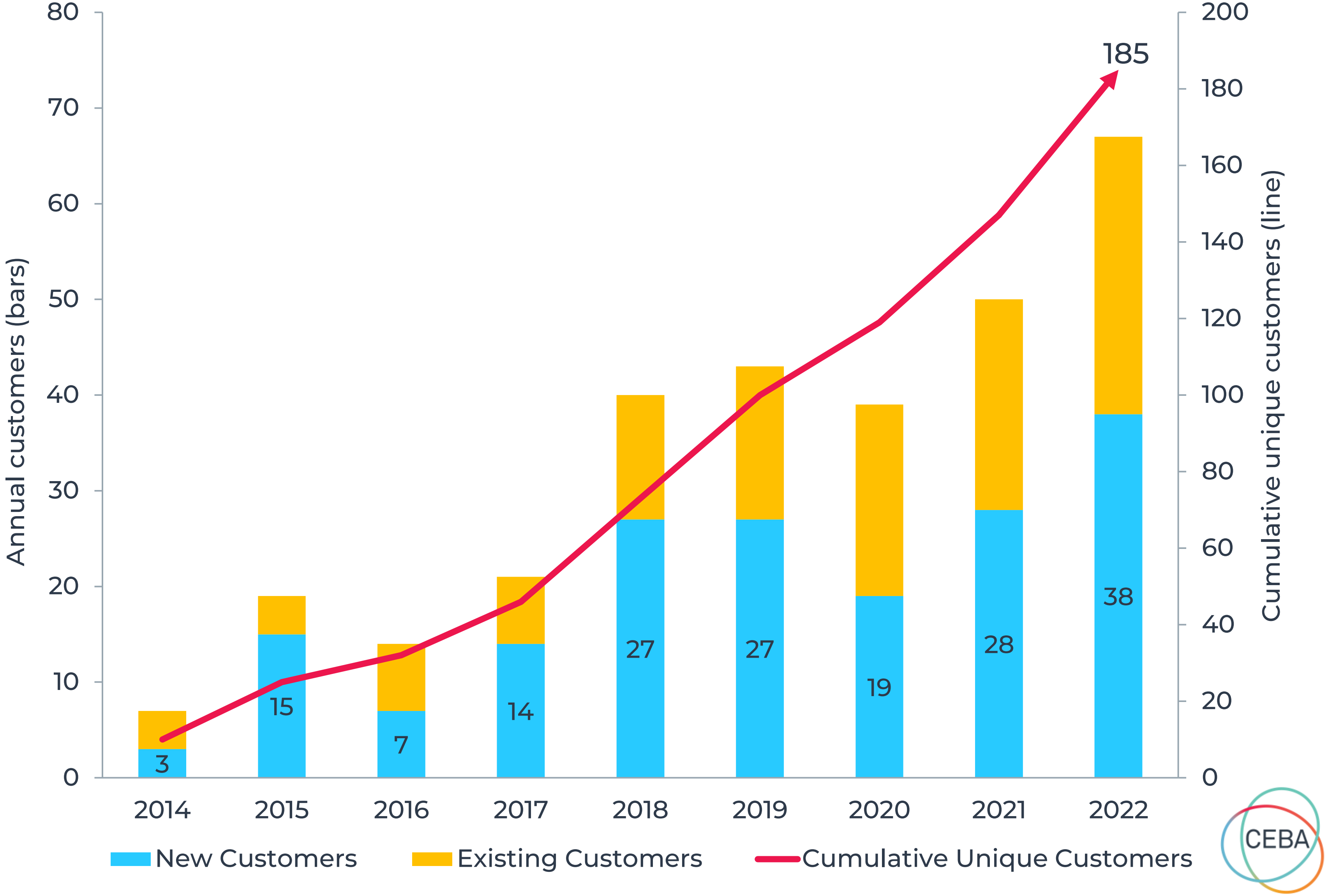
2022 highlights

67 companies announced clean energy deals

- 26% increase over 2021

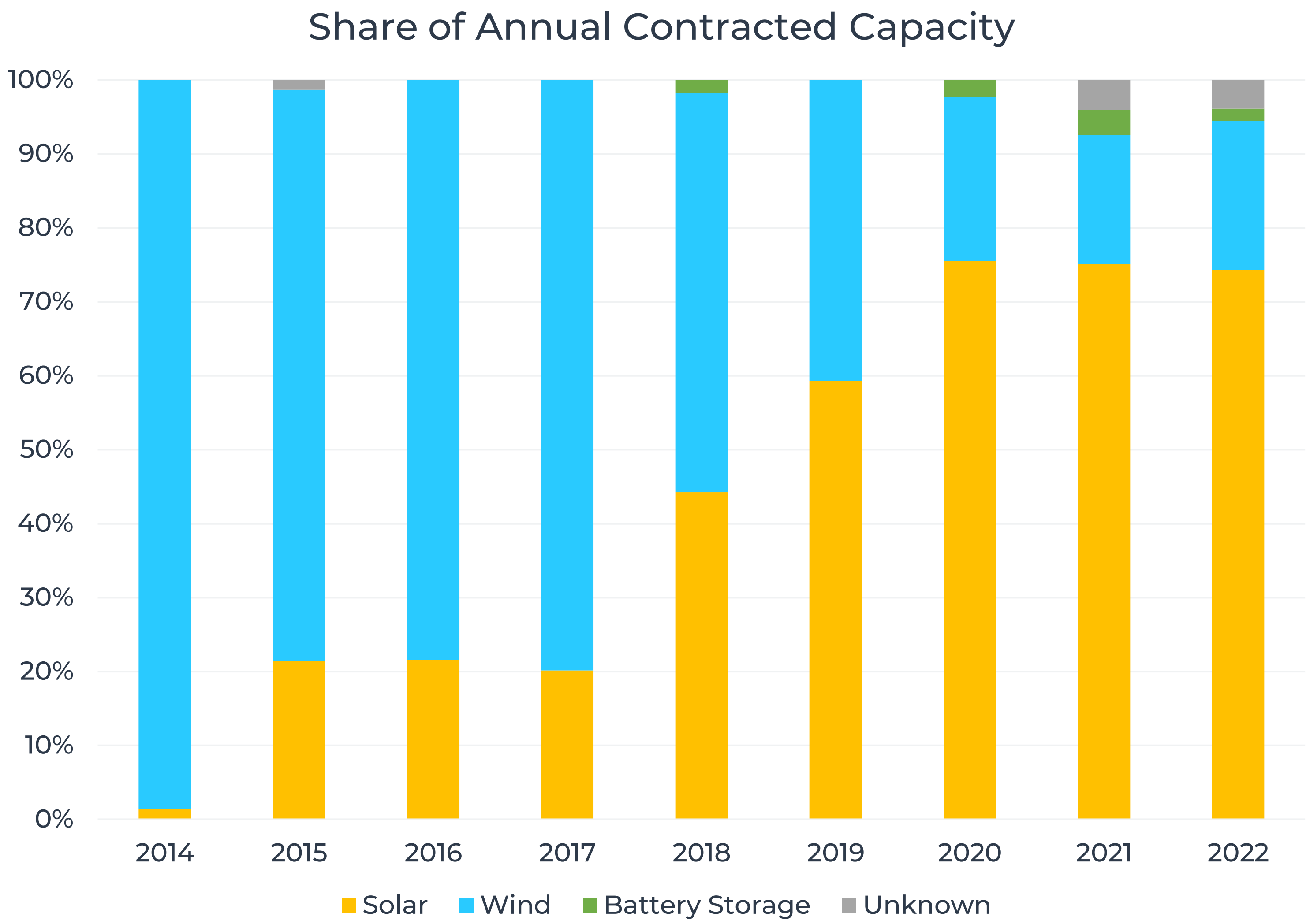
38 new customers

CEBA buyer members involved in **84%** of deals



CEBA

Solar remains the technology of choice in the US, despite considerable equipment supply challenges



Solar represented 74% (12.9 GW) of contracted capacity in 2022

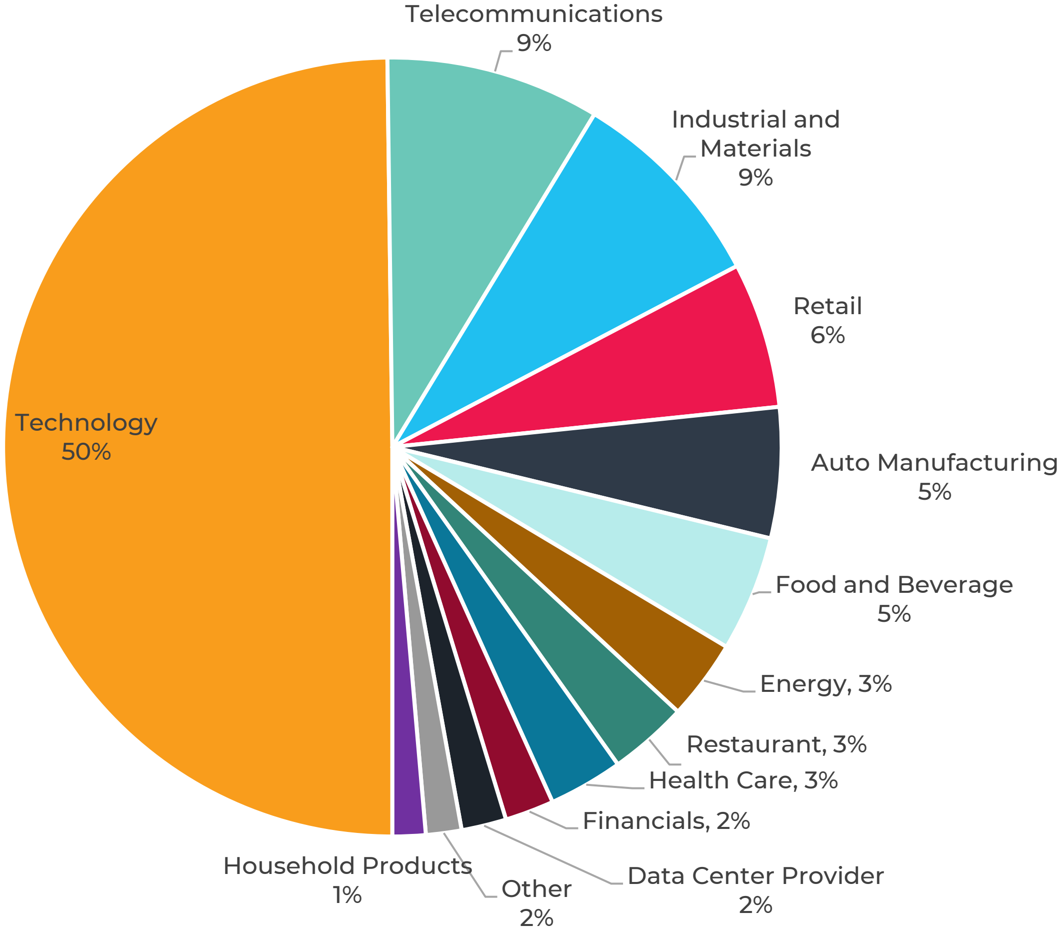
Wind represented 20% (3.4 GW) of deals in 2022

In 2022, solar was the favored technology for deals in every region except the Southwest Power Pool

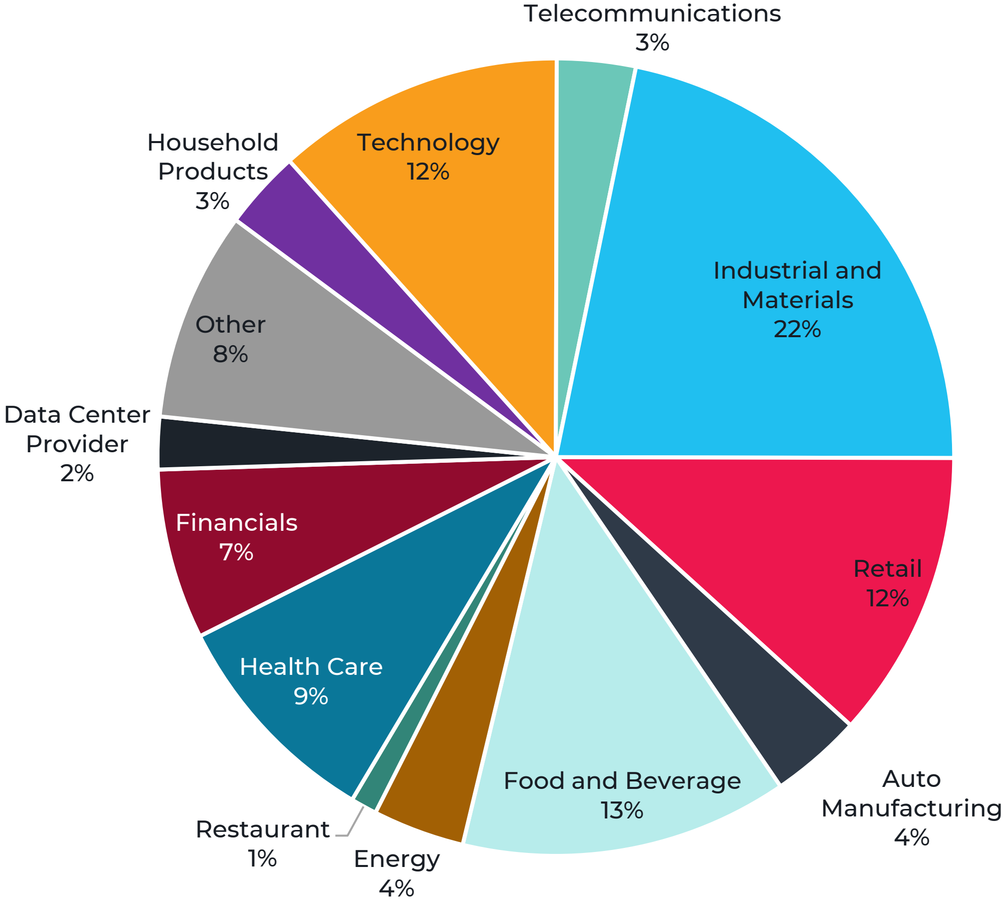
IRA clean energy tax credits now allow solar to claim PTC and allow storage to qualify for ITC

Unlike capacity, company participation is relatively evenly spread across sectors in the US

Share of Capacity Procured by Sector, 2014-2022



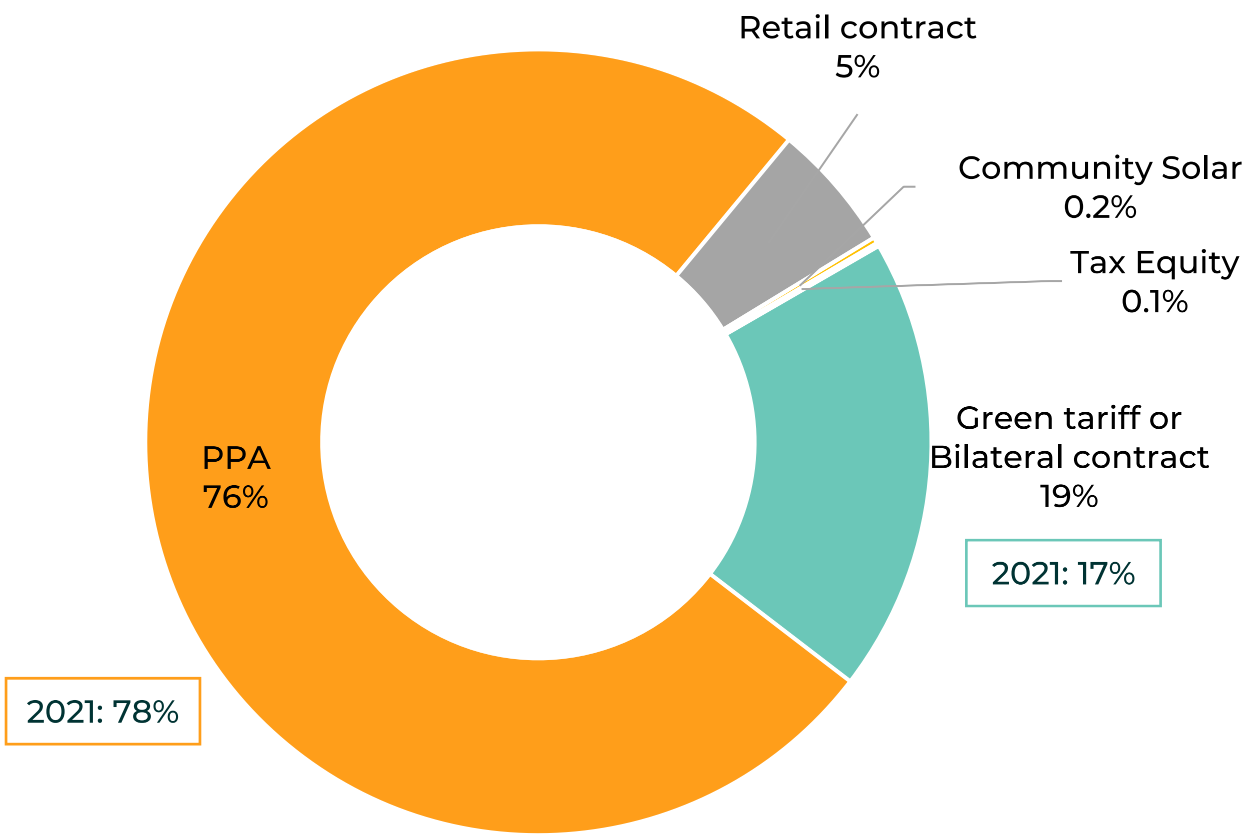
Number of Customers by Sector, 2014-2022

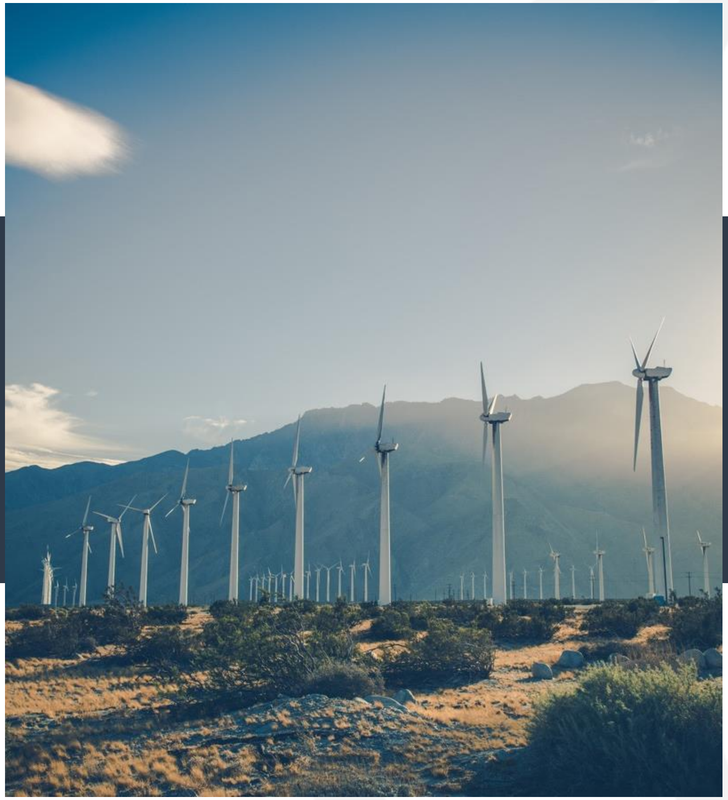


PPAs remain dominant procurement mechanism in the US, utility participation through green tariffs is growing

- ERCOT saw highest share of PPAs in 2022, followed by PJM and MISO
- Over 3 GW of green tariff or bilateral utility deals in 2022
  - Highest year for utility deals
- MISO only organized region with green tariff activity in 2022
- PPAs represent 75% of capacity contracted since 2014; utility deals represent 21%

Procurement Mechanisms by Capacity, 2022





US market trends

VPPA accounting and risk concerns

Supply chain & and aggregation

Why financial accounting is important (US GAAP)

Primary takeaways	• Accounting is the biggest transaction killer • There are three issues to be considered • There are ways to manage all of them
Two 'regulations' to consider	The Dodd-Frank Act - reporting **Federal Accounting Standards Board (FASB)**

Three FASB standards

1. Variable interest entities
2. Lease accounting treatment
3. Derivative accounting treatment

Financial accounting standards that matter

Variable interest entities

Balance sheet consolidation

Do the PPA terms give the buyer control the project?

US GAAP
Control the project?

Lease accounting treatment

Balance sheet consolidation

Do the PPA terms read like a lease?

US GAAP	IFRS 16
Control the project?	Substantially all economic benefits?

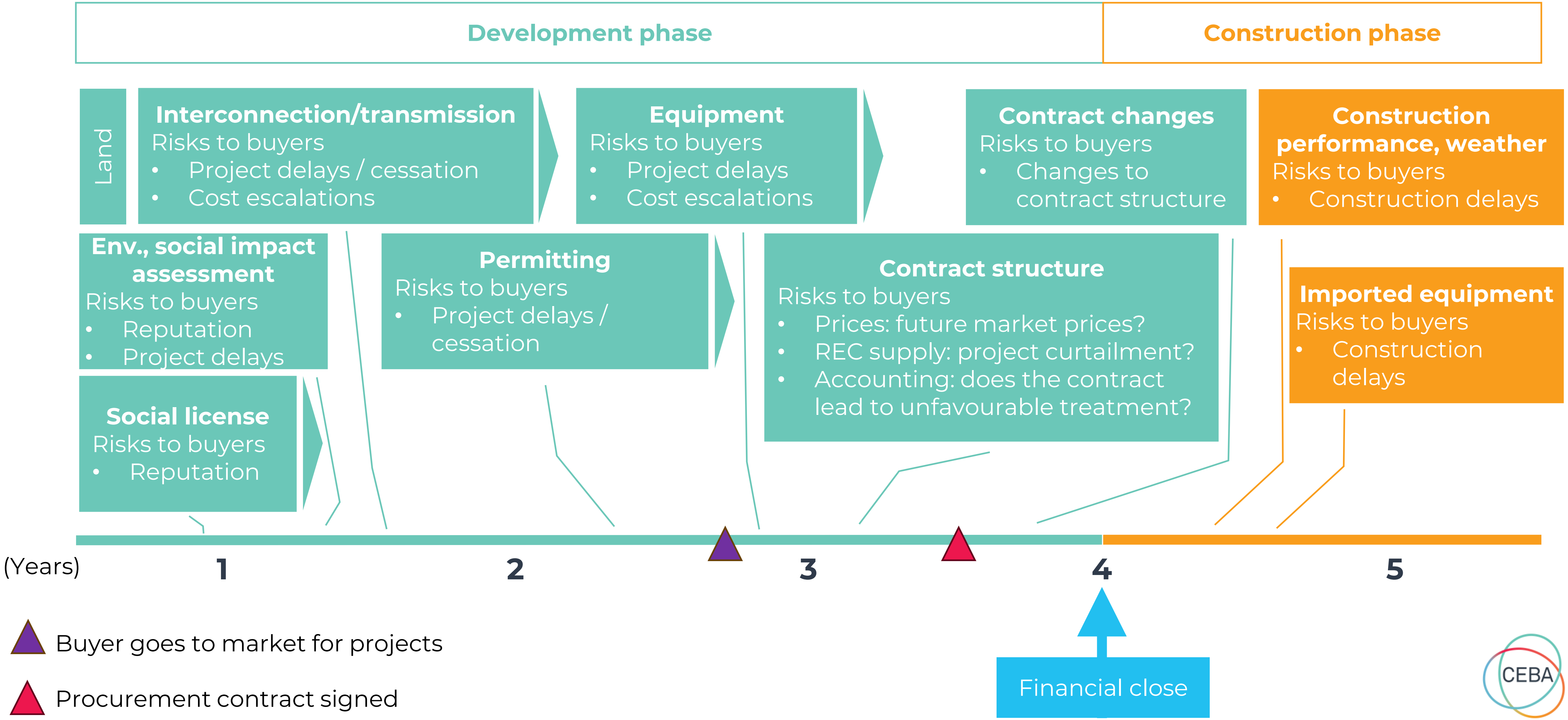
Derivative accounting treatment

Mark-to-market accounting

Does the PPA include a derivative value?

US GAAP	IFRS 9
Contract for % of output to avoid	Will be treated as a derivative

Market and project risks to be aware of leading up to commercial operating date (COD)



Development phase

Construction phase

Land

Interconnection/transmission

Risks to buyers

- Project delays / cessation
- Cost escalations

Equipment

Risks to buyers

- Project delays
- Cost escalations

Contract changes

Risks to buyers

- Changes to contract structure

Construction performance, weather

Risks to buyers

- Construction delays

Env., social impact assessment

Risks to buyers

- Reputation
- Project delays

Permitting

Risks to buyers

- Project delays / cessation

Contract structure

Risks to buyers

- Prices: future market prices?
- REC supply: project curtailment?
- Accounting: does the contract lead to unfavourable treatment?

Imported equipment

Risks to buyers

- Construction delays

Social license

Risks to buyers

- Reputation

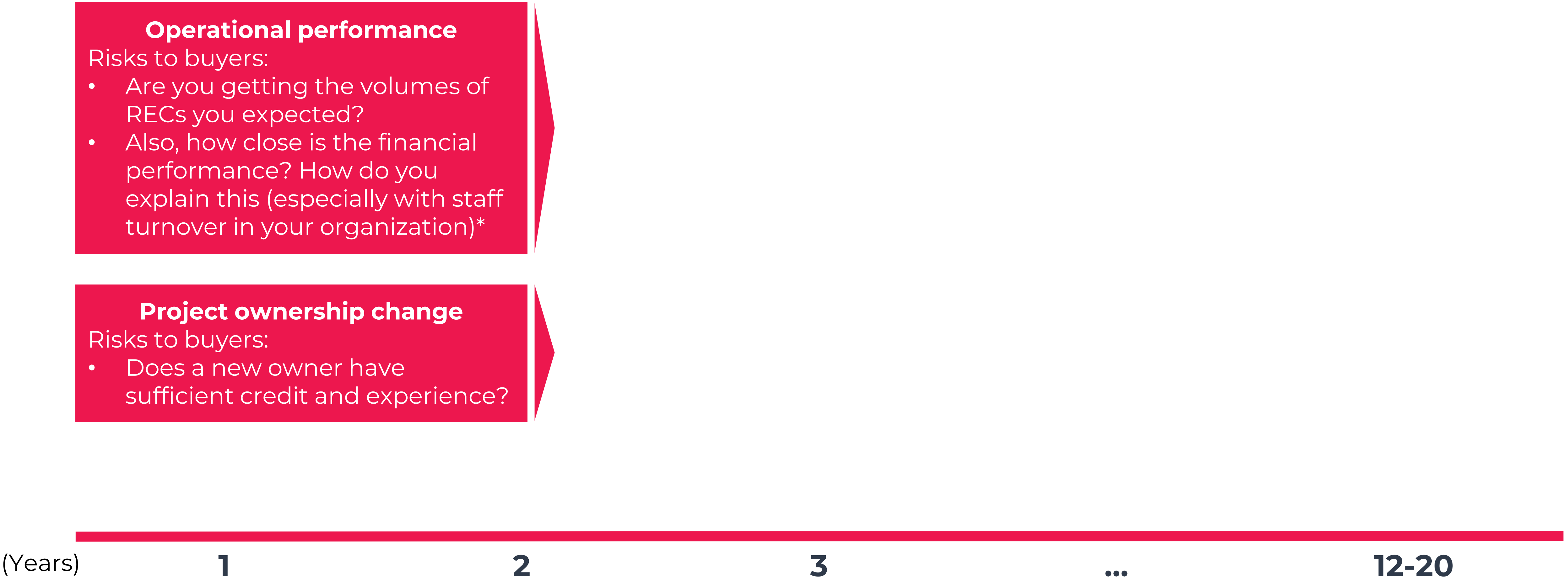
(Years) 1 2 3 4 5

Financial close

▲ Buyer goes to market for projects

▲ Procurement contract signed

Market and project risks to be aware of following commercial operating date (COD)



Operational performance

Risks to buyers:

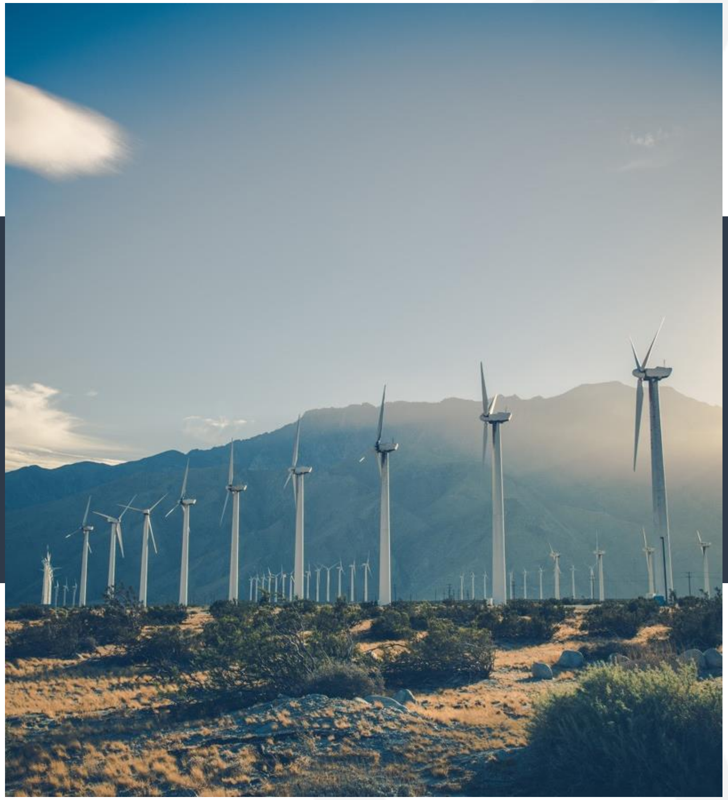
- Are you getting the volumes of RECs you expected?
- Also, how close is the financial performance? How do you explain this (especially with staff turnover in your organization)*

Project ownership change

Risks to buyers:

- Does a new owner have sufficient credit and experience?

* Not a 'risk' per se but worth being aware of



US market trends

VPPA accounting and risk concerns

Supply chain & aggregation

Five company aggregation transaction that collectively contracted < 50% of a project's output

COX ENTERPRISES

workday

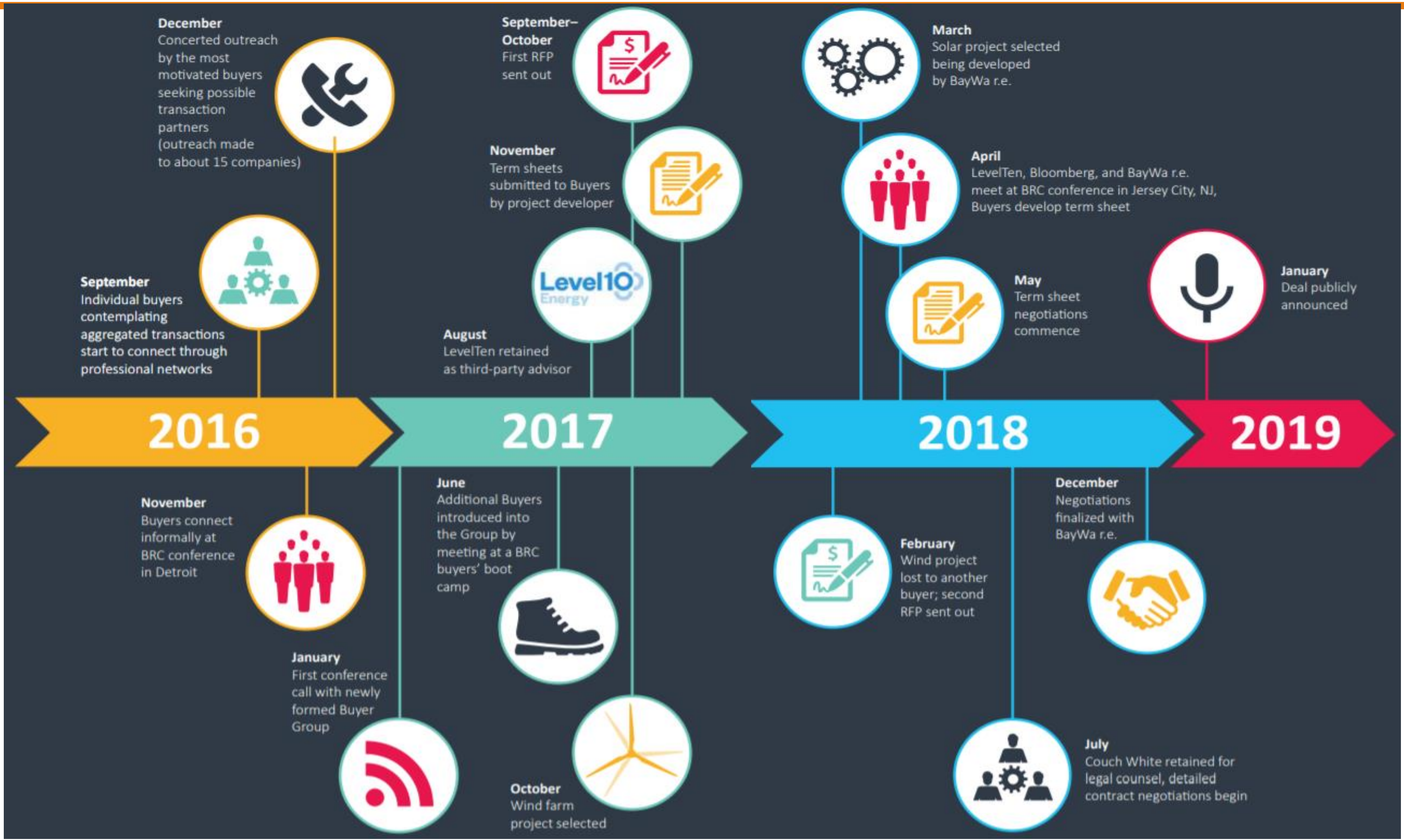
GAP

salesforce

Bloomberg

- Five individual buyers
- ~5-10 MW tranches
- Combined 42.5 MW of a 100 MW solar project
- Price identical for each buyer
- Transaction expenses where shared equally for each buyer
- The transaction utilized a blended credit rating
- Each buyer executed its own contract, assumed its own liability

The ‘heavy’ aggregated transaction took about two years in a ‘buyer’s market’



2016

September
Individual buyers contemplating aggregated transactions start to connect through professional networks

November
Buyers connect informally at BRC conference in Detroit

December
Concerted outreach by the most motivated buyers seeking possible transaction partners (outreach made to about 15 companies)

2017

January
First conference call with newly formed Buyer Group

June
Additional Buyers introduced into the Group by meeting at a BRC buyers’ boot camp

August
LevelTen retained as third-party advisor

September–October
First RFP sent out

October
Wind farm project selected

November
Term sheets submitted to Buyers by project developer

2018

February
Wind project lost to another buyer; second RFP sent out

March
Solar project selected being developed by BayWa r.e.

April
LevelTen, Bloomberg, and BayWa r.e. meet at BRC conference in Jersey City, NJ, Buyers develop term sheet

May
Term sheet negotiations commence

July
Couch White retained for legal counsel, detailed contract negotiations begin

December
Negotiations finalized with BayWa r.e.

2019

January
Deal publicly announced

Creating and maintaining the partnership is of critical importance that is akin to a marathon rather than a sprint

Lessons Learned:

- Importance of a professional network
- Criteria for partner selection
- Developing an upfront project framework
- Common rational for transaction

Partner Selection

- Works well with 3-6 members
- Partner attrition is real
- Experience helps
- Business model alignment helps

Upfront Framework

- Selected VPPA
- No upfront investments
- Geographic flexibility
- Utility relationship not changed

Transaction Rational

- PJM for common load location, maximum emissions reductions
- Single transaction to reduce costs
- Accepting of VPPAs

Finding the right project counterparty who will work with a group of buyers is critical

Lessons Learned:

- Selecting quality external advisors
- RFP issuance and the need for speed
- Negotiating as a group? Expect revisions…
- Common contracts but separate liability

The Deal Team

- Build internal champions!
- External advisors are critical—legal and commercial
- A flexible developer matters

The RFP Process

- From 100 to 10
- A collective term sheet helps
- Move quickly – this group lost their first option

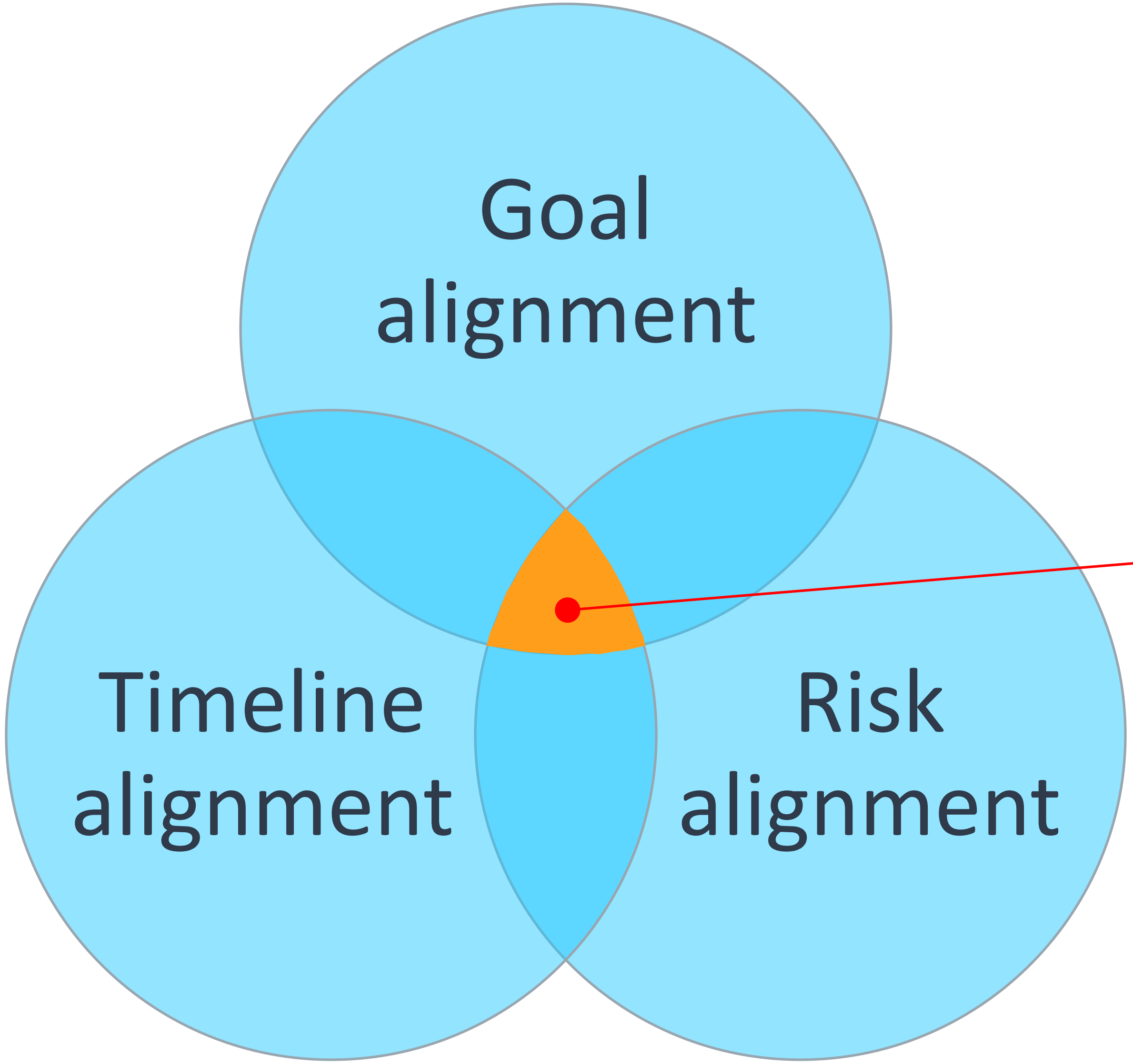
Closing

- Hoped for two revisions, had five
- A single, external counsel helped streamline
- Common contract language was used

Aggregated deals are harder but can diversify risk, few group-deals happening in today's 'seller's market'

Partner selection	Look for partners that are committed and willing to share the workload	Level of 'internal development' is a good filter – timing is key	Strong brands (with strong commitments) make good partners
Group structure	Ensure external advisors are focused on your business needs/objectives	Alignment on attitude towards key risks is critical	Keep governance simple, focus on what is required to procure energy
Execution	Understand what each partner can contribute to share the work	Focus on creating replicable transaction structures/documents	Open conversations with developers early to create an optimal structure

Start aggregation group conversations with three areas of conversation



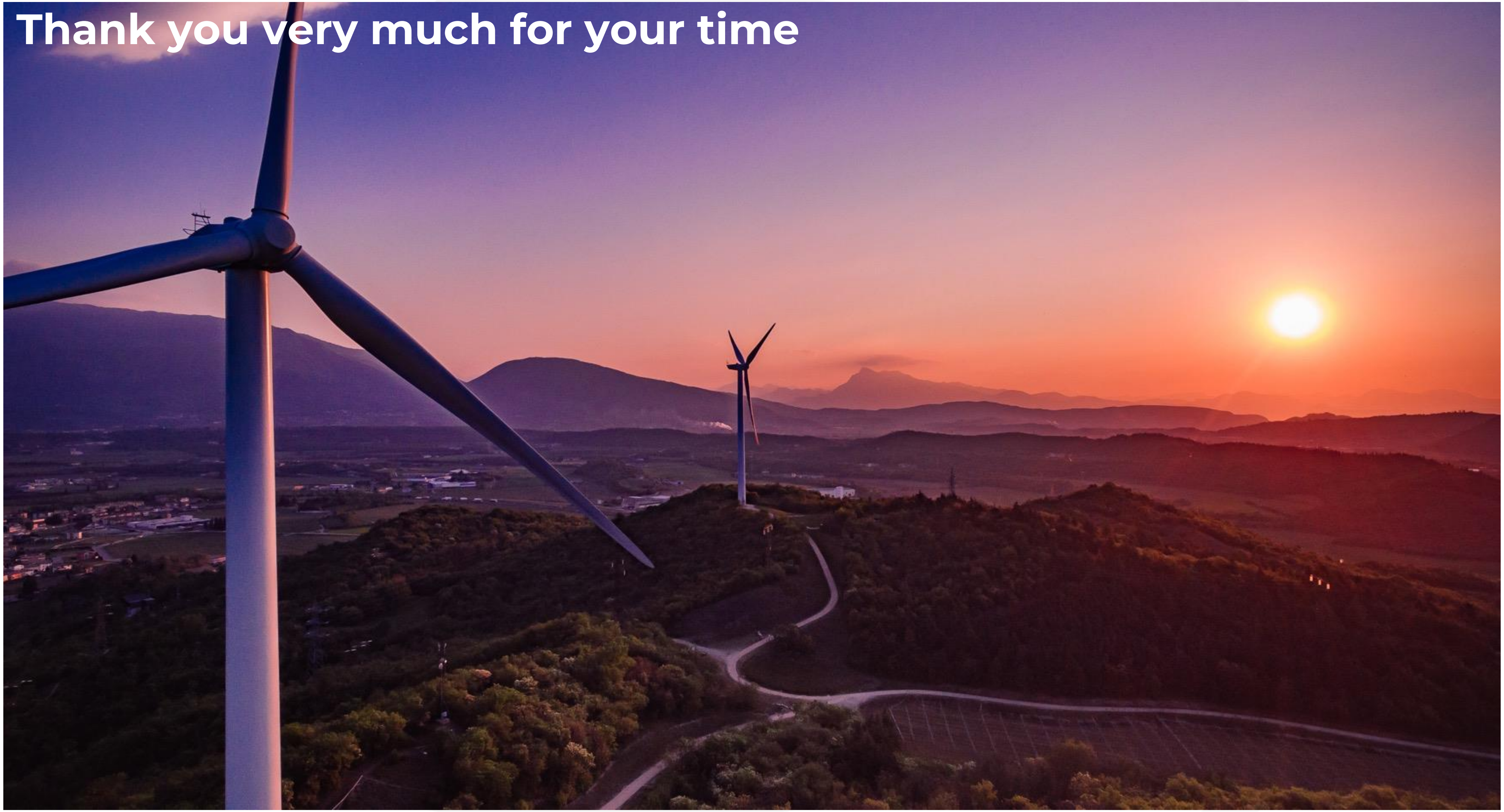
Aggregation groups are best explored when all three areas are aligned at a high-level between partners

Aggregation partners can be within industry, within supply chain, a combination, or none – alignment is key

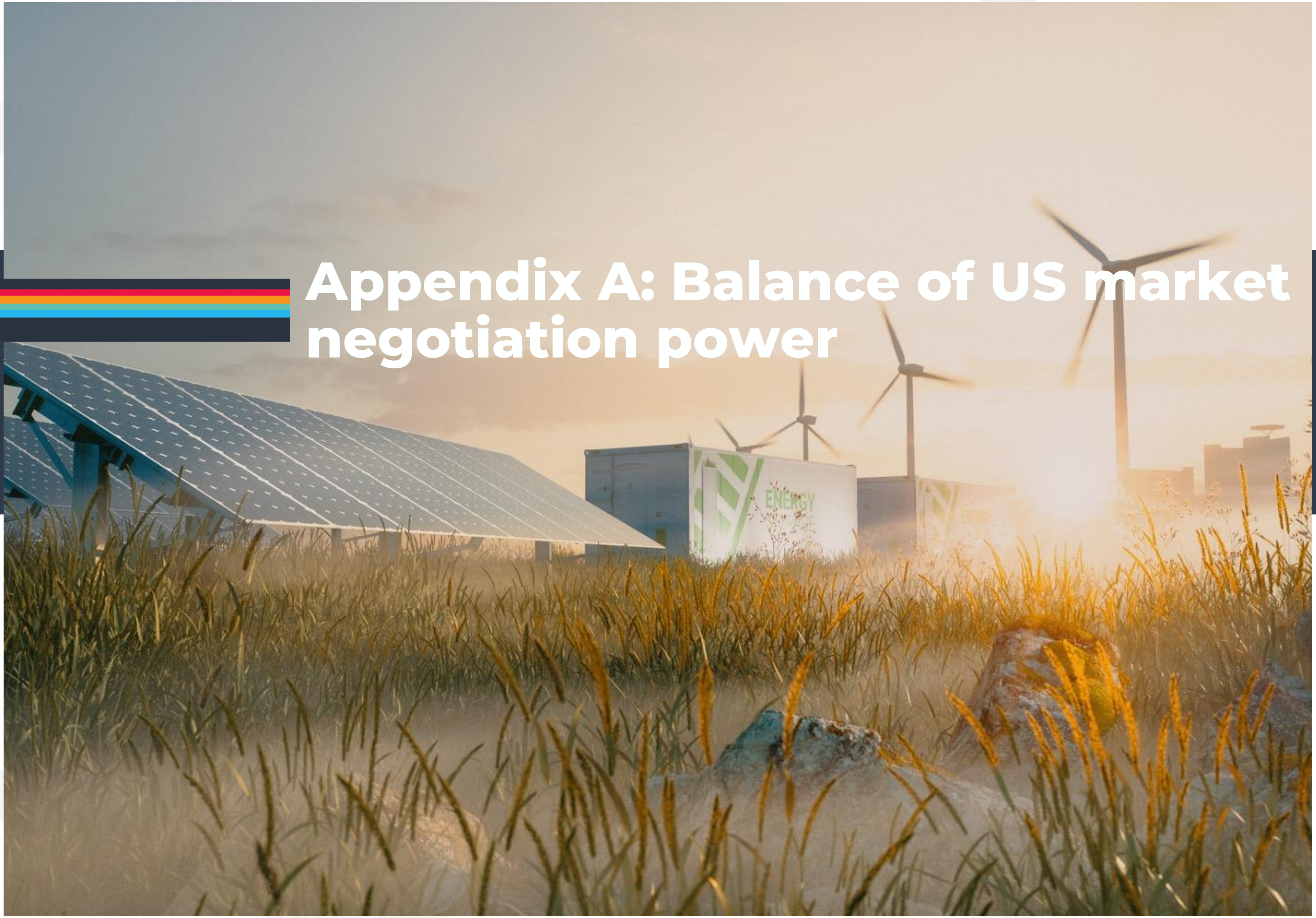
Understanding alignment

Goal alignment	Questions: What are your company's goals? RE100? SBTI? What characteristics are important to your company?
Timeline alignment	Questions: When are your goals due? What are your interim targets (may not be public)? Who is the executive sponsor?
Risk alignment	Questions: Is your business generally (risk) aggressive? Conservative? Does your business welcome new partnerships?

Thank you very much for your time

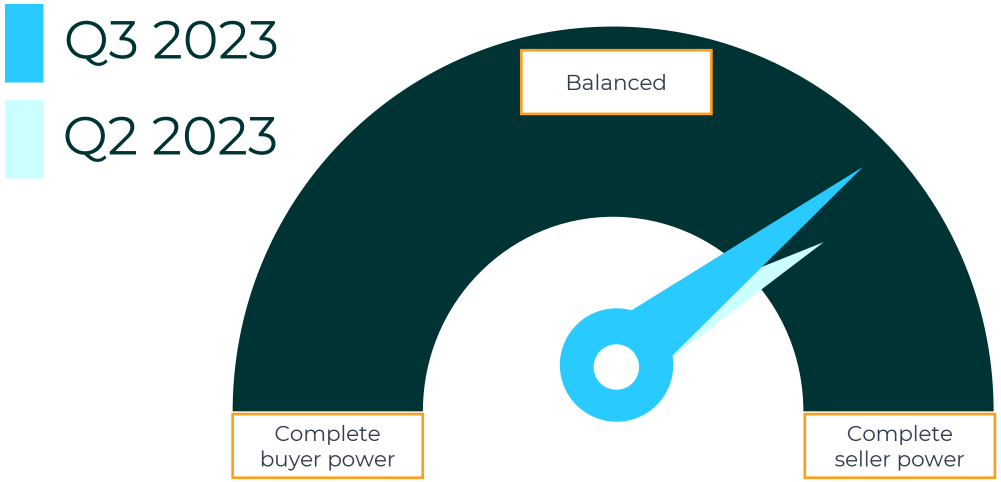


Appendix A: Balance of US market negotiation power



The US market remains a ‘seller’s market’ and shows little sign of being balanced in the near- and medium-term

Transaction negotiation power



Pulls towards buyer-power	Pulls towards seller-power
• Willingness to accept longer-term contracts • Q2 2023: Willingness to accept basis risk sharing clauses (temporary node settlement point) when hub<>node delta would lead to economic curtailment	• Project demand significantly outstripping supply, driven by equipment challenges (solar and battery projects) and transmission delays (wind) • Equipment supply challenges mean only sellers can work with suppliers (who in turn have the power in the equipment market)

Project developers feel they are passing on sell-side pressure from equipment suppliers, who in turn are stymied by import challenges

Source: CEBA estimate following conversations with many industry stakeholders

Clean Energy Buyers Association

Appendix B: Move towards purpose-driven procurement

Companies are pursuing purpose-driven procurement with social, environmental, resilience impacts

Respecting & conserving lands, waters, and biodiversity when siting, designing, developing, and operating clean energy projects.

Valuing long-term efficiency and adaptive capacity of our energy systems by increasing investments in the resilience of regional grid infrastructure and supply chains.

Advancing an equitable and just energy transition that upholds human rights and empowers and restores communities.

2022

14 customers announced **30** deals incorporating purpose-driven procurement principles

- **5** customers were new to the market

Q1 2023

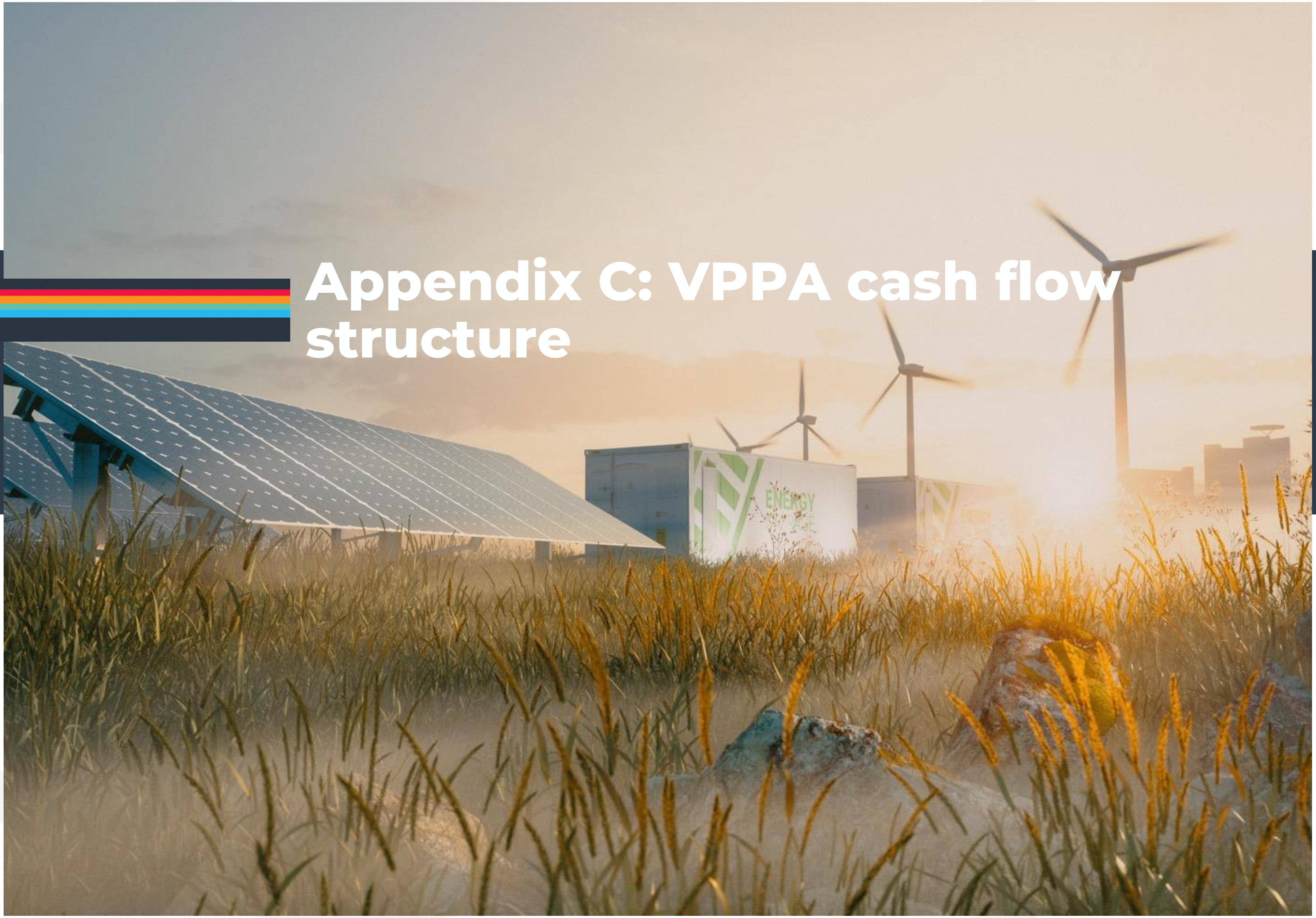
3 customers announced **9** deals incorporating purpose-driven procurement principles

- **2** customers utilized tax equity investment to drive these impacts

Adapted from the Clean Energy Buyers Institute's *Principles for Purpose-Driven Energy Procurement*

Clean Energy Buyers Association

Appendix C: VPPA cash flow structure



VPPA cash flows

Scenario

Project sells 1MWh of electricity with a VPPA in place with a corporate buyer, contract settlement and market pricing at hub (i.e.: no nodal influence)

Corporate buyer

- Buyer receives settlement price ($60.00/MWh) and a REC relating to the MWh
- Buyer pays the PPA strike price ($90.00/MWh)
- Buyer **pays $30.00 and receives a REC**

Contract settles at market hourly price

Buyer pays strike price

Project

- Project receives market price ($60.00/MWh)
- Project pays buyer settlement price ($60.00/MWh)
- Project receives PPA strike price ($90.00/MWh)
- Project **nets $30.00**

Market buys power

$

Independent market price

- $60.00/MWh

Note

In the US market the price a project receives from the market organizer (known as an ISO or TRO) at the "node" and the price of the contract settlement, at the "hub" can vary significantly

Appendix D: Additional accounting details

Variable interest entities

US GAAP

ISSUE / CONCERN	Balance sheet consolidation
The rules	Consolidation is appropriate if a reporting entity has a controlling financial interest
Tests	A controlling financial interest could be assumed if the offtaker is taking >50% of a project's output If so: • The power to direct the activities of a VIE that most significantly impact the VIE's economic performance; [AND] • The obligation to absorb losses of the VIE

Lease accounting treatment

US GAAP

ISSUE / CONCERN	Balance sheet consolidation
The thought process	Is the contract a lease, and if so, is it a finance (previously: capital) or operating lease?

Tests – is the contract a lease?	A contract is a lease if:
	• The contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration
	• Control exists if the off-taker has:
	  • The right to obtain substantially all of the economic benefits from the use of [an identified] asset; [AND]
	  • The right to direct the use of the [identified] asset

Lease accounting treatment - IFRS interlude

IFRS

ISSUE / CONCERN

Balance sheet consolidation

The thought process

Under IFRS 16, does the VPPA convey the right to obtain **substantially all** economic benefits?

What does 'substantially all' mean?

No set definition, but:

- Revenue from a renewable energy facility = sales of electricity and environmental attributes
    - VPPA purchases the environmental attributes, which is considered the lower value driver between the two sources
    - Therefore VPPAs are typically not considered a lease

What about a physical PPA?

- Typically relates to the design of the facility, right to operate/direct use of the asset
    - Typical voluntary buyers do not have the ability to influence design and/or the desire for control

Derivative accounting treatment

US GAAP

ISSUE / CONCERN	Mark-to-market accounting
To clarify	A derivative instrument is a financial instrument which derives its value from something else. PPAs can be a type of swap, and as such need to be considered for potential derivative behavior
One point	“Notional amount” - the ability to create a yard stick of future performance, by which actual performance can be measured.
The thought process	If we can calculate a notional amount, then the PPA is a derivative

Derivative accounting treatment - example

US GAAP

Notional amount calculation	Notional amount = Price ($/MWh) x Volume (MWh) x Term (years)
Notional amount example	• Strike price: $18/MWh • Volume: 100,000 MWh • Term: 12 years • Notional amount = $21,600,000
Implication	$21.6 million balance sheet charge Quarterly adjustments comparing notional amount to market price, impacting income statement and balance sheet (mark-to-market)

Derivative accounting treatment - example

US GAAP

Notional amount calculation	Notional amount = Price ($/MWh) x Volume (MWh) x Term (years)
Notional amount example	- Strike price: $18/MWh - **Volume: 75% output** - Term: 12 years Variability of wind and solar prevents MWh calculation - Notional amount = uncalculatable
Implication	No notional amount, no ability to mark-to-market

Derivative accounting treatment - IFRS interlude

ISSUE / CONCERN	Mark-to-market accounting
The thought process	Under IFRS 9, a contract contains a derivative if value changes in response to a specific variable, the contract doesn't require an upfront investment, and is settled at a future date
Can mark-to-market accounting be avoided under IFRS?	The thought process sounds like most VPPAs: • VPPAs do not qualify for the 'own-use scope exemption' and therefore will be treated as a derivative under IFRS A physical PPA however: • The 'own-use scope exemption' requires the buyer to demonstrate the PPA was entered into and continues to be used to receive physical power and/or environmental attributes in accordance with their expected usage requirements • A market price cap and/or floor in the contract can create an "embedded derivative" and require mark-to-market accounting

Lease accounting treatment – if the PPA is deemed to be a lease (1 of 3)

US GAAP

Tests – if the contract is a lease, is it a finance lease?

Are any of the following true:

1. The lease transfers ownership of the property to the lessee by the end of the lease term
2. The lease grants the lessee an option to purchase the underlying asset that the lessee is reasonably certain to exercise
3. The lease term is for the major part of the remaining economic life of the underlying asset
4. The present value of the sum of the lease payments and any residual value guaranteed by the lessee equals or exceeds substantially all the fair value of the underlying asset
5. The underlying asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term

Lease accounting treatment – if the PPA is deemed to be a lease (2 of 3)

US GAAP

Tests – if the contract is a lease, is it a finance lease?

Are any of the following true:

1. The lease transfers
   the lease term
2. The lease grants the
   that the lessee is re
3. The lease term is fo
   underlying asset
4. The present value o
   value guaranteed b
   fair value of the unc
5. The underlying asse
   have no alternative

Ownership transfers at the end of the contract

Option to purchase that is likely to be exercised

Lease term = most of the asset's remaining life

Present value of contract payments is equal or above the asset's fair value

Asset not expected to have any market for use post-contract

Lease accounting treatment – if the PPA is deemed to be a lease (3 of 3)

US GAAP

If the contract is not a finance lease, then the contract is an operating lease

The results	Principal distinction between the two types of leases is in the resulting income statement recognition and disclosers: • Interest and amortization expense are recognized for finance leases (under a financing model) • A single lease expense is recognized for operating leases (typically a straight-line basis) • Finance and operating leases are shown on the balance sheet, unless <12 months

Appendix E: Lessons learned from all those deals

Lessons to execute strategy-congruent transactions

Key steps in the process

External factors to consider

Lessons to execute strategy-congruent transactions

Key steps in the process	External factors to consider
Understand the business rationale for procuring renewable energy (your ‘why’)	What do key stakeholders say? What are your company’s plans?

Defining why sustainable energy is critical before a transaction: what is your why?

What is the business case where sustainability adds value?

Employee attraction and retention

- Next generation of employees
- Retaining current employees and supporting culture build
- Competitor attractiveness

Brand building/customers

- Matching customer actions/direction
- Differentiation
- Demonstrating leadership

Risk management

- Enhanced energy management (EE, on-site, storage)
- Climate change exposure (including compliance with government regulations)
- Policy risk

Other stakeholder demands

- Investor relations
- NGO community

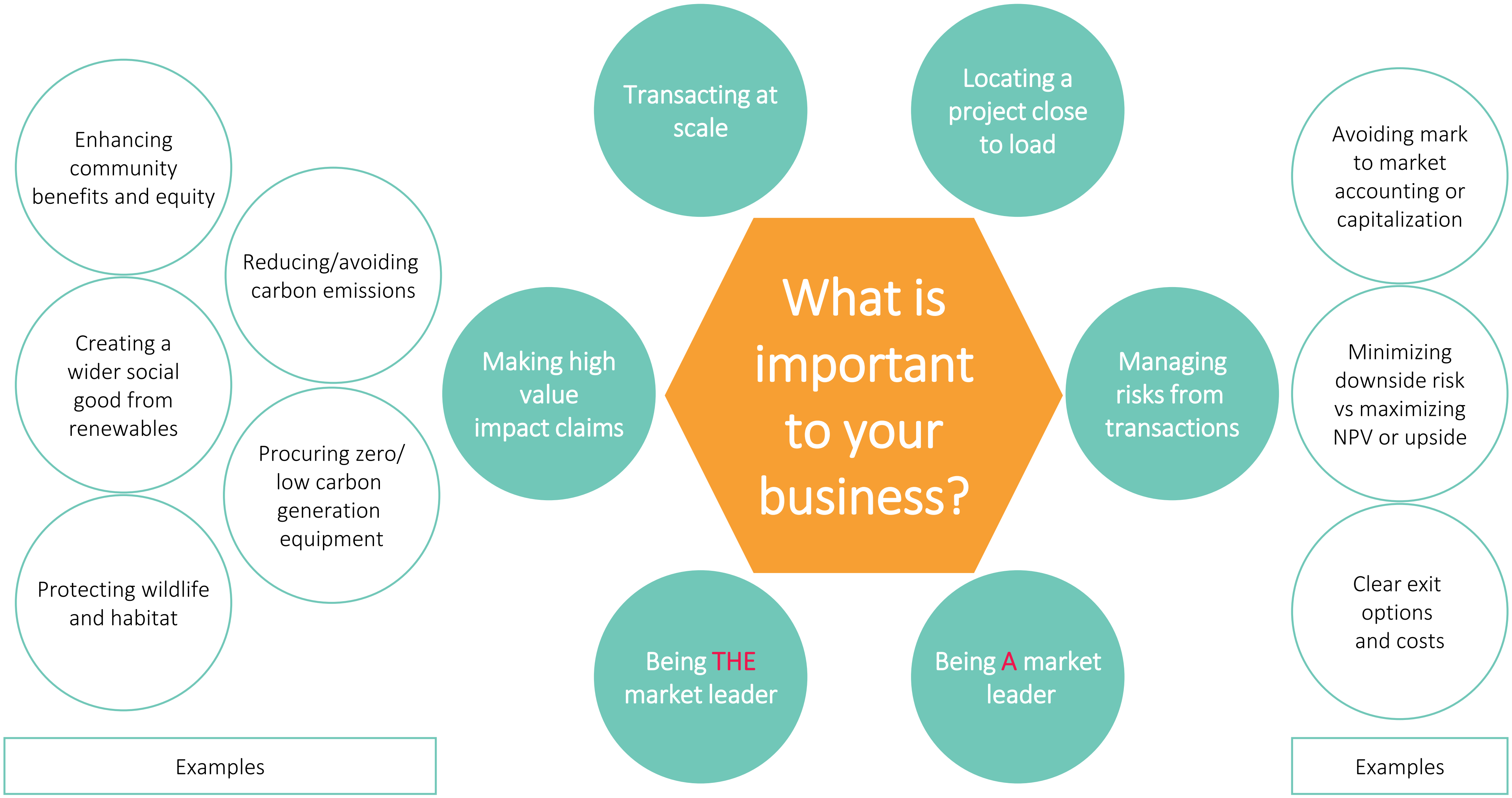
Lessons to execute strategy-congruent transactions

Key steps in the process	External factors to consider
Understand the business rationale for procuring renewable energy (your 'why')	What do key stakeholders say? What are your company's plans?
Set a public goal that aligns stakeholders	Where is leadership in this movement? How can renewable energy aid other goals?

Lessons to execute strategy-congruent transactions

Key steps in the process	External factors to consider
Understand the business rationale for procuring renewable energy (your ‘why’)	What do key stakeholders say? What are your company’s plans?
Set a public goal that aligns stakeholders	Where is leadership in this movement? How can renewable energy aid other goals?
Build from your ‘why’ and develop a list of characteristics that are important to you	What is normal for your sector? Do you want to follow or lead the market?

Buyers typically have 2-3 key priorities when transacting



Enhancing community benefits and equity

Reducing/avoiding carbon emissions

Creating a wider social good from renewables

Procuring zero/ low carbon generation equipment

Protecting wildlife and habitat

Examples

Transacting at scale

Locating a project close to load

Making high value impact claims

What is important to your business?

Managing risks from transactions

Being THE market leader

Being A market leader

Avoiding mark to market accounting or capitalization

Minimizing downside risk vs maximizing NPV or upside

Clear exit options and costs

Examples

Lessons to execute strategy-congruent transactions

Key steps in the process	External factors to consider
Understand the business rationale for procuring renewable energy (your ‘why’)	What do key stakeholders say? What are your company’s plans?
Set a public goal that aligns stakeholders	Where is leadership in this movement? How can renewable energy aid other goals?
Build from your ‘why’ and develop a list of characteristics that are important to you	What is normal for your sector? Do you want to follow or lead the market?
Assess procurement options against the characteristics that are important to you	What is available today vs tomorrow? Leverage experts like REI to stay current

Procurement options in Japan today

Option	Cost	Risk	Impact
Unbundled environmental attribute certificates	Low, but additional to electricity cost	Very low (annual procurement basis)	Often very low
Bundled green product	Slightly higher than standard tariff/rate	Very low (utility provider manages risks)	Depends on product, will vary significantly
Onsite project (owned or PPA)	Usually lower than standard tariff/rate	Low	High at small scale
Offsite PPA	Usually similar to standard tariff/rate	High (buyer has exposure to market price changes)	High at large scale

Lessons to execute strategy-congruent transactions

Key steps in the process	External factors to consider
Understand the business rationale for procuring renewable energy (your ‘why’)	What do key stakeholders say? What are your company’s plans?
Set a public goal that aligns stakeholders	Where is leadership in this movement? How can renewable energy aid other goals?
Build from your ‘why’ and develop a list of characteristics that are important to you	What is normal for your sector? Do you want to follow or lead the market?
Assess procurement options against the characteristics that are important to you	What is available today vs tomorrow? Leverage experts like REI to stay current
Advance with transactions that best align to your required characteristics	Consultants can play a critical role during any and all stages

Clean Energy Buyers Association

Appendix F: Highlight supplier selection insights

Supply chain partner engagement is critical and difficult

Each supplier needs to be encouraged along a roadmap

Stage 0

Understand and define why engage suppliers

Stage 1

Select suppliers to work with

Stage 2

Gather data from suppliers

Stage 3

Secure agreement in principle

Stage 4

Secure supplier commitment

Stage 5

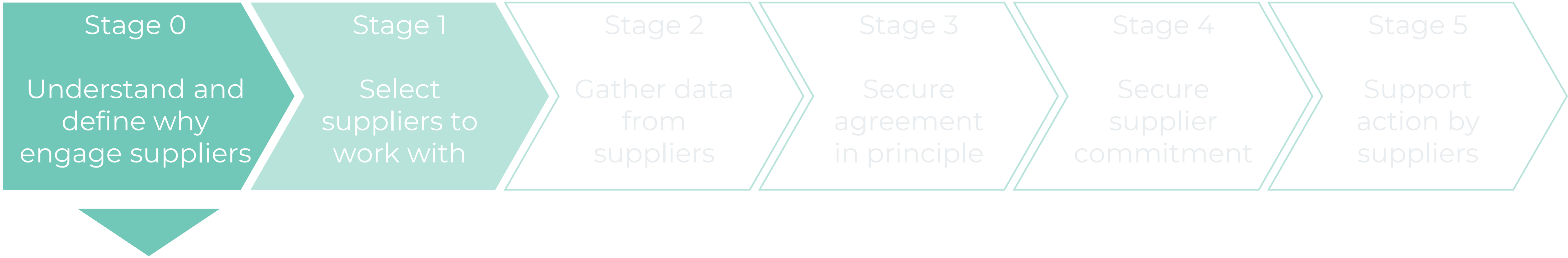
Support action by suppliers

Internal to your company

External to your company

Securing agreement in principle is the critical step on the supplier engagement and enablement path

Each supplier needs to be encouraged along a roadmap



Attracting or retaining employees

Sustainability differentiates in the war for talent

Shareholder/investor concerns

Shareholders concerned about supply chain risks and sustainability; SEC/IFRS reporting

Attracting or retaining customers

Customers pushing you to operate more sustainably and cascade learnings along supply chains

Future-proofing a major input

Leaders in the global supply chain are ruthless cost reducers, energy is a key cost

Strong customer relationship

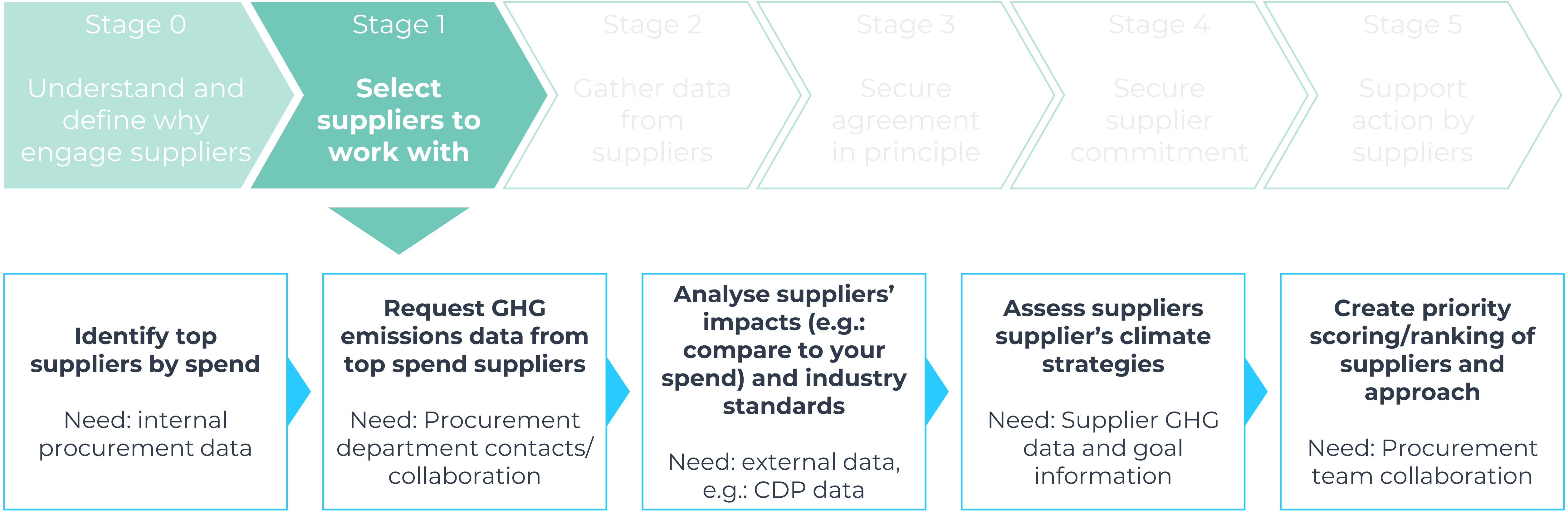
Customer-facing brands are increasingly addressing scope 3, lock-in relationships

For you

For your supply partners

Securing agreement in principle is the critical step on the supplier engagement and enablement path

Each supplier needs to be encouraged along a roadmap



Stage 0

Understand and define why engage suppliers

Stage 1

Select suppliers to work with

Stage 2

Gather data from suppliers

Stage 3

Secure agreement in principle

Stage 4

Secure supplier commitment

Stage 5

Support action by suppliers

Identify top suppliers by spend

Need: internal procurement data

Request GHG emissions data from top spend suppliers

Need: Procurement department contacts/ collaboration

Analyse suppliers' impacts (e.g.: compare to your spend) and industry standards

Need: external data, e.g.: CDP data

Assess suppliers supplier's climate strategies

Need: Supplier GHG data and goal information

Create priority scoring/ranking of suppliers and approach

Need: Procurement team collaboration

Securing agreement in principle is the critical step on the supplier engagement and enablement path

Each supplier needs to be encouraged along a roadmap

Stage 0

Understand and define why engage suppliers

Stage 1

Select suppliers to work with

Stage 2

Gather data from suppliers

Stage 3

Secure agreement in principle

Stage 4

Secure supplier commitment

Stage 5

Support action by suppliers

Select data collection method/tools

Consider platforms, e.g.: RBA, in-house development, and/or consulting support

Consider volume

Some businesses are now receiving 600 – 700 sustainability surveys per year, less is more

Ongoing through balanced scorecard

Use existing channels and scorecard processes to reinforce messages to key accounts

Keep it simple

Many supply partners lack specialist staff, keep questions simple and focused on needs (not wants)

What’s in it for the supplier

Continue to consider what’s in it for the supply partner and evolve messaging + practices