UNECE

Overcoming barriers to scaling up RE

Increasing Access to Finance
(an Independent Engineer's Perspective)

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EGRM-11 Special session

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Increasing Access to Finance

Types of Money

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- Different Types of Investors
  - Lower Cost Finance Available from Public Markets
    - Requires More Transparency, Auditable Metrics, Classification and Estimation

Source	Money	Interest Rate	Term (years)	Low ($MM)	High ($MM)	Risk Tolerance	Sample Companies	Market
Venture Capital	Equity	-	3-5	5	20	Very High	Sequoia, Accel	10's of Billions
Private Equity	Equity & Subdebt	-	5	15	25	High	Blackstone, Carlyle, KKR	Trillions
Family Office	Equity & Subdebt	-	?	5	15	High-Medium	Walton Enterprises, Bezos	Billions
Strategic Investor	Equity	-	10+	20	500	Medium	BP, Shell, Exxon	Billions
Mezzanine Debt	Debt	12-18%	<3	20	70	Medium	Cerburus, Bain	10's of Billions
Investment Bank	Debt	7-10%	5-7	30	150	Medium-Low	Goldman Sachs, JPM, BofA	100's of Billions
Institutional	Debt	5-8%	10-15	40	350	Low	BlackRock, Vanguard, State St.	Trillions
Bond House	Debt	5-7%	15+	100	700	Very Low	PIMCO, Prudential	10's of Trillions

Note: generic ranges only from the perspective of an engineer that does due diligence, please contact your financial advisor for investment decisions!

Increasing Access to Finance

New Opportunities in Public Finance

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- Qualified Institutional Buyers (QIB's)
  - Allowed to trade in unregistered securities
    - Manages a minimum investment of $100 million in securities
    - Sophisticated investor capable of due diligence
    - Put in place as part of Securities Act of 1933
- Renewables Master Limited Partnerships (MLP's)
  - Tax Advantaged Publicly Traded Limited Partnership
    - Used for Natural Resources and Real Estate Projects
    - Renewables not eligible because lack of standard to quantify reserves (Quantities)
    - Financing Our Energy Future Act – 2019/2020 (H.R. 3249 / S. 1841)
- Registered Securities
  - Publicly Traded, Owners Tracked on Exchanges
    - Bonds and Stocks Available for Purchase by Public
    - Requires Auditors and Established Classification/Estimation Practices for Public Reporting
    - The higher a bond is rated, the lower the interest rate it requires
    - Bondholders typically wont take development/construction risk

Money Available for RE Now

Money Available for RE with Classification & Quantity Estimation System

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Developing Markets

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- Investors in Developed Markets Looking for Yield
  - RE projects in developed markets are providing very low returns, and transitioning to hedged offtakes from traditional long term PPA's
    - Investors looking in developing markets for projects, RE projects provide the opportunity for consistent revenues with long term offtakes
    - Differences in diligence practices between countries makes it expensive and difficult to evaluate projects in developing economies
    - Standardized UNFC classification and estimation practices could facilitate cross border investments
- Lenders in Developing Markets
  - Leveraging UNFC creates an opportunity to expand non-recourse project finance in many markets
    - Lenders have substantial commercial and real estate lending experience, classification of projects and estimation of quantities could expand lending significantly

Thank you

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