

The literature on renewable energy sources indicates that an increase of the intermittent wind and solar generation affects significantly the distribution of electricity prices. In this article, the influence of two types of renewable energy sources (wind and solar photo voltaic) on the level and variability of German electricity spot prices is analyzed. The quantile regression models are built to estimate the impact of the supply structure on different quantiles of electricity prices. The results indicate that an increase of both types of renewable generations leads to a fall of the price level. When the price volatility, measured by the inter-quantile range (IQR), is considered, the outcomes show that wind and solar influence prices differently. Conditional on the level of the total demand, the wind generation would either increase (when the demand is low) or decrease (when the demand is high) the IQR. Meanwhile, the increase of solar power stabilizes the price variance for moderate demand level. Thus, policy supporting the development and integration of RES should search for a balance between the wind and solar power.