Abstract: We estimate conditional and unconditional high quantiles for electricity spot prices based on a linear model with stable innovations. This approach captures the impressive peaks in such data and, as a four-parametric family captures also the asymmetry in the innovations. Moreover, it allows for explicit formulas of quantiles, which can then be calculated recursively from day to day. We also prove that conditional quantiles of step $h \in \mathbb{N}$ converge for $h \to \infty$ to the corresponding unconditional quantiles. The paper is motivated by the daily spot prices from the Singapore New Electricity Market, which serves as an example to show our method at work.

Stichworte: ARMA model, electricity prices, high quantile, linear model, stable distribution

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