Electrical Load Forecasting in R

Corinne Walz[1,*] **, Franziska Ziemer**[1,*]**, Daniele Amberti**[2,*]

1. Julius-Maximilians-Universität Würzburg, Germany
2. O.R.S., Italy

* Contact author: Corinne.Walz@stud-mail.uni-wuerzburg.de, Franziska.Ziemer@stud-mail.uni-wuerzburg.de, amberti@inwind.it

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Due to the liberalization of the European energy markets, electrical load forecasting became very important. To achieve accurate medium term forecasting on an hourly basis, forecast models that integrate previous consumptions as well as exogenous variables (like temperature) are needed.
Currently used approach is a 'Two stage modelling in electrical load forecasting, with application to customer management by power distribution utilities' (Amberti et al, 2006) that uses an autoregressive model with external regressors and a day types approach. This work focuses on model selection especially in terms of forecasting performance as a requirement for usability in a production environment. Solution's implementation is done through time series modelling and forecasting libraries, clustering and model selection R's features as well as original contributions in R.

References

D.Amberti and A.Pievatolo (2006). Two-stage modelling in electrical load forecasting, with application to customer management by power distribution utilities. *Proceedings of the ENBIS Sixth Annual Conference.*