

Iraqi Short Term Electrical Load Forecasting Based on Interval Type-2 Fuzzy Logic

Authors : Firas M. Tuaimah, Huda M. Abdul Abbas

Abstract : Accurate Short Term Load Forecasting (STLF) is essential for a variety of decision making processes. However, forecasting accuracy can drop due to the presence of uncertainty in the operation of energy systems or unexpected behavior of exogenous variables. Interval Type 2 Fuzzy Logic System (IT2 FLS), with additional degrees of freedom, gives an excellent tool for handling uncertainties and it improved the prediction accuracy. The training data used in this study covers the period from January 1, 2012 to February 1, 2012 for winter season and the period from July 1, 2012 to August 1, 2012 for summer season. The actual load forecasting period starts from January 22, till 28, 2012 for winter model and from July 22 till 28, 2012 for summer model. The real data for Iraqi power system which belongs to the Ministry of Electricity.

Keywords : short term load forecasting, prediction interval, type 2 fuzzy logic systems, electric, computer systems engineering

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