



REFF West

Discussion on Private Bonds for Renewable Energy Projects

September 29, 2009

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Power Team Profile

US arm of Manulife Financial, largest life insurer in North America

Boston Power Team Manages \$13 Billion:

- Public Bonds (fixed-rate utility lending, 10 – 30 years)
- Privately Placed Bonds (project financing, 15 – 25 years)
- Private Equity (utilities, projects)

2008: Invested \$3.3 billion across 90 companies



Panoche Energy Project
Firebaugh, CA



Nellis Solar Power Plant
Clark County, NV



Grand Gulf Nuclear Generation Facility
Port Gibson, MS



Katrina/Rita
Storm Recovery Bonds

Private Bonds for Renewable Projects: Profile

- Longer tenor ~ 20 years
- Fixed rate
- Construction risk acceptable
- Wide range of applicable energy sources
 - Wind, solar, hydro, geothermal, waste-to-energy, biomass
- Experienced institutional investor teams
 - Migration toward bank financing in recent years seems to be reversing
- Potential for jointly financed deals with Banks
 - Common during the 1990's
 - Banks – short tenor
 - Institutions – long tenor



Pricing and Market Status

- 2009 market recovery has resulted in public bond yields tightening over the past 6 months
- In conjunction, private project bond pricing has also come in
- Currently, investment grade projects are pricing in the range of ~7.25-7.5%
- Generally no or minimal upfront fees
- Appetite is strong among institutions, however club deals necessary for larger transactions



DOE Loan Guarantee Program

- DOE program expected to stimulate the market substantially
- Private bond market is a natural fit
 - Institutional investors typically long term
 - Willingness to provide both guaranteed and un-guaranteed financing

Borrower Perspective: Pros and Cons

■ Pros

- “Fire and Forget” - long term financing
- Fixed rate – no need for interest rate swaps to hedge interest rate risk

■ Cons

- Challenge of prepayment - Make-whole
- Less flexibility in cash advances during construction