

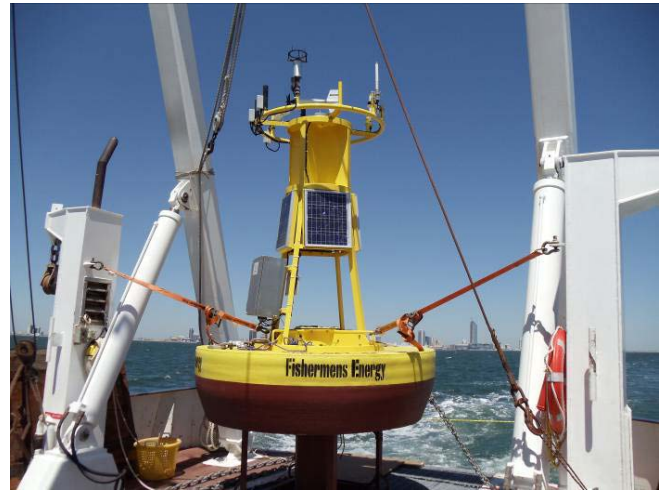
# Real-Time Meteorological Buoy - Offshore Wind Farm, Atlantic Ocean, Atlantic City, NJ

## Project Characteristics:

- *Real-Time Meteorological Data*
- *Wind Speed/Direction*
- *Air and Sea Temperature*
- *Barometric Pressure*
- *Baseline Measurements*

Fishermen's Energy is developing a 20MW offshore wind energy facility 2.8 miles offshore Atlantic City, NJ. Six 3.6 MW turbines are scheduled for installation during the summer of 2011. While the wind regime in the area has been well documented and is attractive for energy production, a thorough wind resource assessment (WRA) program is critical for providing site-specific data to turbine manufacturers and lenders.

Fishermen's Energy contracted the design, fabrication, and installation of a Real-Time Meteorological Offshore Buoy to Woods Hole Group. Through close collaboration with the wind resource consultant, AWS Truewind (AWS), a wind-resource monitoring program was developed. Although data from numerous regional wind measurement systems will contribute to the overall assessment, site-specific data are a key requirement. No met tower will be installed at this near shore location. To directly measure environmental conditions at the Fishermen's 20MW project area, a meteorological buoy was installed during April 2010. Planned to operate continuously for a period of two years, the buoy will provide site conditions in near real-time for shore side processing and analysis.



Woods Hole Group worked with Fishermen's Energy to develop a suite of sensors to meet the operational needs. The suite of sensors includes: redundant wind speed and direction (RM Young 05106 Anemometer and Ultrasonic RM Young 85106); Air Temperature (RM Young 41342VF); Barometric Pressure (RM Young 61302); Electronic Compasses (RM Young 32500); Sea Temperature (Campbell 109SS); and Garmin 16X GPS. Sensors are interfaced to a Campbell Scientific CR1000 data logger. Data telemetry from the buoy is provided by primary and secondary cellular IP modems on CDMA and GPRS networks. Emergency recovery positions are provided by the Xeos Technologies Melo GPS/Iridium Watch Circle monitoring beacon. Power is provided by four 20 watt solar panels to a 160 AH storage battery in the buoy hull.

All data is transmitted off the Met-Buoy on a 4-hour schedule.