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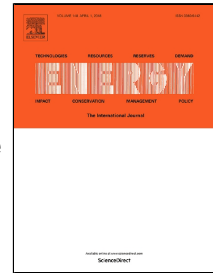
Assessment of onshore wind energy potential under different geographical climate conditions in China

L.I. Yi, W.U. Xiao-Peng, L.I. Qiu-Sheng, T.E.E. Kong Fah

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**Assessment of onshore wind energy potential under different
geographical climate conditions in China**

Yi LI^{1,2}, Xiao-Peng WU³, Qiu-Sheng LI^{4,*}, Kong Fah TEE²

¹Hunan Provincial Key Laboratory of Structures for Wind Resistance and Vibration
Control & School of Civil Engineering, Hunan University of Science and
Technology, Xiangtan, 411201, Hunan, China

²Department of Engineering Science, University of Greenwich, UK

³Xiangtan Electric Manufacturing Group, Xiangtan, 411102, Hunan, China

⁴Department of Architecture and Civil Engineering, City University of Hong Kong,
Kowloon, Hong Kong

*Corresponding author, E-mail: bcqqli@cityu.edu.hk

Abstract: Wind resource in China is abundant due to its vast land mass and long coastline. Based on wind speed and direction records from wind measurement towers at six onshore sites with different geographical climate conditions in China, statistical assessment of wind characteristics and wind energy potential at height of 70 m corresponding to the hub heights of multi-megawatt wind turbines is presented and discussed in this paper. First of all, the Weibull distribution function is verified to be a reliable model for wind speed prediction and the moment method is proved to be an accurate approach for estimation of the Weibull parameters at all the sites. Moreover, the variations of mean wind speed, the Weibull parameters and wind power density at the six sites are investigated in terms of seasonal, monthly and diurnal time scales. Finally, annual energy outputs at the six sites are determined by

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