

On the Construction of the Hourly Price Forward Curve for Electricity Prices

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Abstract:

The Hourly Price Forward Curve (HPFC) is the standard tool for computing prices for electricity retail products. Several methods on how to construct the HPFC are suggested in the literature, but few studies compare the different approaches, highlighting the strengths and weaknesses of the different methods. As the HPFC for one year will estimate the prices for a total of 8760 hours, the construction of an HPFC is a challenging task. Even if the HPFC as a whole seems reasonable specific hours might be mis-priced compared to prices of other hours. In this study we propose a novel approach for constructing a HPFC and compare the most common methods to obtain a HPFC. When constructing a HPFC one has to link the economical characteristics one observes for electricity prices to a fitting mathematical model. As these characteristics might differ from different markets, our paper will not focus on specific economic characteristics, but rather use a set of generic assumptions. So, we are able to explain how the common mathematical models work, and how these models can be altered to give a better fit to the data.