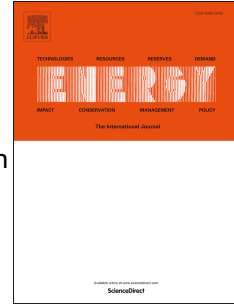


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An assessment of wind and wave climate as potential sources of renewable energy in the nearshore Shenzhen coastal zone of the South China Sea

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Abstract

In this study, nearshore wind and wave climates and their potential as renewable energy sources are evaluated by means of buoy observational data for the Shenzhen coastal region. Six buoys were originally deployed in the region by the city local government of China in 2014, and are located in different areas of the study region, including Dapeng Bay, Daya Bay, Shenzhen Bay. The waters in these areas are relatively shallow, ranging in depth between about 3-22 m. The results show that during 2014-2016, annual mean wind speeds (at 2.5 m above the sea surface) in the region varied between 3.1-4.1 m s^{-1} , leading to wind powers between 37-94 W m^{-2} ; significant wave

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