From Local to Global

The Rhode Island Model for Harnessing Wind Power Worldwide

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Agenda

Introduction & Background

Who Will Own the Turbines?

Off-take Options

Ownership and Capitalization Models

How Can Renewable Energy Portfolio Funds be Used?

Introduction to Wind Power Finance

Overview

2006: 2,454MW's of new wind capacity installed in 2006, or an increase of 27%.

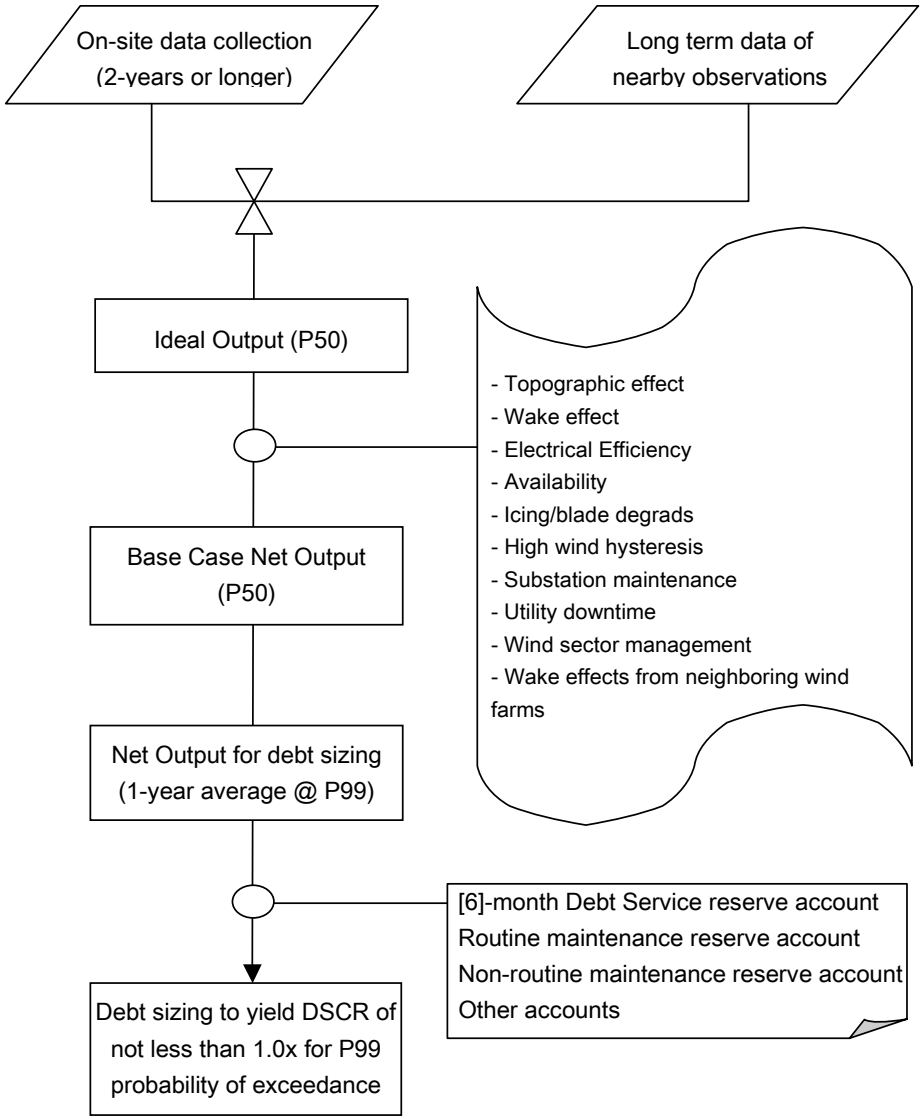
Total installed capacity now at 11,603MW's.

Equates to approx. $4.5 Billion in capital investment.

2007: Additional 26% capacity increase expected.

Approximately $4.5-$5 Billion capital investment.

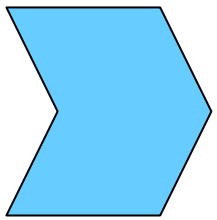
Introduction to Wind Power Finance



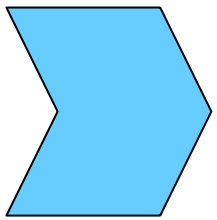
- On-site wind data is correlated with long term data collected at nearby observation points.
  - Typically at least 2-year of on-site data is requested
- From the correlated data, an ideal output at P50 probability of exceedance is calculated.
- The ideal output is adjusted by various factors to derive base-case net output at P50 probability of exceedance.
- Debt will be sized based on 1-year average output projection at P99 probability of exceedance.
  - Debt sizing will result in DSCR for P99 of not less than 1.0x
  - Based on debt sizing method, base case DSCR yields 1.4x – 1.5x
- Reserve accounts used in wind power project finance include:
  - Debt service reserve
  - Routine maintenance reserve
  - Non-routine maintenance reserve

Introduction to Wind Power Finance

Value Streams in Wind Projects

Cash 

Energy Payment
Renewable Energy Certificate

Tax 

Production Tax Credit
Depreciation

Tax attributes equivalent to 60-65% of wind farm economics

Who Will Own The Turbines?

Issue of Ownership of Turbines can be critical in financing.

If financing is to be Non-Recourse, i.e. based upon stand-alone contractual structure, clear ownership is critical.

Finance parties will look to “Secure” financing with a lien on ALL assets of the wind farm, including turbines, towers, real and personal property.

Additionally finance parties will seek assignment of contracts, energy sales, operations and maintenance contracts, warranties.

“Un-secured” finance options exist, where liens are not required, however, historically approx. 67% of wind farms are financed on a secured basis.

Off-Take Options

Energy Sales Agreement(s)

Typically long-term fixed price or indexed contracts for sale of energy (megawatt hours)

Longer tenor equates to higher leverage:

- Ability to recover capital costs,
- Improved returns

Unique aspects for wind farms:

- Scheduling,
- Transmission,
- Curtailment,
- Performance standards

Off-Take Options

Alternative Energy Payment Structures

Financial structures as a proxy for an Energy Sales Agreement: Hedges, Swaps, Floors, Collars.

Replace traditional Energy Sales Agreements with sales to financial parties.

Current structures for 7-years, in some areas up to 10-years.

Consideration for: scheduling, settlement security for hedge provider.

Off-Take Options

Renewable Energy Certificate Sales

Sales to 3rd parties for REC's evidencing electrical generation from renewable resources.

Typically quoted as $/MWh.

Bi-lateral, bundled, sales to ISO or clearing entity.

Off-Take Options

Conclusions

Optimizing the financial structure for secured non-recourse financing hinges upon:

Long-term, 10-years or greater of fixed price off-take sales, i.e. Energy Sales Agreement, financial structures or REC sales.

Credit-worthy counter party.

Recognition of unique aspects of wind farms: intermittent resource.

Ownership & Capitalization Models

Strategic Owner

An entity such as a utility or other major energy company will own the wind farm.

The entity in question ill have “tax appetite” and can use the production tax credits and depreciation for to reduce their taxable income.

Financing based upon i) Cash revenue streams from energy and REC sales, and ii) periodic equity contribution for PTC’s generated.

Wind Farm financed at the project level.

Partnership Structure

A partnership will own the wind farm. Pursuant to their respective interests, each partner will be allocated certain attributes generated by the wind farm.

Cash investors, typically the developer, earn the cash return from the wind farm.

Tax investors, typically 3rd party financial institutions, utilize the tax benefits; PTC's and depreciation.

Financing based upon i) Cash revenue streams allocated to the cash investor.

Wind Farm financed at shareholder level.

Ownership & Capitalization Models

Service Contract

An Agency contracts with a strategic owner or partnership to purchase renewable energy for a given period of time, typically 10-years or longer.

The sales of energy to the Agency over time are sized to cover capital costs, and the appropriate return to the owner/partnership. Upon expiry of the sales agreement ownership may transfer to the agency.

Financing based upon i) Cash revenue streams from energy and REC sales, and ii) periodic equity contribution for PTC's generated.

Wind Farm financed at the project level.

Ownership & Capitalization Models

Conclusions

Given that tax attributes constitute a significant part of the overall economics of a wind project ownership and capitalization of a wind farm need to consider ability to earn PTC's and utilize depreciation.

Key drivers; Tax appetite,
Owner/operator,
Equity at risk,
Cannot be majority owner and sell power.

Financing Context

Defray capital cost

Guarantee debt service,

Offer minimum REC price.

Support turbine and/or other payments

Achieve economies of scale.

Mizuho Corporate Bank Background

Global Project Finance Loans					
	Mandated Lead Arranger	Value $m	Deals	% Share	2005
1	Calyon	7,211	51	5.2	3
2	Royal Bank of Scotland	6,599	56	4.8	1
3	BNP Paribas	5,313	47	3.8	2
4	Mizuho	5,151	52	3.7	15
5	Mitsubishi UFJ Financial Group	5,124	55	3.7	19
6	Credit Suisse	4,640	15	3.3	5
7	SG Corporate & Investment Banking	4,114	31	3.0	4
8	BSCH	4,103	37	3.0	17
9	WestLB	3,963	34	2.9	8
10	Goldman Sachs	3,916	11	2.8	23

North American Project Finance Loans					
	Mandated Lead Arranger	Value $m	Deals	% Share	2005
1	Credit Suisse	4,109	11	12.8	1
2	Goldman Sachs	3,611	9	11.2	2
3	BNP Paribas	1,905	10	5.9	24
4	WestLB	1,729	8	5.4	3
5	Royal Bank of Scotland	1,406	8	4.4	11
6	Dexia	1,368	5	4.3	10
7	HSH Nordbank	1,368	13	4.3	13
8	Mizuho	1,307	11	4.1	15
9	DePfa Bank	1,141	3	3.5	-
10	Morgan Stanley	1,068	4	3.3	12

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2006 Wind Power Program
US$ 1,220,000,000

Mandated Lead Arranger
Administrative Agent

March, 2006

Horizon Wind Energy

BC2/Maple Ridge, LLC
US$ 263,000,000

Lead Arranger
Documentation Agent

June, 2006

FPL Energy

Lone Star Wind, LLC.
US$ 710,000,000

Lead Arranger
Co-Syndication Agent

December, 2006

BABCOCK & BROWN

Back-Leverage Portfolio Financing
US$ 194,380,000

Mandated Lead Arranger
Administrative Agent

December, 2006

Mizuho financed 59% of new capacity additions as Arranger in 2006

Contacts

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MIZUHO