

# Forecasting of short term electricity load demand in Cameroon using semi parametric model

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The rationalization of electricity supply is a key activity of power system planning and development in all countries. This involves forecasting load demand with a higher accuracy. If the demand is under estimated, this will affect economic activities, because of power cut; if then the demand is over estimated, it will imply financial penalty due to waste of resources. Therefore, the minimization of forecasting errors is a strategic bet for the electricity supply industry, and also for the entire economy. Recent studies in Cameroon experimented a parametrical model (PM) and non parametrical model (NPM) to forecast the electricity load curves, but they gave mitigate results, since no model surpassed the other one during some period of the day. We implemented a semi parametrical model (SPM), which combines parametrical and non parametrical methods, and therefore has the advantage of dealing with some drawbacks of both methods. The application of SPM on hours load curves during three period of the year 2009 has globally given interesting results, comparing to individuals models (PM and NPM) results. We intend in following studies to experiment other combining method like the aggregation model in order to perform more accurate forecast of electricity load demand in Cameroon.

**Key Words:** load curves, electricity, forecasting, semi parametric model, Cameroon