

Email to Associate Director

Subject: Data Requirements & Analysis Plan for PowerCo Churn Investigation

Hi [AD],

Estelle and I have structured our approach to investigate PowerCo's churn, focusing on price sensitivity while considering other potential factors.

Problem Framing

PowerCo is experiencing high customer churn, likely due to price competition. However, factors like service quality, renewable energy options, and location might also contribute. Our goal is to quantify the impact of price and other factors on churn behavior.

Data Requirements

To analyze churn drivers, we need:

- **Customer Data:** Business type, location, contract tenure, energy usage.
- **Pricing Data:** Historical price plans, discounts, competitor pricing, tariff changes.
- **Churn Data:** Customers who left (past 3–5 years), last bill amount, stated reason for exit.
- **Service Data:** Customer complaints, support interactions, satisfaction scores.
- **Market Data:** Competitor pricing trends, energy mix, regulatory changes.

Analysis Approach

- **EDA & Visualization:**
 - Churn trends over time.
 - Price distribution comparison (churned vs. retained customers).
 - Customer segmentation based on pricing sensitivity, location, and business type.
 - Correlation analysis between churn and pricing changes.
- **Modeling:**
 - **Predictive Models (Logistic Regression, Decision Trees):** To quantify the impact of price on churn probability.

- **Cluster Analysis:** Identifying churn-prone customer segments.
- **Survival Analysis:** Estimating customer lifetime based on pricing patterns.

Next Steps

We'd appreciate your feedback on our data needs and approach before we proceed with data collection and analysis. Let us know if you'd like any adjustments.

Best,
Prathmesh & Estelle