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Valery A. Kholodnyi* (kholodnyi@mtsu.edu), Department of Mathematical Sciences, P.O. Box 34, Middle Tennessee State University, Murfreesboro, TN 37132. *The Non-Markovian Approach to the Valuation and Hedging of European Contingent Claims on Power with Scaling Spikes.*

We present and further develop a new approach to modeling power prices with spikes proposed earlier by the author. In contrast to other approaches, we model power prices with spikes as a non-Markovian stochastic process that allows for modeling spikes directly as self-reversing jumps. We show how this approach can be used to value European contingent claims on power with spikes as well as to value and dynamically hedge European contingent claims on forwards on power for power with spikes in a practically important special case of the scaling probability distribution for the magnitude of spikes. (Received September 23, 2006)