

## Abstract

In this thesis, we investigate the impact of intermittent renewable energy sources on the level and volatility of the Czech electricity spot prices during the period from 2015 to 2019. The analysis is warranted due to the obligations of the member states of the European Union to augment the share of clean energy in the gross final energy consumption by 2030. The technique applied in the empirical part concerns univariate GARCH-class models (namely, plain vanilla and exponential) which are extended with additional explanatory variables in the form of total load, solar and wind power generations. By constructing daily, peak and off-peak indices from the dataset comprised of hourly observations, we establish a comparative framework throughout the text. More specifically, this approach allows us to contrast price dynamics under the regimes of high and low demand for electricity as well as to explore the patterns of solar and wind production. The findings indicate that both Czech solar and wind power sources induce the so-called merit order effect. In contrast, once the volatility of electricity prices is taken into account, the examined sources of energy behave in a different manner. Owing to the daily index, while solar power generation decreases the volatility of electricity prices, the opposite is found true for wind power generation.