As the energy markets taking over, a lot of attention has been given to short-term load forecasts. Shortterm load forecasting area unit employed in planning maintenance and fuel allocation, moreover as in tiny infrastructure changes.

Two approaches

The standard applied mathematics approach which helps informing the relation between the load and the factors that have an effect on the load (such as statistic multivariate methods, etc.) and the other one is an artificial and process intelligence approach.

Accurate models for electric power load forecasting are essential to the operation and planning of a utility company, especially during the electricity market evolving trend of daily changes in price

of electricity and liberalization of the electricity sector.

The important element of STLF is finding the relationship between input variables and forecasting parameters.

POWER system short-term load forecasting is an important part of Energy Manager System (EMS), and accurate short-term load forecasting can increase operation efficiency of power system.

Experts present a lot of methods for load forecasting which can be divided into two classes: one is the traditional methods such as temporal series methods and regression analysis methods, which are simple and high computingspeed, but they can not simulate the complex and variableload. Another is the machine learning methods such asArtificial Neuro Net (ANN)[1] and Support Vector Machines (SVM)

As the demand of electricity grow rapidly, the planning for power system is very important. Short-term

load forecast (STLF) serves as a guideline for safe scheduling, planning and management of Microgrid.

If the predicting load is higher than the real requirement, it will waste the resource for electricity generation and electric power product.

The characteristic of load demand is non-stationary, which depends on several loads affecting parameter like weather condition,energy price, population size and calendar events, etc. These loads affecting parameter differ for different geographical regions.

Accurate load forecasting plays an important role in decision making about generation and transmission planning, which avoids over and under generation situations.

In early stages, different statistical techniques are applied in STLF, but these forecasting gave fewer accurate result when the load data is non-linear, so there is a growing need for solving non-linear problems using artificial intelligence.

The traditional models for short-term power load forecasting such as the time Series model, regression

analyses model [2], [3] are too simple to simulate the complex and fast change of the short–term power load.

With the increasing load types, the randomness and uncertainty of the load are further strengthened, but the load changes have inherent regularity, which lays the foundation for load forecasting.

Load forecasting play a key role to provide input with security control. The predicted loads are used for decision-making in generation scheduling such as economic load dispatching, unit commitment, fuel allocation, etc.

STLF provides necessary information for day to day operations and optimal scheduling of the generation capacity. Inaccurate predictions may lead to significant operating costs for utilities due to energy wastage or lack of supply [6]. To avoid the negative consequences, improving load forecasting has become a field of interest for both the power industry and forecasting community.