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## CORPORATE PPAS FOR OFFSHORE WIND

- Corporate PPAs enabled development of thousands of MW of wind & solar in US
- Corp PPAs a possible OSW offtake model:
  - BOEM lease in Gulf of Mexico adjacent to states without OSW procurements mandates
  - Little history of competitive procurements for renewables
  - US Northeast: project expansions & residual lease area

## EUROPE CORPORATE OSW PPAS

- MW for Corp PPA, only a portion of project total capacity

Seagreen (538 MW)	
Country	Scotland
Developer/Seller	SSE Renewables / TotalEnergies
Year Signed	2020
Buyer	Statkraft

Dogger Bank A & B (480 MW)	
Country	England
Developer/Seller	SSE Renewables / Equinor
Year Signed	2021
Buyer	Danske Commodities



Horn Rev 3 (27 MW)	
Country	Denmark
Developer/Seller	Orsted
Year Signed	2021
Buyer	Danfoss

Borkum Riffgrund 3 (250 MW)	
Country	Germany
Developer/Seller	Orsted
Year Signed	2021
Buyer	Amazon

SeaMade (65 MW)	
Country	Belgium
Developer/Seller	Eneco
Year Signed	2022
Buyer	INEOS

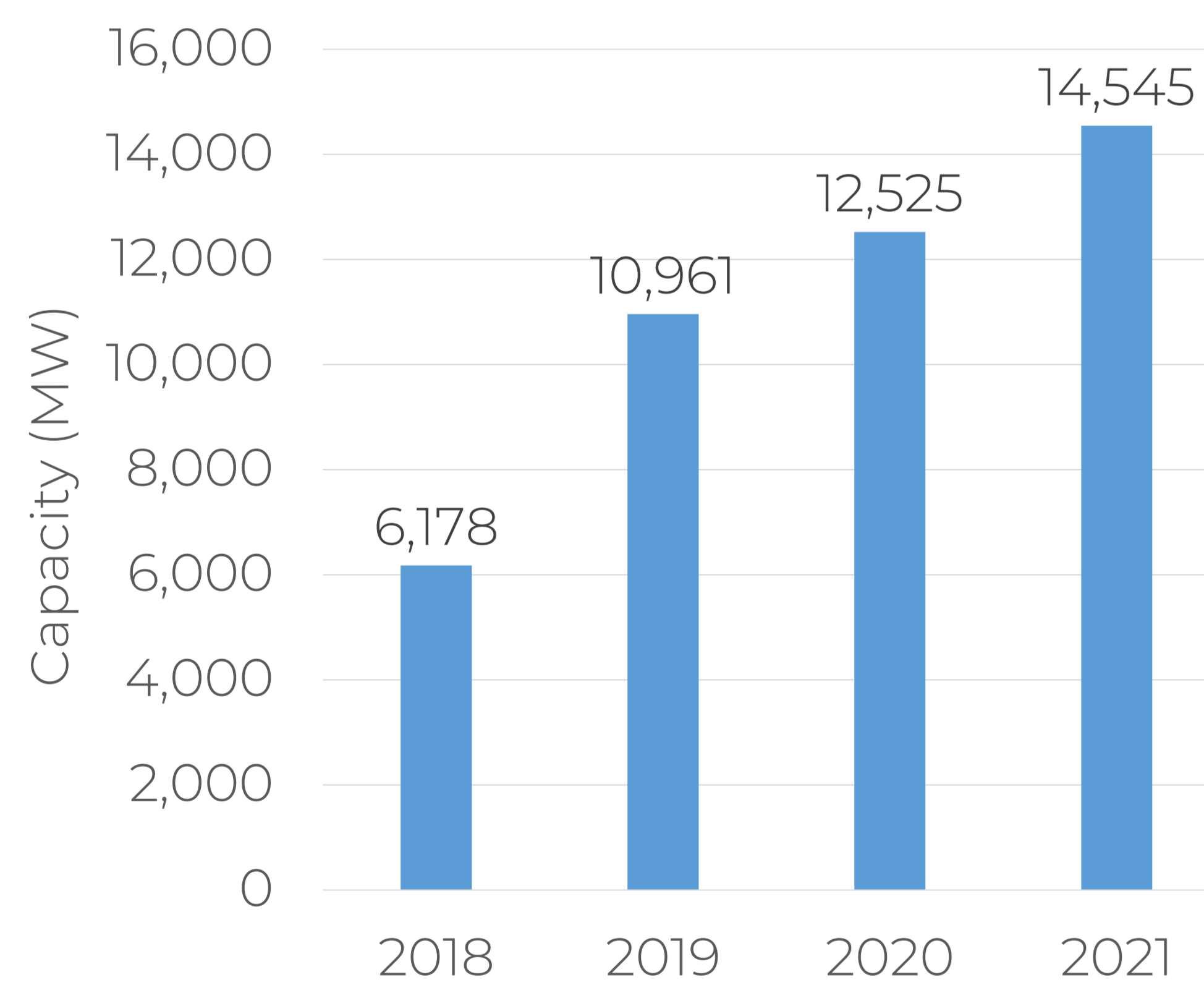
## VALUE OF OSW CORPORATE PPAS

- Large volumes of clean energy
  - Hydrogen?
- Close to load centers
  - Reducing transmission costs
  - More favorable basis
- Additional value given diversity
  - Winter pricing differential

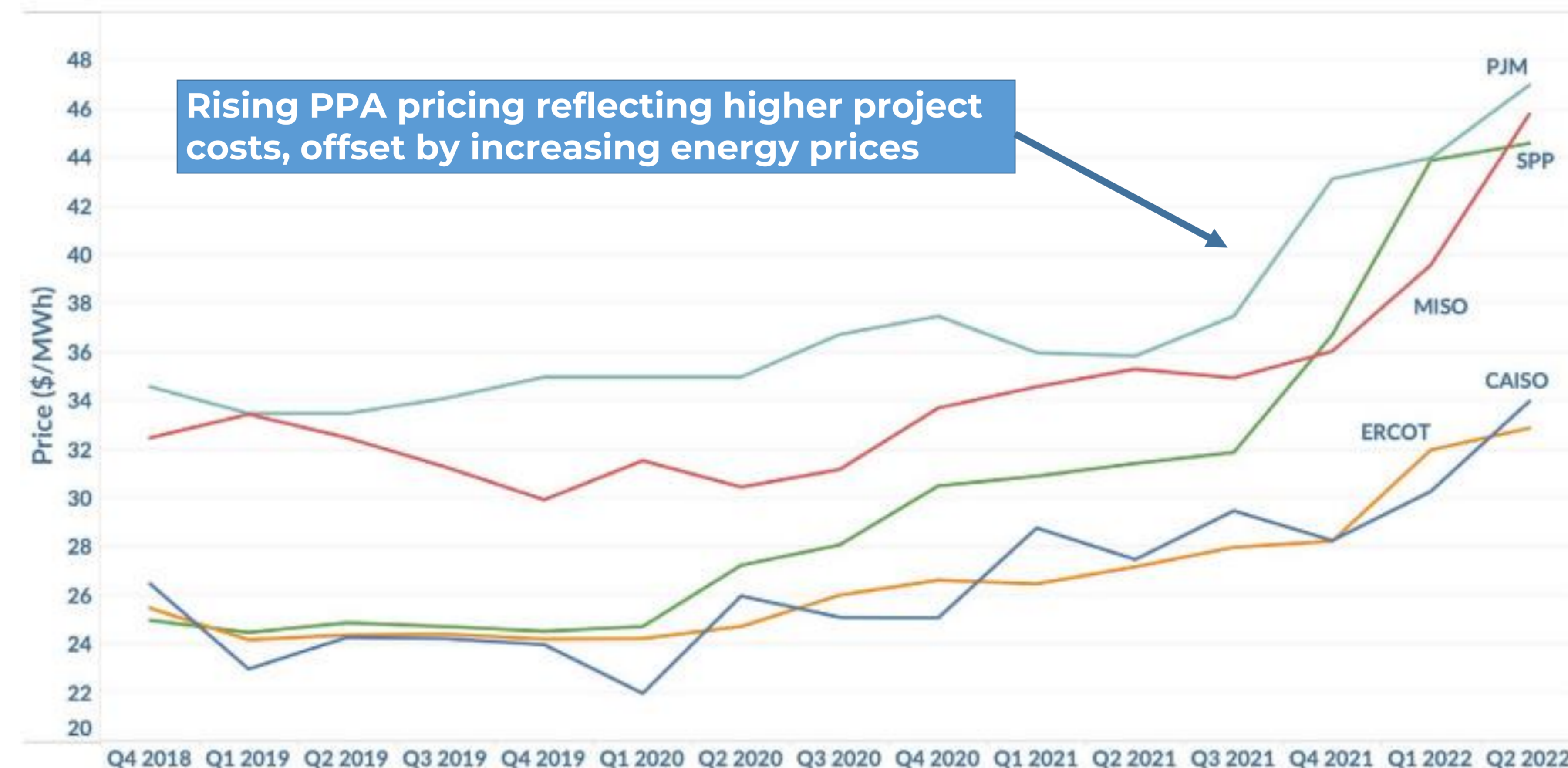
## FAVORABLE FUTURE OUTLOOK

- Continued declines in cost of OSW
- Increasing carbon constraints
  - Creating opportunities for green hydrogen
- Increased focus on ESG

## US AND CANADA CORPORATE PPAS<sup>1</sup>



## US CORPORATE SOLAR PPA PRICING BY MARKET<sup>2</sup>



## LIMITATIONS OF OSW CORPORATE PPAS

- Pricing highly competitive, with little to no premiums for renewable attributes
    - Constraining pricing expectations
- Tenor of Corp PPAs short
    - Long duration Corp PPA is 10+ years.
  - Credit quality of counterparties
    - Limiting pool of qualified buyers
- Procurement volumes often modest
    - Relative to OSW project sizes
    - Requires portfolios of buyers
    - Can strength credit quality
    - Additional complexity associated with a portfolio
  - Net result limits financial certainty of revenues

## REFERENCES

- BloombergNEF, Q4 2021 and Edison Energy
- LevelTen Energy Q4 2021 PPA Price Index
- US Offshore Wind Market Report: 2022 Edition

## CONTACT INFORMATION

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## CORPORATE PPA STRUCTURES

- Majority virtual PPAs
  - Financial transactions settled relative to physical delivery point based on market price relative to strike price
  - When market price > than strike price seller pays buyer difference

## POWER ADVISORY OSW EXPERIENCE

- BOEM Auction Support
- Procurement Support
- Market Analysis
- Offtake Assessment
- Transmission Assessment
- Project Development Support
- Policy Analysis

