

U.S. Renewable Energy Markets Incentive Structures and Financing Issues

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Presented to



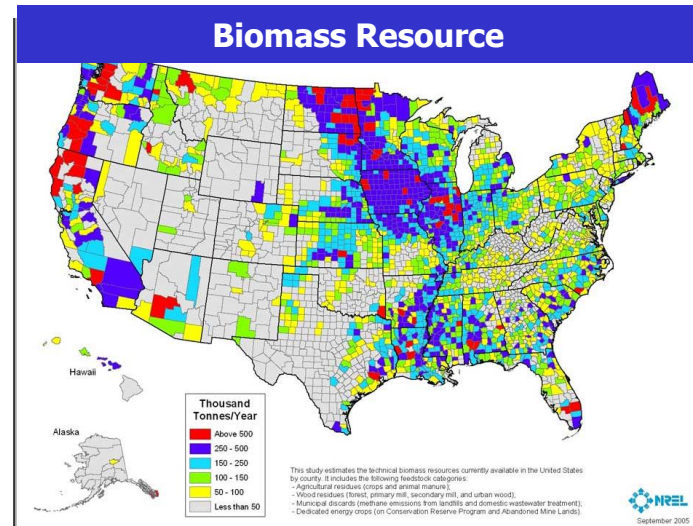
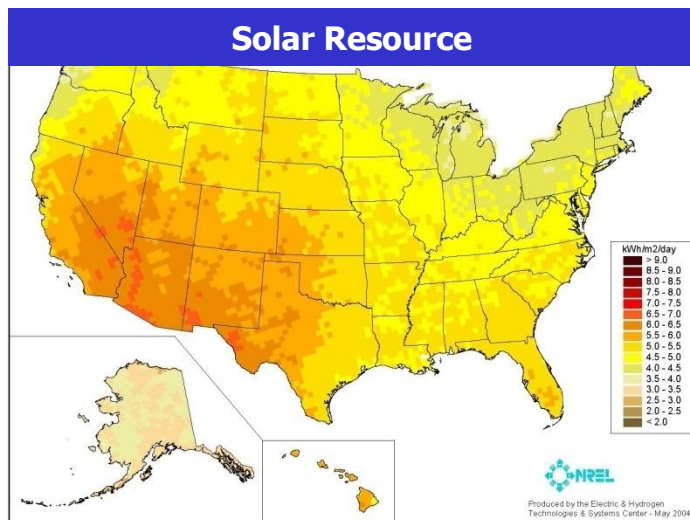
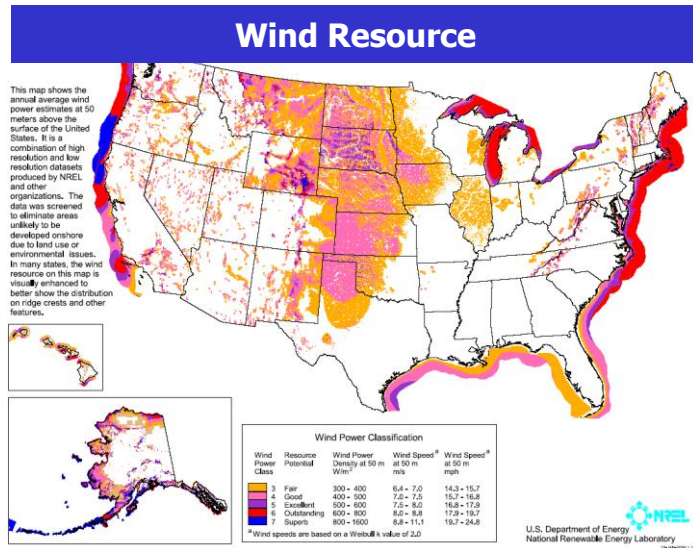
June 3, 2009
Riyadh, The Kingdom of Saudi Arabia



ALYRA

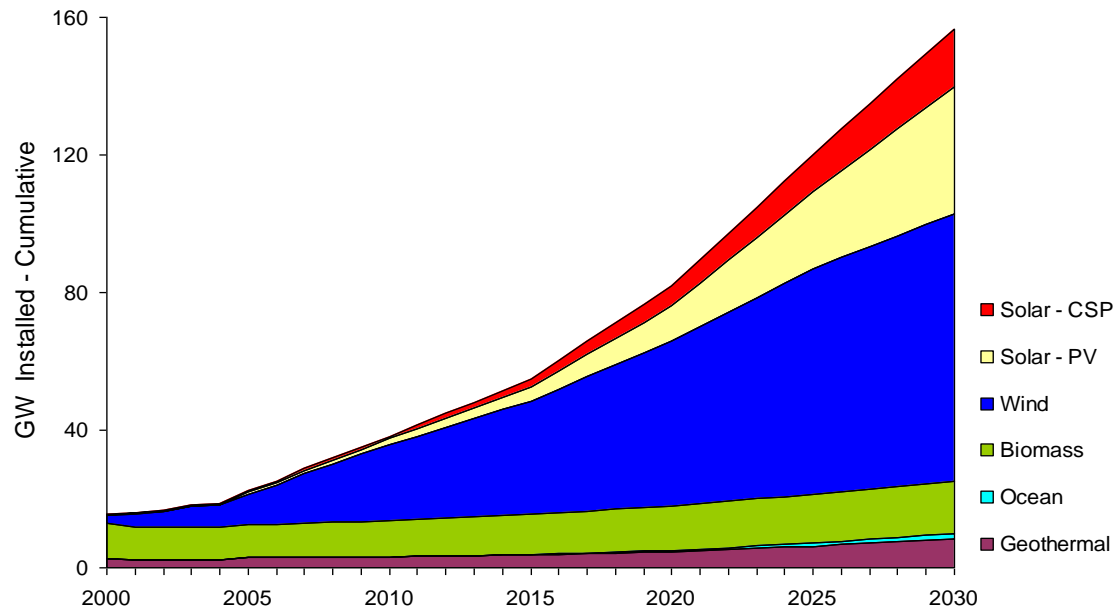
The U.S. Renewable Energy Sector

- Renewable energy is a reasonably small part of the U.S. power sector, but with the strongest potential.
- Abundance of resource – geographically diverse and complimentary
- Changing political climate and public consensus growing, to take the sector to its real potential
- Strategic/long-term investors are expanding roles - a renewable energy generation portfolio is a natural hedge against carbon exposure



The U.S. Renewable Energy Sector

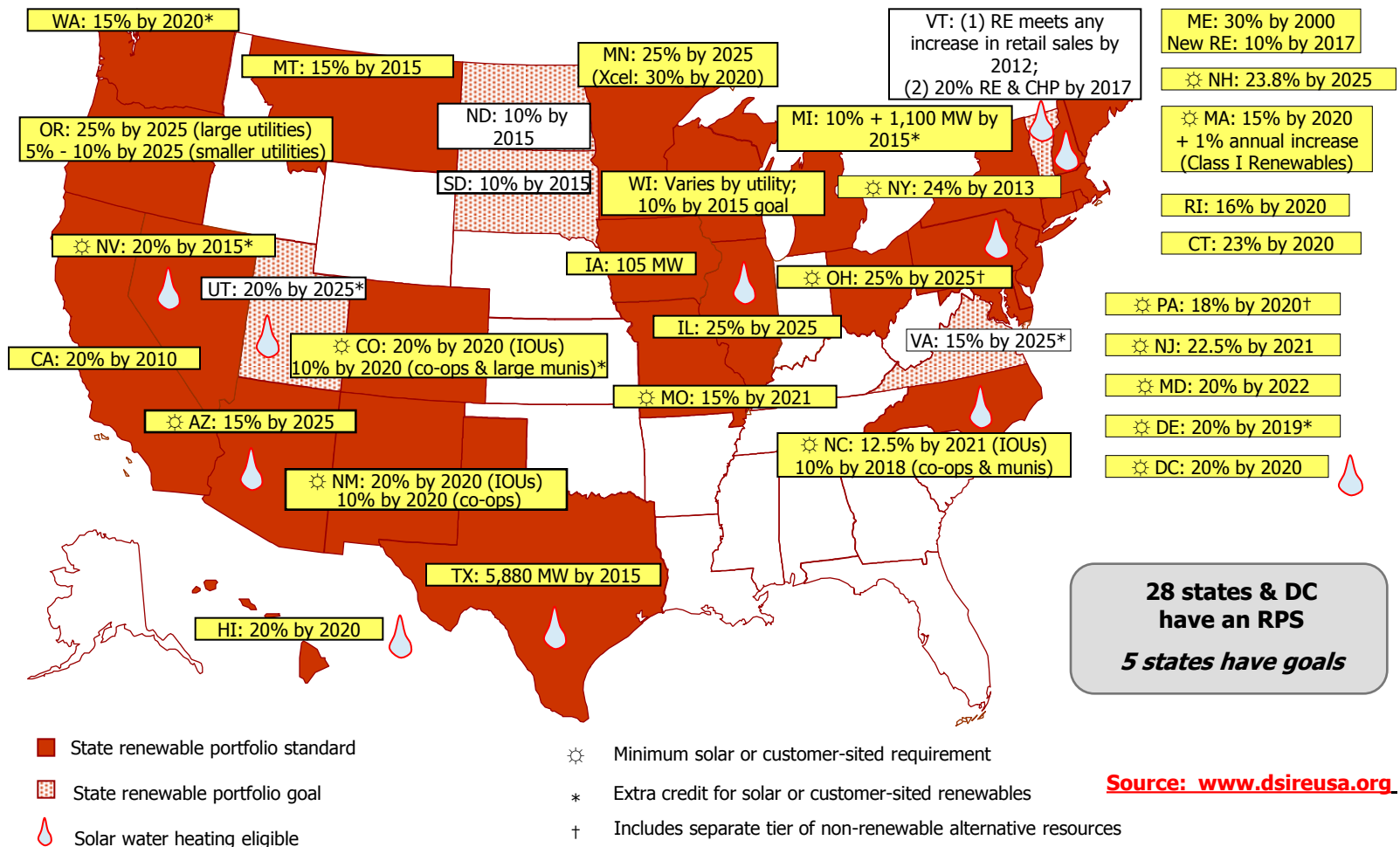
- Renewable energy enjoyed over 25% annual growth over the last decade
 - Wind – most commercially developed
 - Solar – gaining momentum
- Key Growth Factors
 - State Renewable Energy Mandates – RPS [Driver]
 - Federal Financial Incentives -- PTC/ITC/Grants/Guarantees [Enabler]



Source: EIA, CERA

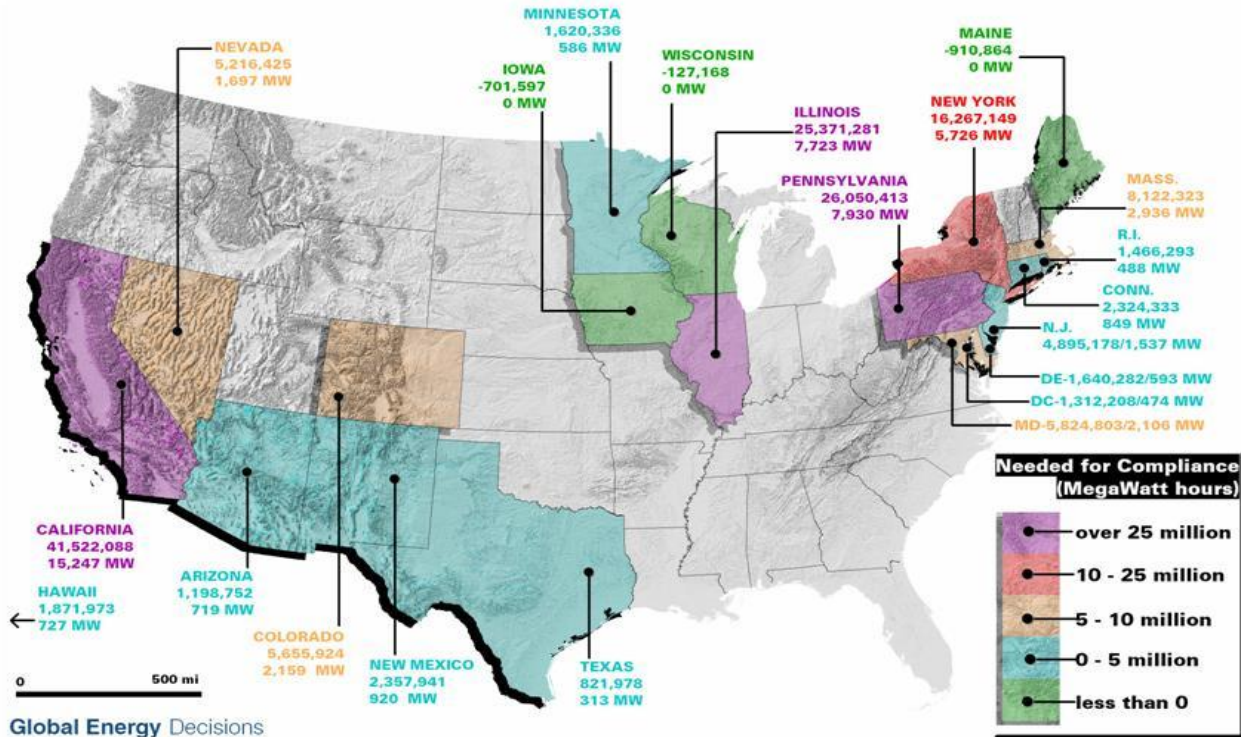
State Renewable Energy Mandates

- RPS – How they work
- Resource diversity / inadequacy
- Each RPS is a result of its own political process + gradual process to implement and refine
- Tradable RECs



RPS Induced Demand Profile

52 GW Renewables needed by 2020 to meet RPS



Federal Financial Incentives

- **Tax Credits**

- PTC
- ITC



- **Cash Grants**

- In lieu of ITC

- **Accelerated Tax Depreciation**

- 5-year MACRS
- Bonus Depreciation



- **Loan Guarantees**

- The PTC is available for a 10-year period from the COD. The ITC is available as soon as the project is online.
- Historically, wind projects received PTC and solar received ITC, with no cash refundability.
- In 2009, responding to financing market meltdown, wind projects were allowed an option to choose ITC instead of PTC.
- As a measure of short-term economic stimulant, near term (2009-10) projects were also allowed to take the ITC as non-taxable cash grant, because the tax equity market is currently not functioning fully.
- Final rules for the cash grant and loan guarantees are pending.

Sector	PTC*	ITC**	Grant Election***	Depreciation	Loan Guarantee
Wind	\$0.21/kWh, if PIS before 1/1/2013	30%, if PIS before 1/1/2013	30% of adj. Basis	5 year MACRS + 50% Bonus Depr. In 2009	Eligible
Solar	N/A	30%, if PIS before 1/1/2017	30% of adj. Basis	5 year MACRS + 50% Bonus Depr. In 2009	Eligible

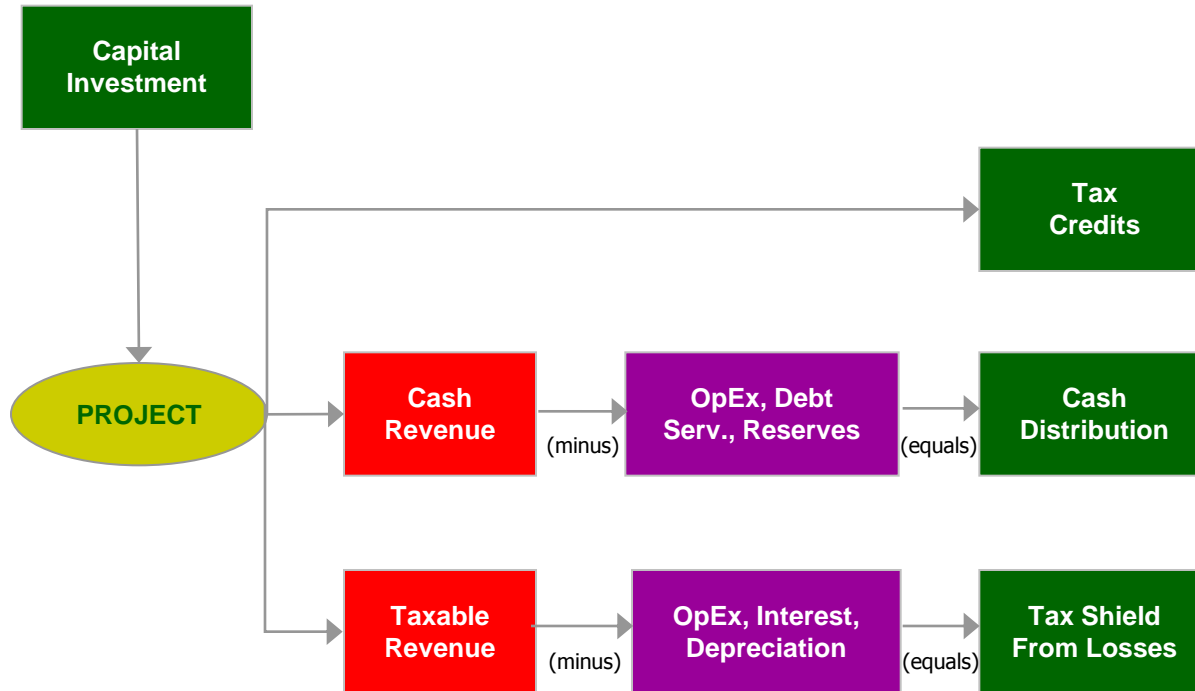
* Received for 10 years from COD; subject to annual inflation adjustment, using the GDP deflator, and round up to the first decimal

** Cannot take PTC if taking ITC

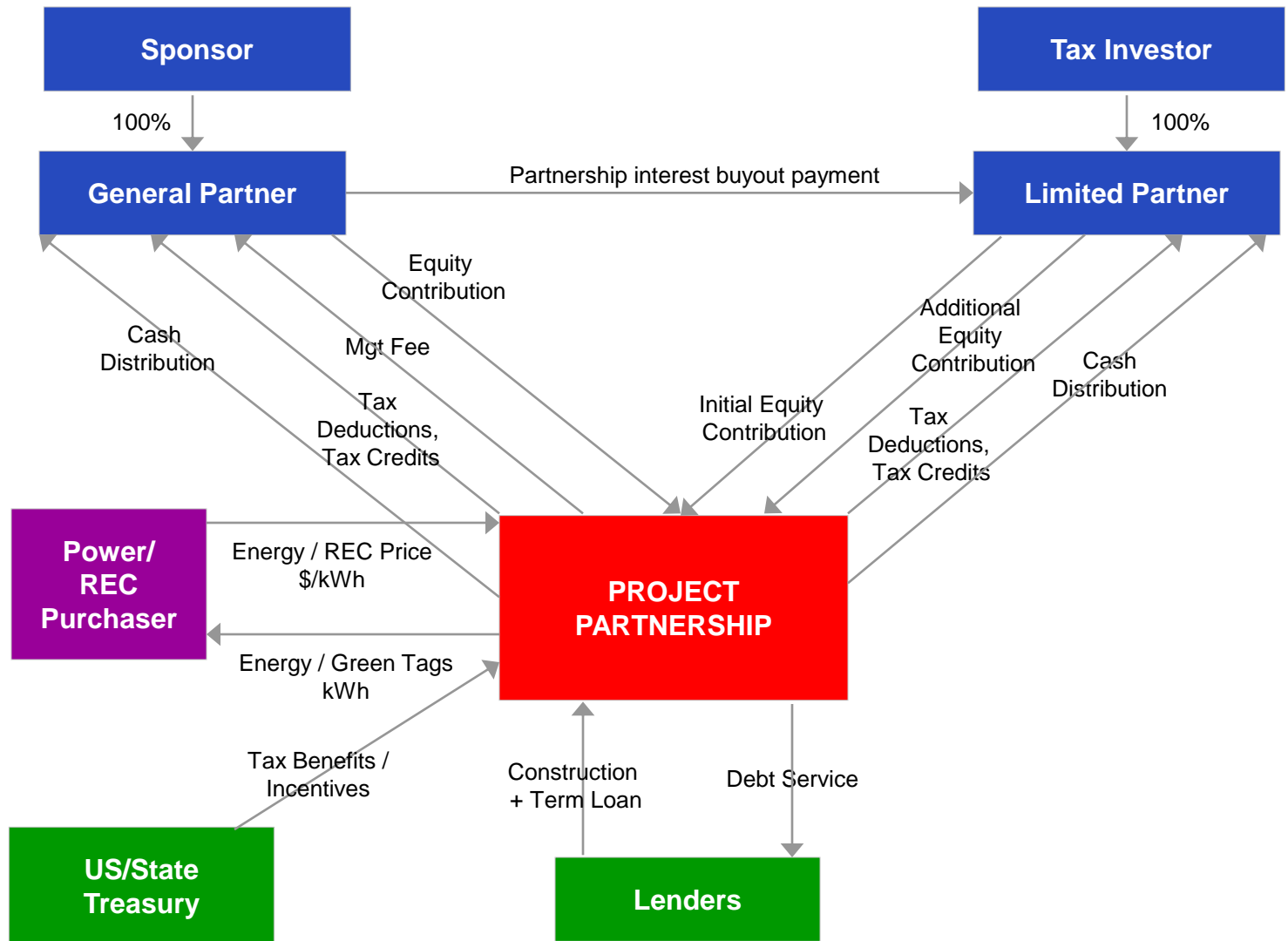
*** Cash Grant in lieu of ITC – not additional



Renewable Energy Project Economics

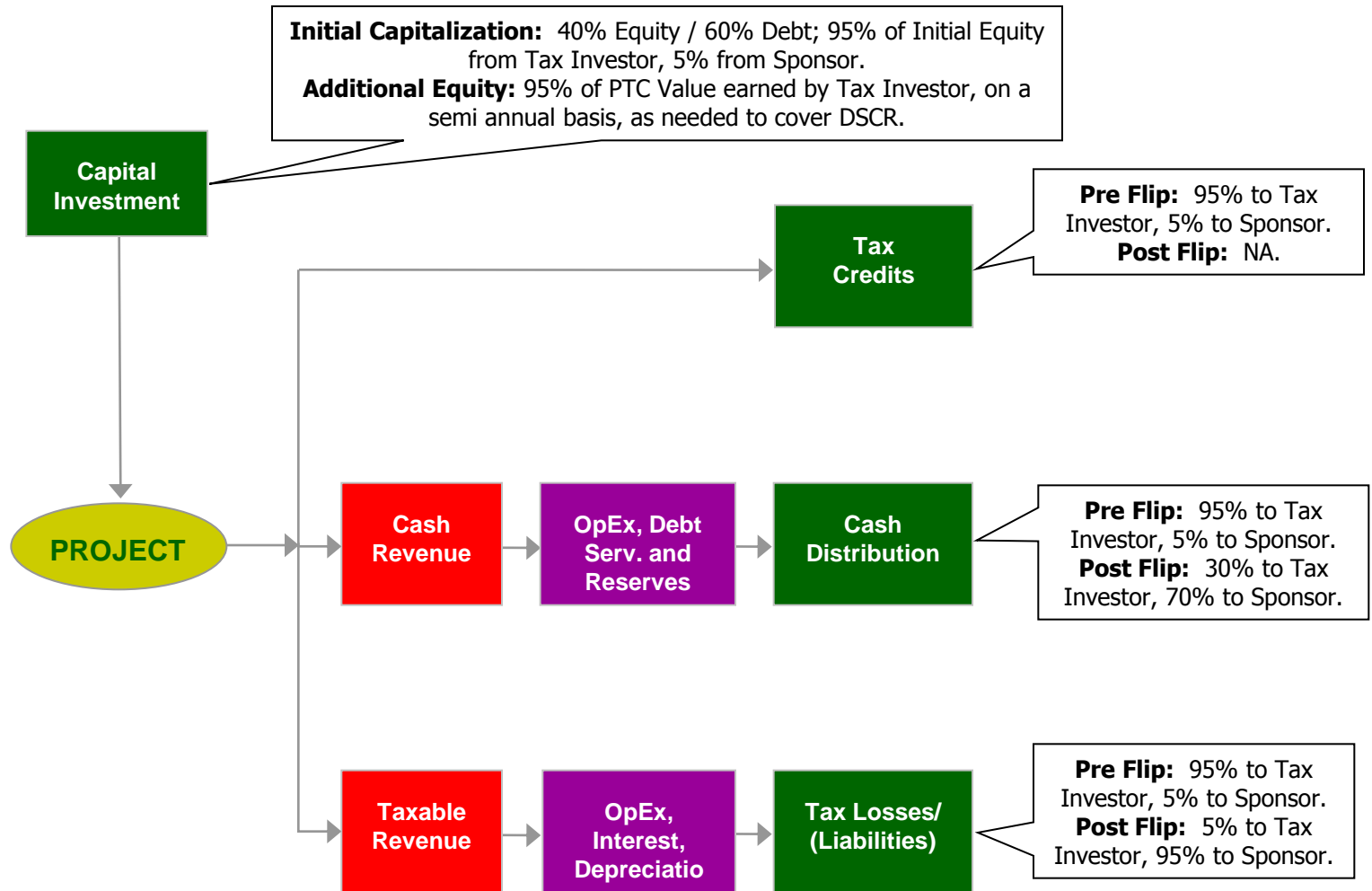


Partnership Flip Structure Example



Partnership Flip Structure Example – Allocations

Assuming fully functioning debt and equity markets



Financing Issues – Federal Tax Credits

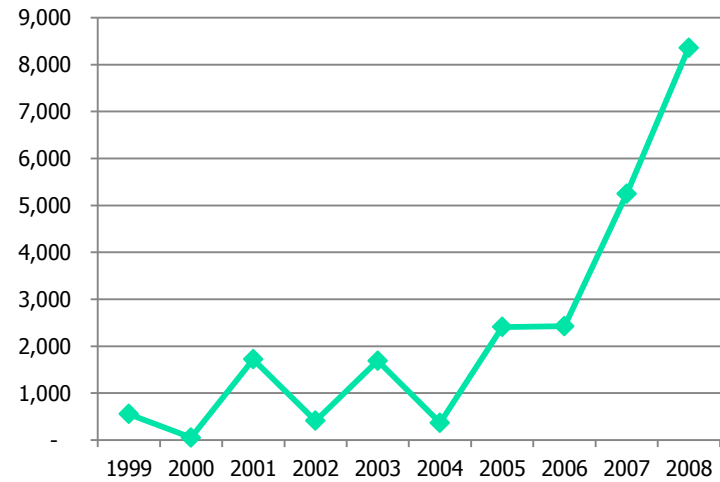
- **Market Distortion:** restricts equity financing options; yield requirements volatile and driven mostly by unrelated market factors.
- **Structural Challenges:** limitations on ownership structure – passive loss rules. Need complicated partnership “flip” structures to accommodate these rules.
- **Financing “Gap” During Construction:** tax investors only step in after project is in operation and thus eligible for the credits. Whereas, without firm equity commitments, bridge financing during construction is difficult (and currently unavailable). This is one of the reasons small to medium size developers are forced to develop and sell (vs. build and hold) projects.



Critical requirements in renewable energy policies to facilitate financing

- Long-term focus – plan incentive period according to the realistic technology maturation period.
- Make incentive available/useable to the widest financing markets.
- Provide investment grade, bankable credit support behind PPAs.
- Remove/reduce production intermittency risk for the banks/investors.
- Reduce/simplify permitting risk.
- Avoid tradable RECs structure if the markets for such RECs will not be significantly large and deep.
- Provide pricing clarity and let PPA pricing be determined through a competitive bidding process.

Wind - Annual Installed Capacity (MW)



Source: AWEA



About Alyra

A firm imbued with a singular focus and rich experience in renewable energy, Alyra provides financial advisory services exclusively to the renewable energy sector. The firm specializes in M&A/cross-border joint ventures and structured tax equity/project finance. Alyra's clients include leading renewable energy companies in North America and Europe, institutional investors, national renewable energy research laboratories and Federal and state energy agencies.

Alyra was founded in January 2004 by Mohammed Alam, following his energy banking career with Fortis Capital Corp., where he led a range of origination, structuring and restructuring of renewable and conventional power transactions. Before Fortis he worked at GE Capital's Capital Markets Group, providing structuring and advisory services to GE's Latin American power and infrastructure transactions. Earlier, he started his finance career at Brown Brothers Harriman, focusing on emerging markets research. Mr. Alam holds a Master's degree in Public and Private Management from the Yale School of Management where he was one of three recipients in his class for the Scholastic Excellence Award. He also holds a Bachelor's of Science degree, summa cum laude, from the University of Massachusetts, with various scholastic and leadership honors and distinctions, including the valedictorian nomination. Mr. Alam frequently speaks at major international energy conferences and is an author of published articles for leading energy publications.

RECENT ENGAGEMENT HIGHLIGHTS

Sole Advisor to Duke Energy regarding its acquisition of all wind power assets of Tierra Energy, March 2007.

Originated the \$240 million Catamount Energy acquisition transaction for Duke Energy, June 2008.

Currently retained as sole advisor to a strategic buyer regarding acquisition of two solar power companies.

Currently retained as sole advisor to a strategic investor, a \$50 billion energy company, regarding investments and strategic joint ventures in Solar Thermal/CSP sector.

Currently retained as advisor to buyer, a \$30 billion energy company, regarding a potential wind portfolio acquisition (\$400-500 million).

