Business Understanding & Hypothesis Framing:-

I intend to solve your problem by the following steps:

Step 1: Test the Hypothesis:

    The hypothesis can be tested by analysing the historical data about customers' contracts.

- Collect historical data about all customers' contracts
- Extract data on the customers who transferred to other providers
- Identify whether customers churn and an increase in price happened at the same time
- Prove the hypothesis

    If the customer churn is along with an increase in price, we can conclude the growth in prices affects customer churn. On the contrary, if customers transfer to another providers when there is no change or even a decrease in price, we can say prices do not affect customer churn.

Step 2: Build a model to predict customer churn :

It is a binary classification problem. All customers are labelled with either 1 (switch to another provider) or 0 (stay with the current provide). In order to build a powerful model to predict customer churn, I intend to complete the following tasks:

    Task 1: Collect data on all customers, including

- contract data: starting time and ending time, price, discount, promotions, etc
- customer information: name, country, city, profit, revenue, company size, industry, etc
- energy usage: energy consumption amount
- If transfer to other providers, this is the target label

    Task 2: Understand and clean the data

    Task 3: Exploratory data analysis

    Discovering data patterns by data visualization

    Task 4: Build a machine learning model and evaluate its performance

- Train a model on the clean dataset got in task 2
- Use cross-validation to evaluate the model performance

    Task 5: Identify whether a discount on price can prevent customer churn

    Apply 20% discount on the prices, then predict the customers' labels again. If the predicted labels (got in task 4) change from 1 to 0, this indicates the discount can stop customer churn. On the contrary, if the predicted labels are still 1, this indicates the discount cannot stop customer churn.

Regards, Tushar Khairnar.