

Dear Associate Director,

In order to analyze the effect of price sensitivity on customer churn, or whether other factors have a substantial influence, we would need data that relates to prices, customers, and any known reasons customers switch to another energy provider. Key reasons we think customers would likely switch include information related to convenience, customer satisfaction, price, length of power outages, location and customer service.

Specifically, any data you can provide us on the following topics would be helpful.

- Customer Satisfaction
  - Customer ratings of PowerCo
  - Frequency and duration of power outages
  - Benefits other companies provide that PowerCo does not
- General customer information
  - Date client became a customer
  - Spending or utility bill history
  - Whether the customer is residential, commercial or manufacturer
  - Location
- Additional information for customers who churned
  - Reason they left, if available
  - Date the customer left
- Price history
  - History of price data, including factors determining what a customer is charged
  - Date and amounts of price hikes
  - Price comparison between PowerCo and other utility companies
- Costs for PowerCo
  - Fuel costs
  - Electricity costs

After acquiring the data, we would use the data to complete the following tasks:

- Analyze the price data to determine the effect of price on churn
- Explore the data to find patterns, statistics, and correlations.
- Create new features based on existing features to make the classifications more accurate
- Since churn is binary, we would use a machine learning classification model like Naïve Bayes, Random Forest, or Logistic Regression
- After running a model, we would test the accuracy of the model
- Using the trained model, determine the factors that influence churn the most, and whether customers churn due to price sensitivity

We looking forward to presenting our insights.

Regards,

Mark Bahr  
Junior Data Scientist