

## Using Medium Range Weather Forecasts to Improve the Value of Wind Energy Production

MS Roulston, DT Kaplan, J Hardenberg & LA Smith

*Renewable Energy* 29 (4) 585-602, April 2003

### Abstract

The value of different strategies for consolidating the information in European Centre for Medium Range Weather Forecasting (ECMWF) forecasts to wind energy generators is investigated. Simulating the performance of generators using the different strategies in the context of a simplified electricity market revealed that ECMWF forecasts in production decisions improved the performance of generators at lead times of up to 6 days. Basing half-hourly production decisions on a production forecast generated by conditioning the climate on the ECMWF operational ensemble forecast yields the best results of all the strategies tested.

Copyright (C) 2002 Elsevier Science Ltd