**Electricity price prediction**

**1.DEFINITION & DESIGN THINKING**

The model predicts the amount of power used based on the important characteristics taken from the current data. A dataset is a collection of data. With tabular data, each table row corresponds to a specific record of the data set, a nd each column to a single variable.

**DESIGN THINKING**

1. The innovator of the electric bulb, Edison didn’t stop there, he went about building the entire electricity system.

2.Design Thinking allows us to adopt a human-centred perspective in

Creating innovative solutions while also integrating logic and research

**2.INNOVATION**

1.Smart batteries, renewable energy integrated microgrids, and smart lighting system are some of the accelerating innovation areas, where adoption has been steadily increasing. Among maturing innovation areas are prepaid electricity metering, and home automation networks, which are now well established in the industry.

2.A good model for predicting the demand for electricity requires to analyze the following types of variables:

* Calendar data: Season, hour, bank holidays, etc.
* Weather data: Temperature, humidity, rainfall, etc.
* Company data:

Price of electricity, promotions, or marketing campaigns.

**ABSTRACT DEVELOPMENT-1**

Abstract:Sustainable energy development plays a prominent role in energy planning to maintain natural resources and mitigate the usage of fossil fuels. The atmospheric factor is one of the main influencing factors network (NAR) using only historical power demand dataset was made. The various benchmarked models were evaluated and compared for their performances using statistical indices such as normalized root-mean-square error (NMSE) and coefficient of determination (R2). The results showed the NARX model could perform better than the NAR model for predicting electricity demand time-series.

**ABSTRACT DEVELOPMENT – 2**

Abstract: The electricity market is a complex, evolutionary, and dynamic environment. Forecasting electricity prices is an important issue for all electricity market participant. In this study, we shed light on how to improve electricity price forecasting accuracy through the use of a machine learning technique-namely, a novel genetic programming approach. Drawing on empirical data from the largest EU energy markets ,we propose a forecasting model that considers variables related to weather conditions, oil prices, and CO2 coupons and predicts energy prices 24 hours ahead. We show that the proposed model provides more accurate predictions of future electricity prices than existing prediction methods. Our important findings will assist the electricity market participantsin forecasting future price movements.

Keywords: energy sector; electricity prices; forecasting; machine learning; geometric semantic genetic programming