



Differentiating Quality PV

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Our Knowledge, Your Power



GCube Overview

- Over 25 years experience in renewable energy insurance
- 40,000MW of renewable energy projects insured
- \$680M capacity for commercial, utility scale wind and solar projects around the globe (any one project or phase)
- Managing General Agency
- Underwriting capital provided by Lloyd's
- Global underwriting authority
- Accessed via licensed insurance broker



GCube Overview: Our People

- Over 55 employees with renewable energy expertise worldwide
 - Newport Beach, New York, Minneapolis, London
 - Global underwriting authority
 - 6 US based underwriters
 - 8 UK based underwriters
 - Loss Control Engineering Team
- Claims settling authority
 - US and UK claims department
(paid over 400 claims in 2010)
- Dedicated Underwriting Team



Focus & Experience

- Wind
- Solar
- BioFuels (Ethanol, Biodiesel & Others)
- BioMass (Anaerobic Digesters)
- Hydro
- Wave
- Tidal



Our Clients

- AON
- Beecher Carlson
- Lockton Companies
- Marsh
- McGriff Seibles
- Myers Reynolds
- Willis
- And other insurance brokers



Coverage Offerings

- Ocean Cargo
- Delay in Start Up (MDSU)
- Cargo/Stockthroughput

- Construction All Risk
- Includes Inland Transit
- Advanced Loss of Profits
- Phased Operational Coverage

- Operating All Risks
- Mechanical & Electrical Breakdown
- Business Interruption (Includes PTC& REC)
- Contingent Business Interruption



Coverage Offerings

Liability

- Third Party Liability / General Liability
- Employer's Liability / Worker's Compensation
- O&M Contractor's Liability



Risk Profile of Wind/PV Solar

- Lower concentration of values
 - Separation of low value units
- Lower loss severity but higher frequency
- Different hazard exposure
 - Lightning
 - Gearbox mechanics
- Different supply chain dynamics
 - Shorter waiting times
 - Different supplier networks for parts and services
- Different operational considerations
 - Construction strategies and process
 - Unit contingent vs. baseload/peaking/available on demand
 - Technology and scale continue to evolve



Risk Management Mechanisms

- **Avoidance** – often impractical
- **Assumption** – “risk retention” – deductibles, low limits, self-insurance
- **Transfer** – insurance or contractual risk transfer
- **Sharing** – insurance pools
- **Reducing** – loss control



Characteristics of Insurance

- Large number of homogeneous exposures to loss
- Loss is definite in time, place, amount and cause
- Accidental in nature – unforeseen and unintended
 - Can't predict specific losses with accuracy
- Significant in scope
- Frequency and severity should be calculable
- Non-catastrophic in nature



Property Underwriting Considerations

- Technology
- Construction Company
- O&M Company
- Warranties
- Geographic Location
- Inventory/Spares Availability
- Crane Access
- Project Values for Property Coverage
- Project Output for Liability Coverage
- Construction Timeline/Schedule



Solar: Probable Maximum Loss Maximum Foreseeable Loss

PV PML:

- Fire or modest damage by natural peril
- Isolated damage and short lead times

PV MFL:

- CAT event – Earthquake, Hail
- Widespread damage
- Short lead times

CSP PML:

- Fire damage to panels or power plant block
- BI loss during repair period

CSP MFL:

- Total loss of panels plus widespread damage to heat exchanger/boiler and turbine
- BI loss during repair period