

Pillar 1

Offshore Wind Plant
Technology Advancement

- 1.1 Array Performance and Control Optimization
- 1.2 Cost-Reducing Turbine Support Structures for the U.S. Market
- 1.3 Floating Structure Mooring Concepts for Shallow and Deep Waters
- 1.4 Power System Design and Innovation

Pillar 2

Offshore Wind Power
Resource and Physical Site
Characterization

- 2.1 Comprehensive Wind Resource Assessment
- 2.2 Development of a Metocean Reference Site

Pillar 3

Installation, O&M and
Supply Chain Solutions

- 3.1 Heavy Lift Vessel Alternatives
- 3.2 Offshore Wind Digitization through Advanced Analytics
- 3.3 Technology Solutions to Accelerate U.S. Supply Chain

Challenge Areas

Awardees

NYSERDA PON 4214

Pillar	Technical Challenge Area	Proposal Title	Lead Proposer
1	1.1: Array Performance and Control Optimization	Computational Control Co-design Approach for Offshore Wind Farm Optimization	Stony Brook University
1	1.1: Array Performance and Control Optimization	Impact of Low Level Jets on Atlantic Coast Offshore Wind Farm Performance	GE Research
1	1.1: Array Performance and Control Optimization	Reducing LCoE from Offshore Wind by Multiscale Wake Modeling	Cornell University
1	1.1: Array Performance and Control Optimization	Wind Farm Control and Layout Optimization for U.S. Offshore Wind Farms	NREL
1	1.2: Cost-Reducing Structure Mooring Concepts for Shallow and Deep Water	A Low-Cost Modular Concrete Support Structure and Heavy Lift Vessel Alternative	RCAM Technologies
1	1.3: Floating Structure Mooring Concepts for Shallow and Deep Water	Shared Mooring Systems for Deep-Water Floating Wind Farms	NREL
1	1.3: Floating Structure Mooring Concepts for Shallow and Deep Water	Innovative Deepwater Mooring Systems for Floating Wind Farms (DeepFarm)	Principle Power, Inc.
2	2.1: Comprehensive Wind Resource Assessment	A Validated National Offshore Wind Resource Dataset with Uncertainty Quantification	NREL