



Long-term variability of winds and wind energy in Iceland

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Wind energy is calculated for various locations in Iceland from surface observations and from an objective analysis from the ECMWF (ERA40) for the latter part of the 20th century. The ERA40 data show a slight positive trend in the geostrophic winds, but this is small compared to the interannual variability. No clear trend is found in the speed of the observed winds. As the geostrophic winds (ERA40), the surface winds show an interannual variability, but this variability is not in phase at all locations. In the vicinity of mountains, even weather stations close to each other may feature long-term oscillations that are quite out of phase with each other. We attribute this to substantial variability in the frequency of large-scale wind directions.