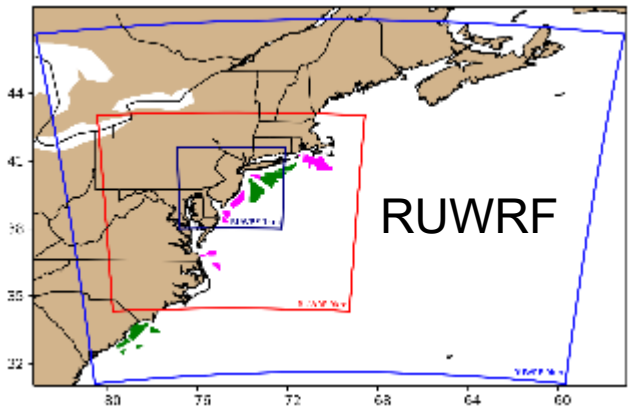
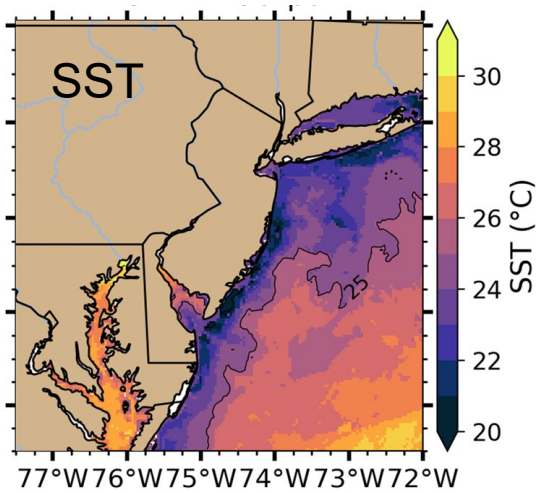
RUTGERS

A Decade of Offshore Wind Energy Research Supporting the New Jersey Board of Public Utilities

Scott Glenn, Josh Kohut, Travis Miles, + many
Center for Ocean Observing Leadership, Marine and Coastal Sciences

Overarching theme – The Coastal Ocean impacts the Offshore Wind Resource





RUCOOL – NJBPU Project Fast Facts:

- RUCOOL supported by NJBPU since April 2011
  - Leverages 30+ years of experience and over $100M in projects
  - Focuses activities on providing value to the NJ rate payer
- NJBPU project has three major components
  - Engagement – *to refine needs of diverse stakeholders*
  - Observations & Forecasting - *to provide a planning resource*
  - Research – *to improve understanding*
- Forecast generated daily using RUWRF – "*digital twin" approach*
  - Evaluated by and optimized with NREL in 2019
  - Continuous ongoing validation documents performance equal to, or better than, the evolving national products
  - Full 4-D dataset is available for applications and research
- RUWRF Key Features
  - Triple nested (9 km, 3 km, 1 km) within U.S. global model
  - Sea Surface Temperature boundary condition generated by RUCOOL using state-of-the-art satellite systems
  - Accounts for essential ocean features (upwelling) and essential atmospheric structures (seabreeze)