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IMPACT OF WIND CHARACTERISTICS AND EFFECTS ON ELECTRIFICATION POWER STRUCTURES

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ABSTRACT

The general global flow circulation pattern previously described is a basic generalised model assuming that the earth is smooth spherical surface. In reality the Earth's relative surface roughness varies between locations due to large natural formations such as land, sea and mountains. The earths land formations can considerably affect the air's flow regime due to their resulting relative pressure fields, solar radiation absorption characteristics and the relative humidity. The ocean is a perfect example of a land formation affecting the flow circulation. The ocean is a huge energy sink and the flow of air over its surface is often linked to and dependent upon the flow characteristics of the water. The local geography and land formations in an area are responsible for creating what is known as a localised wind or regional winds. Fluctuation in the local temperature of a region can cause localised wind to occur on a seasonal or even daily basis including sea breezes or mountain winds. Small scale atmospheric circulation can be divided into two groups, secondary and tertiary circulation. Secondary circulation occurs in centres of high or low pressure caused by the heating and or cooling of different atmospheric levels.