

Learning from the Experts Webinar Series

Offshore Wind Contract Mechanisms to Manage Risk

February 12, 2025



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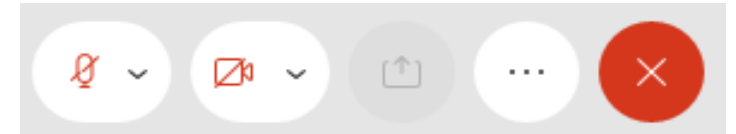
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Learning from the Experts

This webinar series is hosted by NYSERDA's offshore wind team and features experts in offshore wind technologies, development practices, and related research.

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February 2025



Offshore Wind Contracts Project Structuring and Mechanisms to Manage Risk



Agenda

- Opening Remarks and Introductions
- Global Offshore Wind Market: *Introduction to Key Contracts and Project Structuring*
- Financeability: *Project Finance, Tax Credits & Grants*
- Offtake Contracts: *PPAs & ORECs*
- Mechanisms to Manage Risk: *Key PPA and OREC Contract Terms, Provisions and Considerations to Mitigate Risk*
- Global Perspectives
- Questions & Answers

Our Team for Today's Discussion

Development, Offtake,
Finance, M&A and JVs



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Development
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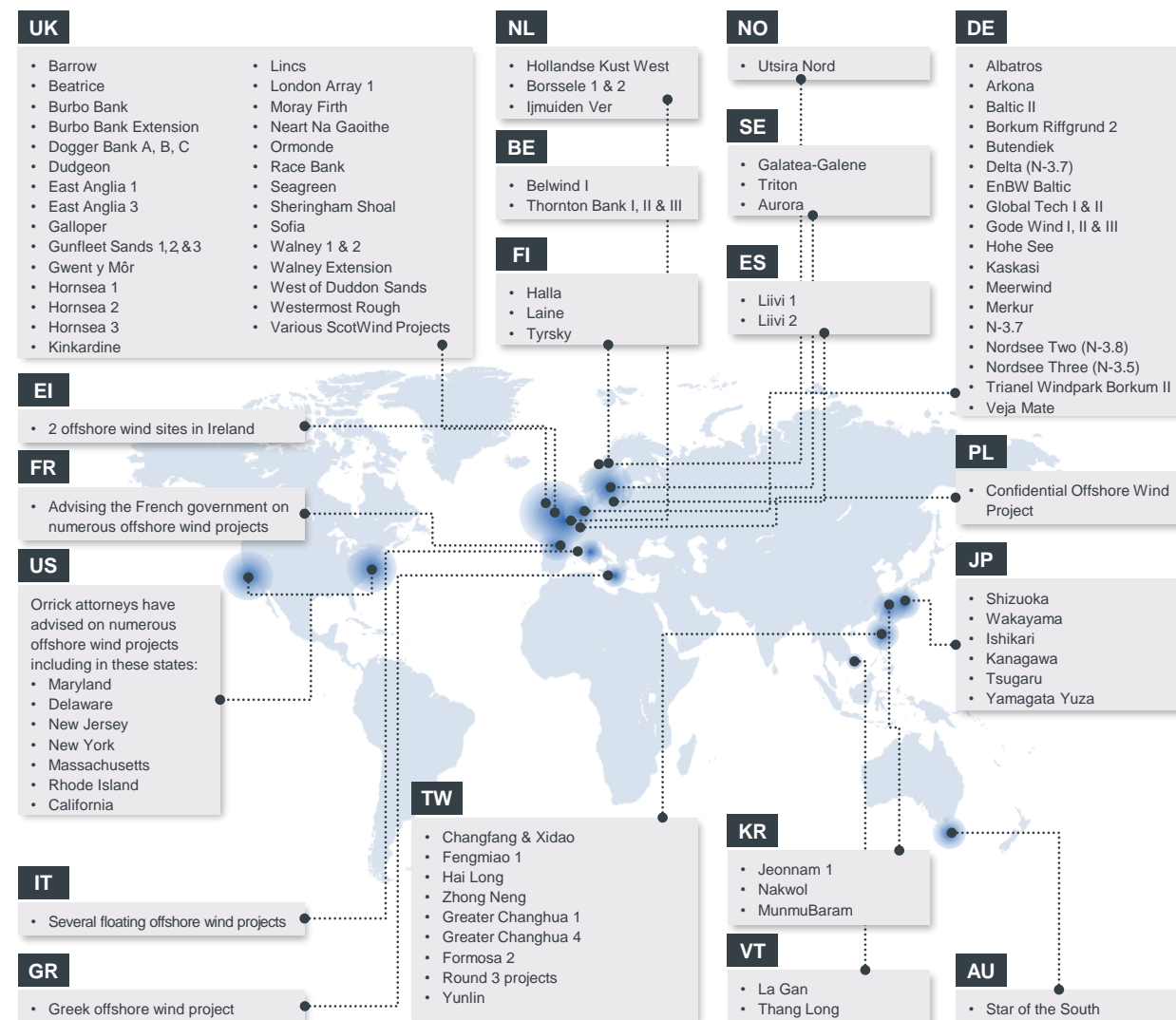


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Our Global Platform

- **Orrick** has experience in over **100 different offshore wind projects globally** and was involved in the earliest U.S. projects nearly **two decades** ago.
- **Decades of practice** in offshore wind across **Europe, Asia** and the **United States**: fully immersed in live matters in each region with **extensive local expertise** developed while operating on a **global platform**.
- Actively investing in the regions with the most expected growth over the next decade, including the **United States** and **Asia**.

ORRICK'S OFFSHORE WIND TEAM RECENT EXPERIENCE



Orrick Global Offshore Wind Report



Thought Leadership

Orrick's Offshore Wind team publishes an annual global report on offshore wind trends, various legal and regulatory points, and general market updates alongside numerous local law firms.

Orrick's 2025 Global Offshore Wind Report will be published in February.

Our 2024 Report is available at:

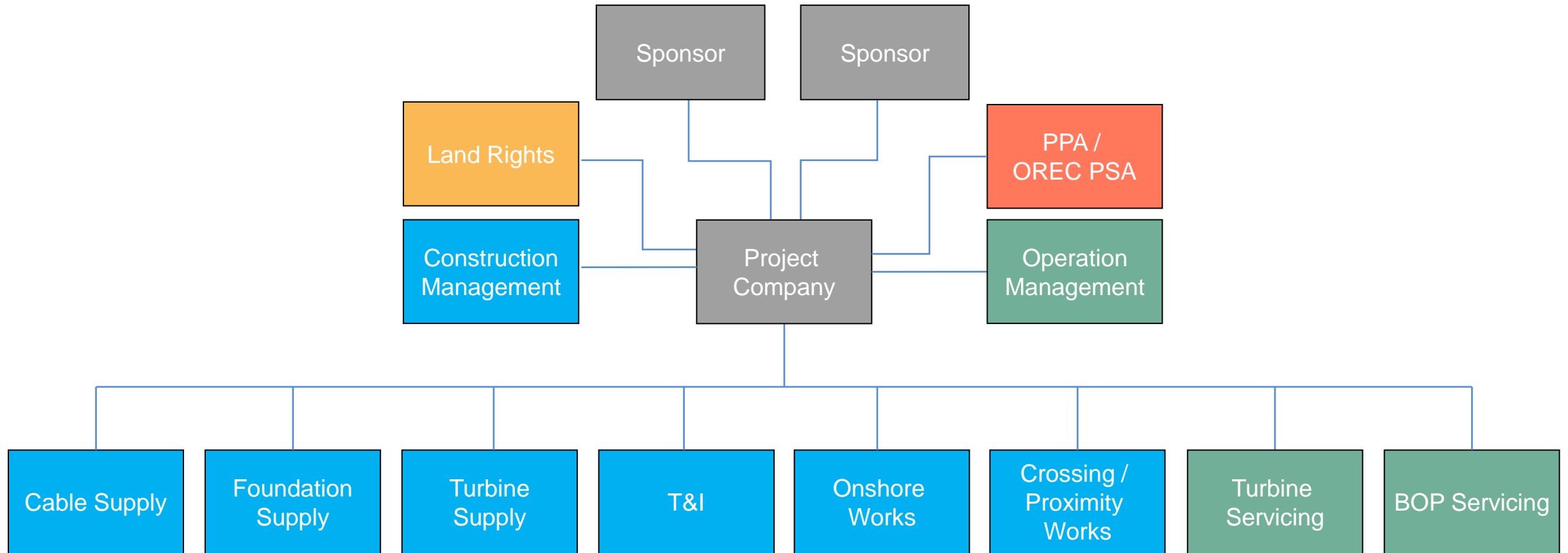
<https://www.orrick.com/OrrickWindReport>

Global Offshore Wind Market

Introduction to Key Contracts

Key Contracts

Introduction



Multi-Contracting

Key Considerations

- Advantages
 - Experienced and specialist contractors
 - Performance and solvency
 - More control and visibility
 - Costs
- Things to be aware of
 - No single point of responsibility
 - Interface risk
- Mitigants
 - Project management
 - Coordination and cooperation provisions
 - Interface matrix / register



Financeability

Project Finance, Tax Credits & Grants

Equity & Project Financing

Select Project Considerations

- Significant development costs prior to bidding into RFP and negotiating offtake.
- Different debt/equity ratio considerations compared to onshore renewables.
- Impact and timing of capital infusions and requirements.
- Structuring debt and equity arrangements to accommodate any tax credit monetization strategies.
- Key Points:
Offtake and other major project contracts must (1) be financeable and (2) accommodate schedule and cost relief for development constraints/variables.



Tax Credits and Grants

Considerations for Sponsors

- Investment Tax Credits (ITC)
& Production Tax Credits (PTC)
 - IRA provides an ITC of up to 30% (excl. adders) through at least the early 2030s.
 - Qualifying projects may elect a PTC.
- Prevailing Wage & Apprenticeship (PWA)
 - Projects must satisfy PWA requirements to receive the 30% ITC or full PTC.
- Tax Credit Adders & Transferability
 - Energy community and domestic content bonus.
 - New means to monetize tax credits.
- Grant & Loan Opportunities
 - Federal and State.



PPAs

Power Purchase Agreements

PPAs vs. ORECs — Overview of Market Use

Transaction Structures

PPAs

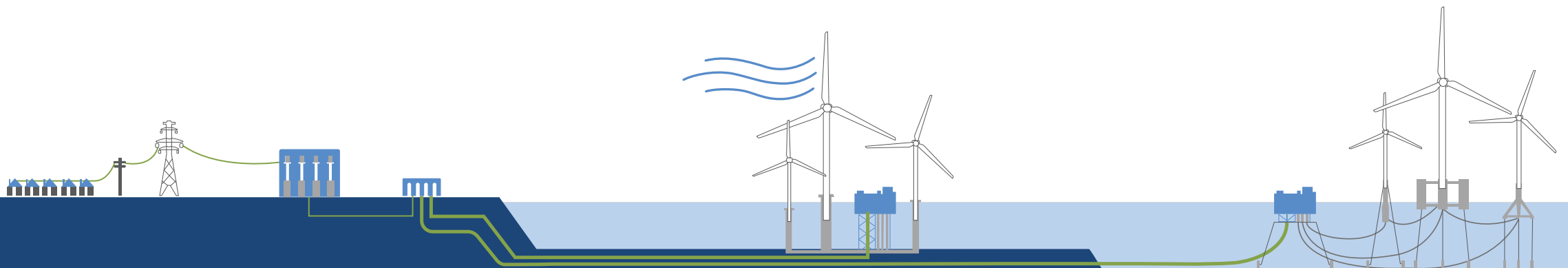
States Utilizing PPAs:

- **Delaware** (Bluewater)
- **Massachusetts**
- **Rhode Island**
- **Connecticut**
- **New York**
(LIPA South Fork PPA)

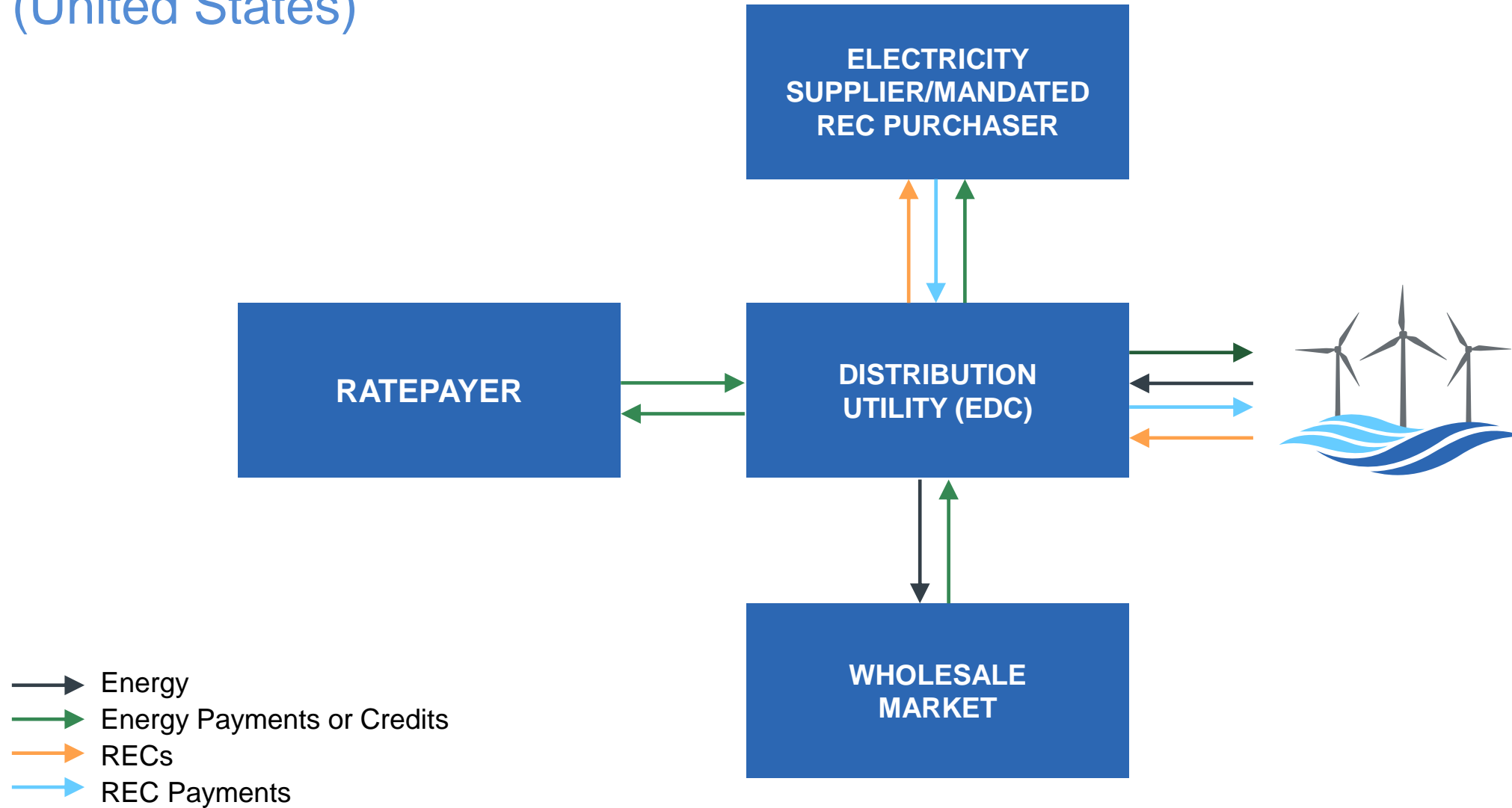
ORECs

States Utilizing ORECs:

- **Maryland**
- **New York**
- **New Jersey**



Generic PPA Structure (United States)



OREC

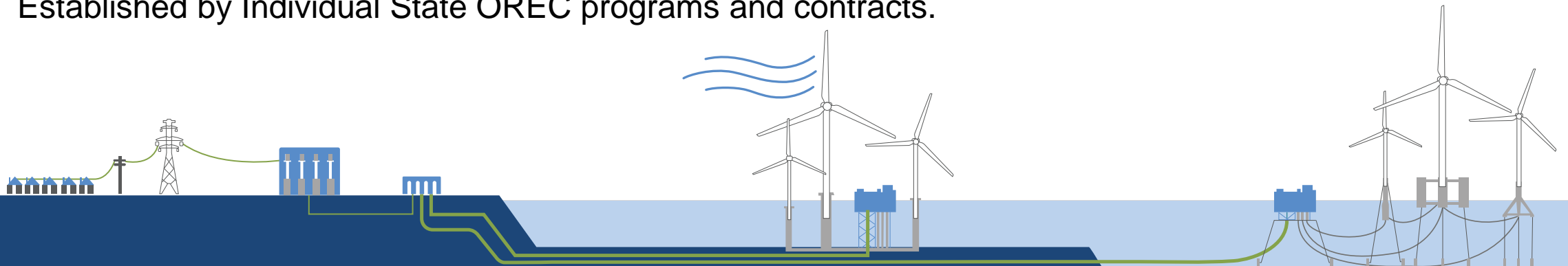
Offshore Wind

Renewable Energy Credits

U.S. Offshore Renewable Energy Credits (ORECs)

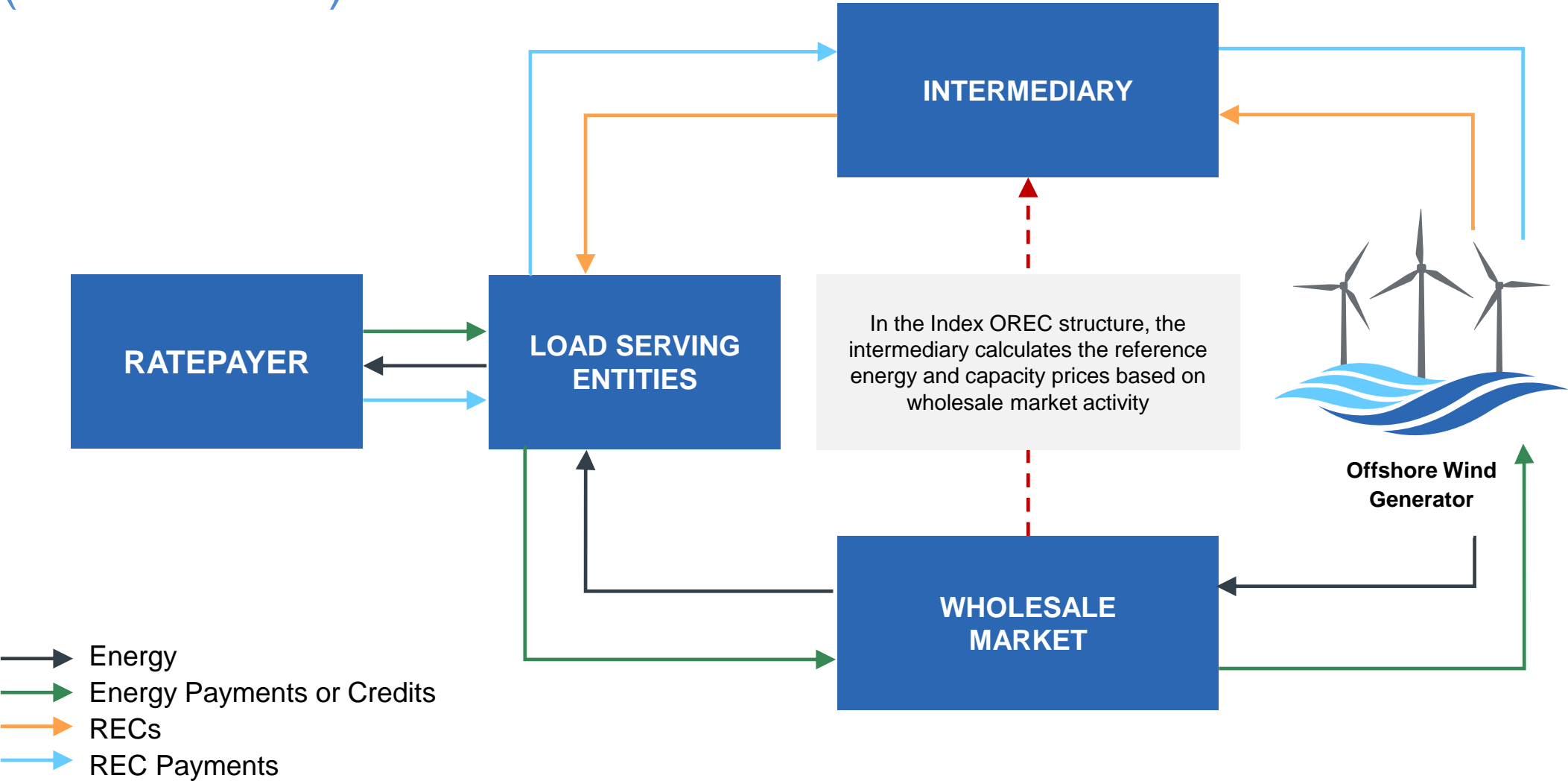
Key Concepts

- What is an "**OREC**" ?
 - An "OREC" is a tradeable certificate representing the positive environmental attributes associated with each MWh of electricity generated from an offshore wind project.
- What is the "**Product**" ?
 - ORECs are separate from the energy produced by the project and can be separately monetized.
- How are ORECs created and transferred?
 - Offshore Wind Renewable Energy Certificate Purchase and Sale Agreement (OREC PSA)
 - OREC PSA requires delivery of energy into the grid, which generates ORECs.
- What is the "**Price**" ?
 - Established by Individual State OREC programs and contracts.



Generic OREC Structure

(United States)



Source: NREL, Comparing Offshore Wind Energy Procurement and Project Revenue Sources Across U.S. States, June 2020

Mechanisms to Manage Risk Offshore Wind Offtake Contracts

Mechanisms to Manage Risk

Key PPA Terms

Sponsors and Developers and Buyers negotiate key terms with a holistic view to mutually satisfactory risk management:

- Price and Price adjustments
- Credit support and creditworthiness
- Project obligations and covenants
- Events of default (e.g., insolvency, material breach, non-payment, credit defaults)
- Change in Law and market disruption
- Force Majeure and interconnection delay



Mechanisms to Manage Risk

Key OREC and PPA Terms

Sponsors and Developers may agree to complex price adjustments or cost sharing:

- Fixed vs. Indexed pricing
- Interconnection adjustments
 - Interconnection Savings Sharing
 - Interconnection Cost Sharing
- Inflation Adjustment
 - Interest Rate and Commodity Price Indices
 - Consumer Price Index
- Government Incentives (State and Federal)
- Change in Law or Regulation
- Schedule relief



Delay and Offtake Arrangements

Risks and Mitigants

- Risk
 - Missing the expected COD
 - Contractor delay (e.g., non-performance)
 - Developer delay (e.g., weather)
 - PPA damages and termination
- Mitigants
 - Partnering with seasoned contractors
 - Project management
 - Construction float
 - Acceleration
 - Descoping rights
 - Delay damages
 - Completion incentives



Offtake Financeability Issues

Risks to Manage

Financing Parties will:

- Evaluate offtake revenue certainty and scrutinize any pricing contingencies or variables.
- Perform a complete review of all project documents, including economic and legal due diligence.
- Key Points: Financing parties will evaluate
 - (1) adequacy of revenues;
 - (2) Project's ability to meet obligations;
 - (3) liquidated damages and schedule relief; and
 - (4) protection in a foreclosure scenario.



Global Perspectives Offshore Wind Offtake

Global Perspectives

Offshore Wind Offtake

Experiences from other select offshore wind markets:

- United Kingdom: Predominately "Contracts for Differences" (CfD), but with some revenue stacking.
- Germany: Strong competition for OSW development, resulting in negative bidding.
- Japan: Feed-in-Tariff available, but strong competition among developers leading to zero price bids.
- Taiwan: Limited supply has created strong seller-friendly CPPA market.
- South Korea: Fixed price REC contracts.



Global Perspectives

Case Study: United Kingdom

- Key CfD Risk Management Mechanisms:
 - CfD is government backed, and prices are fully index-linked for 15-years.
 - Strong Change in Law protection.
 - Ability to add PPAs in addition to CfD allocated capacity.
 - Long term stability and grandfathering of support.



Global Perspectives

Key Takeaways

Government subsidy and offtake schemes have been successful when they:

- Provide financial certainty to both generators and government (e.g. index-linked prices but with limits on cost exposure).
- Specifically structured to be bankable and lower cost of capital (e.g., change in law protection).
- Evaluate and adapt to ensure support remains appropriate to reflect shifting development risks and capital costs.



Closing Remarks Future Opportunities

Closing Remarks

Future Opportunities

- Strong Global Outlook For Offshore Wind.
- Scale and project development timeline requires careful structuring and risk mitigation.
- US Offshore Wind PPA and OREC structures must address market and sector challenges.
- The United States can learn from global sector, and States can learn from each other.
- Successful Project Contract and PPA/OREC structuring is one of the keys to unlocking the power of offshore wind.



Q&A

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- Offshore Wind Financing Structures
- Innovations and Emerging Technologies in Offshore Wind

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We want your feedback! Send suggestions for future webinar topics to offshorewind@nyserda.ny.gov



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Paul represents sponsors, investors, utilities and other strategic participants in corporate and project finance transactions, primarily in the energy and infrastructure sectors. He also serves as the Office Leader for Orrick's Washington, DC office.

Transactions on which Paul has advised include the development, financing, acquisition and divestiture of renewable and conventional power projects and other infrastructure assets in a broad range of commercial and corporate transactions. He has served as lead counsel on many innovative and complex U.S. renewable energy transactions in recent years in the wind, offshore wind, solar, and energy storage sectors.

He is recognized by Chambers USA and Chambers Global, where clients describe him as "highly committed to ensuring clients get excellent service" and "very commercially minded."

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Adam focuses his practice on U.S. domestic and international project and other complex financing transactions across energy and infrastructure sectors, including significant experience with renewable and conventional energy project financings and equity (including tax equity) transactions, ESG-related energy and infrastructure financing and investment transactions and complex and novel commodities transactions for energy and infrastructure projects.

He regularly advises sponsors, lenders, financial institutions and private equity investors in debt and equity financings and restructurings across the renewable energy, conventional energy and infrastructure sectors.



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As a projects and construction lawyer, Jon advises on all aspects of the construction and operation of offshore wind and other large renewable energy projects in established and developing markets.

Jon advises sponsors, financial institutions and contractors on the development of offshore wind, solar and biomass projects across Asia, Europe and the United States. He has a particular focus on the developing offshore wind markets in Taiwan, Japan and elsewhere in the APAC region.

Jon's recent experience includes performing the role of Commercial Director for the Formosa II offshore wind project, which is being jointly developed by JERA, Macquarie's Green Investment Group and Swancor Renewable Energy in Taiwan. Jon also recently advised the lender group on the award-winning Changfang and Xidao offshore wind project, which remains one of the largest offshore wind project financings in Asia.



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Leveraging his extensive buy-side and developer experience, Alfred assists clients in negotiating market-leading power purchase agreements (PPAs) and helping clients navigate the energy transition.

Alfred represents major corporate purchasers and developers in negotiating renewable energy PPAs. His advice helps buy-side clients to reduce their energy costs and meet their clean energy targets. He also advises developers in securing long-term project revenues by structuring and negotiating bankable PPAs. His experience covers all major European jurisdictions, including Spain, the Netherlands, Poland, France, Germany, Sweden, Italy and the UK.

Alfred's experience also extends to grid connection arrangements, energy storage, energy regulation and other energy transition matters.

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Mark is an experienced project finance lawyer with a focus on advising lenders and sponsors on tax matters and tax incentives for renewable energy projects.

Mark has nearly 15 years of experience in project finance. His clients include major financial institutions (tax equity investors and infrastructure funds), lenders, developers, and sponsors, particularly those active in the renewable energy sector. He regularly advises clients on opportunities stemming from the Inflation Reduction Act, specifically Section 6417 direct pay opportunities and Section 6418 tax credit transfers.

Thank you!

