**Article Summary**

# Title: *Forecasting Electricity Demand in Australian National Electricity Market*

**Author(s):** *Shu Fan, Senior Member, IEEE, and Rob J Hyndman*

**Keywords:** *Load forecasting,* *additive model, time series, forecast distribution.*

**Accessed:** *22 July 2012*

|  |
| --- |
| Key Findings |
| In this study, the authors use a variety of time series models to forecast electricity demand in the Australian National Electricity Market (NEM), including exponential smoothing models, ARIMA models, and a seasonal-trend decomposition model based on LOESS (STL). They also investigate the impact of weather variables on electricity demand and find that incorporating temperature and humidity data can significantly improve forecast accuracy. Finally, this study provides a practical application of their forecasting models by developing an online tool for electricity demand forecasting in the Australian NEM. |

|  |
| --- |
| Quotes |
| Fan, S., & Hyndman, R. J. (2012, July). Forecasting electricity demand in australian national electricity market. In 2012 IEEE Power and Energy Society General Meeting (pp. 1-4). IEEE. |

|  |  |
| --- | --- |
| Strengths | Limitations |
| * The study finds that the STL model outperforms the other models regarding forecast accuracy for short-term forecasting (up to 48 hours ahead), while the ARIMA models perform best for longer-term forecasting (up to 168 hours ahead). * The article employs a variety of time series models, allowing for a comprehensive evaluation of different approaches to electricity demand forecasting. * The use of multiple models and the combination of forecasts from different models can lead to improved forecast accuracy. | * **The article does not compare the performance of the models to other methods, such as machine learning approaches, that have been applied to electricity demand forecasting in recent years.** * **The online tool developed in the article may require significant computational resources to implement and may not be accessible to all users.** * **The article focuses on using historical data to forecast future electricity demand. It does not consider the impact of unforeseen events, such as extreme weather or significant power outages, on electricity demand.** |