

# Risk Management and Insurance For U.S. Offshore Wind Projects

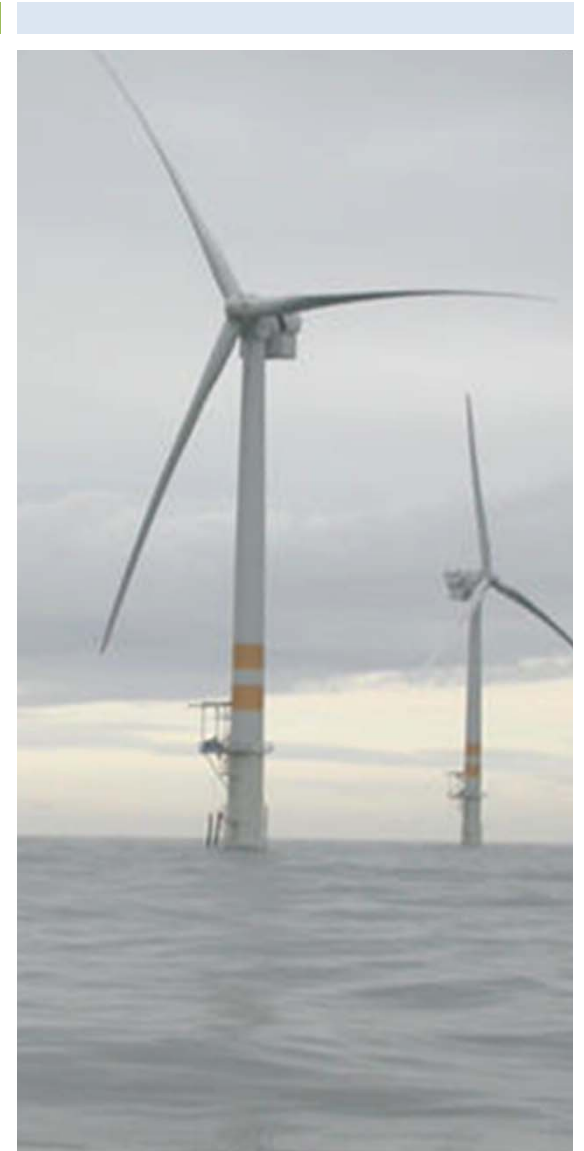
Jeff Kehne  
Sept. 14, 2011



# U.S. Offshore Wind Project Risk Profile

## Character and Incidence of Risks Change as Projects Progress

- **Leasing and Permitting** -- Owners face risk of delay or inability to obtain authorizations
- **Construction** -- Owners and lenders face risks of property losses, delays and cost overruns
- **Operations** -- Owners and lenders face risk of damage or underperformance
- **Decommissioning** -- Interior imposes financial assurance requirements to protect public against private default on decommissioning costs



# Implications of Non-Recourse Debt Financing

- Risks During Construction and Operations Stages Are Most Critical to Project Finance
- Debt Financing Brings Heightened Scrutiny to Risk Management Programs
  - Very Low tolerance of avoidable risk (especially for first-generation projects)
  - Close scrutiny of key project documents (PPAs and construction contracts) and risk management program
  - Rigorous review of insurance backstop
- Important Differences Between U.S. OSW Projects and
  - U.S. land-based projects
  - European projects

# Construction Risks

- Loss or Damage to Property or Equipment During Storage, Transport or Installation
- Delay in Start-Up
  - Scheduling of component deliveries and access to specialized port facilities and vessels (cable
  - Weather delay
- Added Challenges for U.S. Developers
  - Less developed supply chain and contractor expertise
  - Break-in for new (or newly modified) port facilities and installation vessels



# Construction Insurance

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## Typical Construction Phase Program Includes

- Construction All-Risks (CAR)
  - Third-party liability
  - Marine cargo
- Delay in Start-Up
- Worker's Compensation/Maritime Employer's Liability
  - Contractors
  - Owner
- Environmental Liability and Contractor's Pollution Liability
- Design/Professional Liability

# Operations Risks

- Damage or Malfunction During Operation
  - Vessel damage to cables or towers
  - Wind, wave or lightening damage to foundations, nacelles or blades
  - Defect or malfunction outside warranty
- Business Interruption
- Valuable Lessons from Europe, But U.S. Developers Confront
  - Distinct legal risks that extend beyond the leasing and permitting stage
  - Windstorm risks not present in North and Baltic Seas



# Operations Insurance



- Operating All Risks (OAR) including machinery breakdown coverage
- Third-Party Liability
- Business Interruption
- Statutory Workers Compensation
- Environmental
- Executive Risk policies, such as Directors and Officers Liability and Fiduciary Liability

# Insurance in a Successful OSW Program

- Early Planning to Develop Viable Program
  - Satisfy lender requirements for protection
  - Conform to project cost constraints
- Efficient Risk Reduction
  - Cable depth example
- Efficient use of warranties and guarantees
  - Negotiating to put risks on least-cost managers
  - EPC and multi-contract approaches



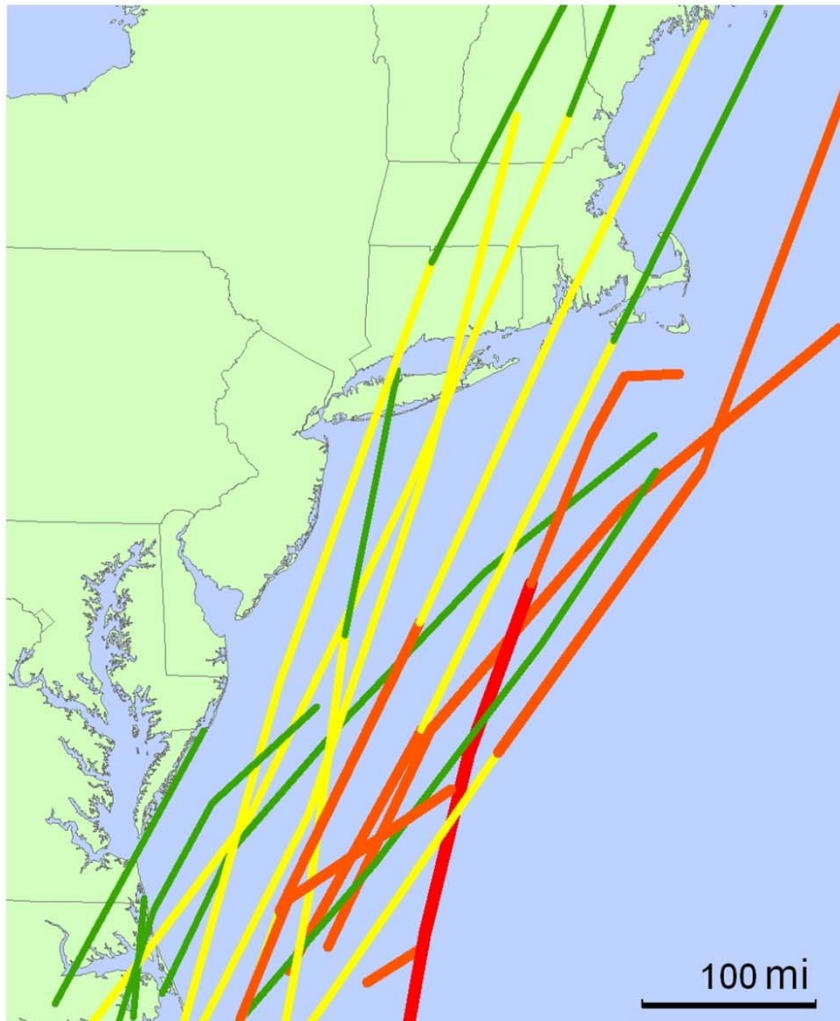


# Insurance in a Successful OSW Program (cont.)

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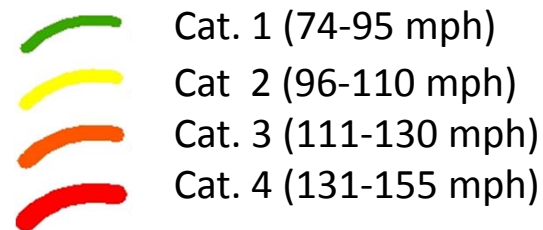
- Early Assessment of Insurance Cost and Availability
- Dual Placement of Construction and Operations Coverage to Eliminate Gaps and Disputes
- Careful Attention to Wording of Customized Policies
- Learn from European Experience While Attending to U.S. Differences
  - Legal regime affects risk profile
  - Hurricane coverage questions

# Insuring Offshore Wind Projects for Hurricane Risks



- European Industry Has Not Modeled for Risks of Hurricane-Speed Winds
- U.S. Industry Needs Estimated Maximum Loss (EML) Studies That Lenders and Insurers Will Accept

Hurricanes Since 1950 by Saffir-Simpson Category



Source: NOAA Coastal Services Data Center (updated June 1, 2010)  
Map prepared by: Hill & Kehne, LLC (Oct. 1, 2010)

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Jeff Kehne is a Founder and Principal at Hill & Kehne, a multidisciplinary law firm and insurance brokerage based in Washington, DC that combines law and insurance-related services on complex projects. Clients include the U.S. Government (Air Force, Army, Department of Justice), Boeing, BP, and the Offshore Wind Development Coalition. Jeff has worked extensively on the development of offshore wind in the U.S. since 2007, focusing on a wide range of federal and state regulatory and project risk management issues.