**Project Title: Electricity Prices Prediction**

***Problem Statement:*** **Create a predictive model that utilizes historical electricity prices and relevant factors to forecast future electricity prices, assisting energy providers and consumers in making informed decisions regarding consumption and investment.**

**Project Steps**

**Phase 1: Problem Definition and Design Thinking**

**Problem Definition:** **The problem is to develop a predictive model that uses historical electricity prices and relevant factors to forecast future electricity prices. The objective is to create a tool that assists both energy providers and consumers in making informed decisions regarding consumption and investment by predicting future electricity prices. This project** **involves data preprocessing, feature engineering, model selection, training, and evaluation.**

**Design Thinking:**

* **Data Source: Utilize a dataset containing historical electricity prices and relevant factors like date, demand, supply, weather conditions, and economic indicators.**
* **Data Preprocessing: Clean and preprocess the data, handle missing values, and convert categorical features into numerical representations.**
* **Feature Engineering: Create additional features that could enhance the predictive power of the model, such as time-based features and lagged variables.**
* **Model Selection: Choose suitable time series forecasting algorithms (e.g., ARIMA, LSTM) for predicting future electricity prices.**
* **Model Training: Train the selected model using the preprocessed data.**
* **Evaluation: Evaluate the model's performance using appropriate time series forecasting metrics (e.g., Mean Absolute Error, Root Mean Squared Error).**

**Dataset Link:** [**https://www.kaggle.com/datasets/chakradharmattapalli/electricity-price-prediction**](https://www.kaggle.com/datasets/chakradharmattapalli/electricity-price-prediction)