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Variance and volatility swaps in energy markets

This talk is devoted to the pricing of variance and volatility swaps in energy market. We found explicit variance swap formula and closed form volatility swap formula (using Brockhaus-Long approximation) for energy asset with stochastic volatility that follows continuous-time GARCH (1,1) model (mean-reverting) (or Pilipović one-factor model). Numerical example is presented for AECO Natural Gas Index (1 May 1998-30 April 1999)