



Exploiting long-term wind observations to inform the energy industry

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A large network of approximately 500 stations for wind observations is available over Australia. Some records go as far back as the 1920s, with a large proportion starting in the 1950s. However, there are several issues to be considered when analysing these data. Here the objective is to investigate the relationships between the main climate modes in Australia - ENSO and IOD - and the interannual variations in wind energy. Such relationships would provide the potential for improving the planning and operation of wind farms in Australia from the wind-power and economic viewpoints. However, before delving into these relationships, a careful selection of the data had to be carried out. The factors taken into account include location, proximity to obstructions, length of continuous data record, and data quality (removing the sudden steps in the data caused by changes in instrumentation, etc.).