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OWP Seminar - Abstract for Presentation

Working Title - "A Policy Maker's Overview of Offshore Wind Turbine Structural Stability Standards, Guidelines and Certifications"

Abstract - The presentation will be an overview of guidelines and certifications for the design of offshore wind turbine foundations and structures and the policy implications of different engineering standards and criteria. It will be based primarily on XX published papers that each treat a different aspect of the subject, and will be structured roughly as follows.

Design Principles - A summary of the key engineering principles of foundation and support design will include fatigue loading, maximum loading, and vibration. A discussion of modeling will touch on:

- Geotechnical, Aerodynamic, Hydrodynamic Modeling
- Structural Modeling
- Standards, Design Loads and Failure Modes

History - A brief history of the development of standards, guidelines and certification organizations for offshore turbines will cover the last 20 years, including DNV, GL, IEC, and API. Recent developments in the US will also be summarized.

Case Study for U.S. - A comparison of API and IEC methodologies and standards will highlight their differences and similarities. Case studies of the Gulf of Mexico and the Massachusetts Coast will be presented.

Policy Implications - An overview of the policy implications of standards and guidelines will include;

- A comparison of the EU, UK, and US systems
- A comparison of API standards vs. other proposed U.S. standards (IEC)
- The relationship between standards, life cycle cost of energy, and other policy related issues