# **Conclusions and Operational Recommendations**

To tackle the task of predicting which auction will have a higher energy price for a given time slot, a Recurrent Neural Network turned out to be the best performing model. The main downside of using it however, is the lack of explanatory power. While the model itself offers the best predictive performance, it’s output can’t be used to gain a deeper understanding of the market. To use it in a productive environment several things have to be considered. First of all, the weather data fed to the model will consist of predicted weather data. However, once real weather data is available for a given time slot, it might be useful to add it as historical data, similar to the historical auction data approach used in our solution. Secondly, the historical auction data approach used by us can and should be evaluated on a regular basis to feed the model the most relevant historical data. To do that it would be useful to create regular explanatory analyses of the auctions so that relevant factors can be kept current. Finally, once put into production the model’s performance has to be carefully monitored and the model needs to be backed up regularly to prevent, or minimize, model degradation. However, if the predictive task is altered to predicting how much energy should be offered, or bought, at which auction, and at what price, it would make sense to test out a reinforcement learning model, as the task’s type would change from classification to a multi-layered regression. The reward type used for it would be the net gains and losses from its predictions.