**Title:** A stochastic programming approach for the development of offering strategies for a wind power producer

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**Abstract:** A stochastic programming approach is proposed in this paper for the development of offering strategies for a wind power producer. The optimization model is characterized by making the analysis of several scenarios and treating simultaneously two kinds of uncertainty: wind power and electricity market prices. The approach developed allows evaluating alternative production and offers strategies to submit to the electricity market with the ultimate goal of maximizing profits. An innovative comparative study is provided, where the imbalances are treated differently. Also, an application to two new realistic case studies is presented. Finally, conclusions are duly drawn. (C) 2012 Elsevier B.V. All rights reserved.

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