

Wind Energy in New England Islands & Coastal Communities



Development & Financing Options
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Overview

- ◆ Background
- ◆ Financial Plan Factors
- ◆ Debt Sources

History: ABB Energy Capital

- ◆ Structured financing of small to medium scale energy infrastructure projects in North America.
- ◆ Financing projects from \$2 to \$80 million.
- ◆ Construction and term project financing & leasing solutions.
- ◆ Core markets: renewable power, energy efficiency, and distributed utility services.
- ◆ ABB Energy Capital acquired by GE Commercial Finance.



Financial Plan: Factors



- ◆ What is the project size?
- ◆ Who is the project developer?
- ◆ Why is the project being developed?
- ◆ Who will be the ultimate project owner?

Factor: Project Size

- ◆ Size determinants (location, location, location):
 - * Wind Resource
 - * Transmission Capacity
 - * Interested, Credit-worthy Buyer(s)
- ◆ Project size ranges:
 - * Dedicated-use, e.g., residential (<100 kW)
 - * Small (< 5 MW)
 - * Medium scale (5 - 30 MW)
 - * Full-size scale (30+ MW)

Factor: The developer

- ◆ Types of developers:
 - * Individual
 - * Municipality/Cooperative/Joint-action agency
 - * "Pure" developer
 - * Investor/developer
 - * Green power marketer.
- ◆ A developer doesn't always keep ownership.
 - * The developer's size as a sign of likely ownership.
 - * Developer and Owner interests are shared, but not identical.

Factor: Why is the Project being developed?

- ◆ Reasons will vary for each project:
 - * Make money selling the project.
 - * Make money selling electricity.
 - * Meet customer demand for green power.
 - * Reduce reliance on fossil fuel-based power.
 - * Secure access to renewable energy credits to meet Mass RPS.
 - * Reduce taxes.
 - * Monetize underutilized assets, e.g., land.
 - * Boost environmental leadership image.

- * What's the primary reason for your project?

Factor: Who will own the Project?

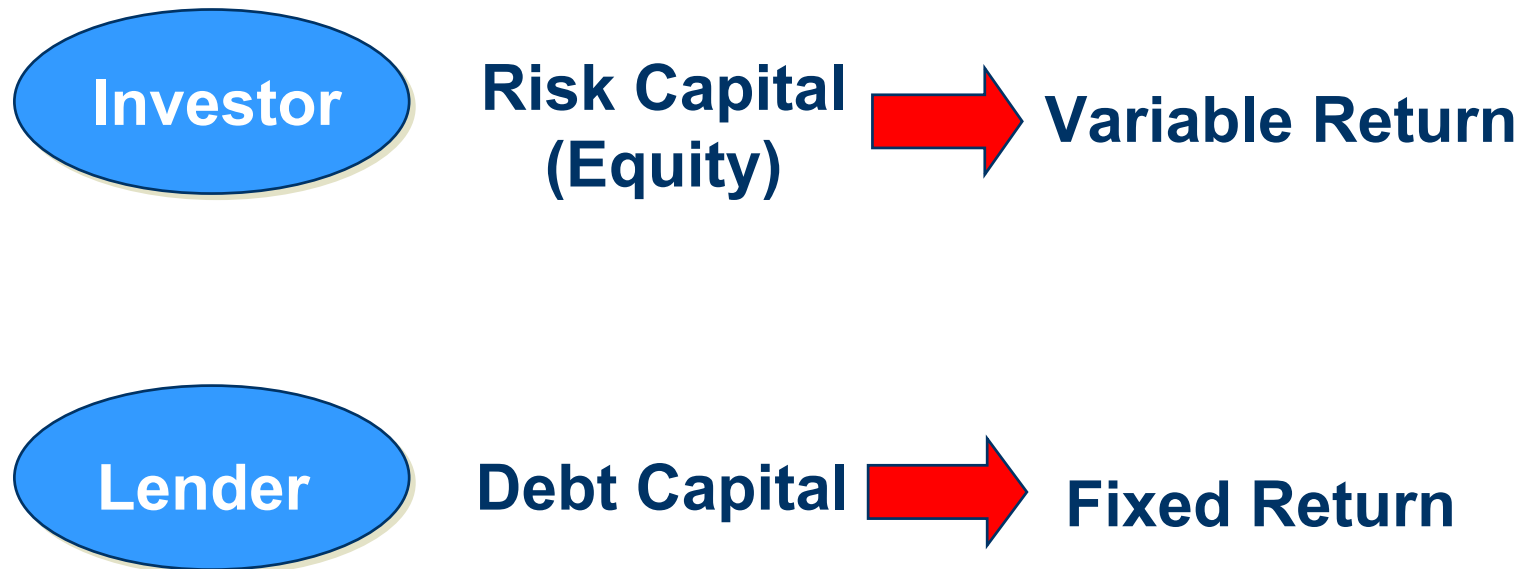
◆ Types of Owners:

- * Municipal electric company.
- * Rural electric cooperative.
- * Joint-action agency owned by multiple municipal utilities.
- * Investor-owned utility.
- * Unregulated subsidiary of an integrated utility company.
- * An independent power project developer.
- * Green power marketer.
- * Individual.
- * Institutional investors.

•• The owner should match the project.

Debt Financing

Risk/Reward Scenario:



Lenders/Investors Favor Projects with:

- ☞ Good wind resource
- ☞ Strong cash flows from the power sales
- ☞ Reputable, credit-worthy contracted buyer
- ☞ Other capital sources are committed
- ☞ Coherent and conducive regulatory environment
- ☞ Reputable contractors (EPC and O&M)
- ☞ Reputable turbines
- ☞ Experienced management
- ☞ Adequate collateral security
- ☞ Coherent warranties, permits, leases, easements, etc.

Project Debt Types

- ◆ Construction loans
- ◆ Corporate term loans (loans guaranteed by the owner)
- ◆ Project finance term loans (no recourse to the owner)
- ◆ Subordinated term loans, e.g., "PTC" loans
- ◆ Bond financing, e.g., municipal bonds
- ◆ Lease financing, e.g., municipal leases

Project Debt Sources #1

- ◆ A particular lender's relative interest will reflect:
 - * Project size (potential for up-front fees)
 - * Project risks (relative current exposure to the off-taker)
 - * Developer relationship (potential for follow-on business)
- ◆ Large projects:
 - * Commercial banks, mostly U.S. banks
 - * A few insurance companies

Project Debt Sources #2

- ◆ Small projects:
 - * Two national-scale commercial lenders
 - * Some state clean energy funds
 - * (see http://eetd.lbl.gov/ea/ems/cases/RE_Loan_Programs.pdf)
 - * Rural Utilities Service, U.S. Dept. of Agriculture
 - * Local banks
- * But mostly: all-equity, e.g., cash from the ultimate owner(s)

Emerging Funding Sources for Small Projects

- ◆ Municipal electric departments, e.g., Hull project
- ◆ Public sector bond support
 - * San Francisco Solar Initiative: \$100 mn. for wind & PV
www.votesolar.org
 - * County industrial revenue bonds
- ◆ Private cooperatives
 - * Toronto Renewable Energy Co-operative (www.windshare.ca)
- ◆ Sales of RECs / Green Tags
- ◆ Farm bill support
 - * Grants/Loans for farmers, rural small businesses, ranchers
- ◆ Private equity funds targeting small renewable power

Parting Thoughts

- ◆ Two truisms:
 - * Time is money.
 - * Keep it simple.
- ◆ Financing is a tool to completing the project, not an end in itself.

