Wave Buoys for PRIMaRE

The Peninsula Research Institute for Marine Renewable Energy (PRIMaRE) has ordered 8 Fugro Oceanor Seawatch Mini II buoys to form the core of an instrumentation network at the Wave Hub site off the South West of England.

Wave Hub is a renewable energy project that aims to create the UK's first offshore facility for the demonstration and proving of arrays of wave energy generation devices (WECs). The Wave Hub facility will provide a well defined and monitored site with electrical connection to the onshore national grid. Four different proven commercial WEC manufacturers will each have a berth to connect a number of their devices to the Wave Hub's sea bed 'socket' which is approximately 16 km offshore and at a depth of 50m.

PRIMaRE, which is directly linked to the Wave Hub project, is tasked to monitor and characterize the wave climate at the site. The 8 directional wave sensor buoys will facilitate this with detailed coverage of the 2km by 4km deployment area. More significantly, as a part of an extensive but highly integrated system of oceanographic, meteorological and environmental monitoring equipment at the Wave Hub site, the buoy array will constitute a world leading facility giving researchers in wave energy a unique opportunity to work with much richer and detailed data sets.

The buoy array will also be an important part of the Wave Hub's infrastructure, feeding wave information to the WEC devices. In one mode of operation the buoys will be able to deliver synchronized live and continuous data streams that will allow a local description of the sea surface to be computed in near real time. This data can be provided as a live feed to the WEC devices to help optimize their energy output.