

عنوان مقاله:

Recent developments and Design Consideration of Offshore Wind Turbines

محل انتشار:

سومین کنفرانس بین المللی رویکردهای نوین در نگهداشت انرژی (سال: 1392)

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خلاصه مقاله:

Nowadays, the limitations of using fossil fuels caused increasing usage of renewable energies. Although there are significant developments in using othertypes of renewable technologies like biomass, solar, and ocean energies, the wind energy still is known as the oldest, cheapest, and most usable type ofrenewable energy. More than 2.5 percent of world energy consumption is supplied from wind energy and it is increasing with a yearly 25% rate. The energyharvested from wind is proportional to the third power of average wind speed in the site and therefore, one of the most important factors in choosing an effective and appropriate wind farm site is to find a place with acceptable wind speed throughout the year. The wind velocity is stronger, faster, and more uniform due to zero roughness at the sea level. This means a more effective electricity production. Stronger wind along with other positive aspects of installing wind turbines in offshore areas resulted in considerable growth of number of offshore wind turbines in recent years, such that it ratio to onshore wind turbines increased from %1 in 2000 to more than %9.6 in 2010, and it is increasing more and more. Planning, designing, and maintenance of offshore wind turbines require considering several different variables including the weather of site, economic incentives, forces on turbine, and environmental and legal considerations. Here it is tried to summarize developments in offshore wind turbine industry as well as .specific design, installation, commissioning, andoperation considerations of these turbines

کلمات کلیدی:

offshore, wind turbine, wind energy, renewable energy

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