Executive Summary for the Steering Committee Meeting

Background:

PowerCo, a leading energy utility, is facing a significant churn rate among its SME customers due to the liberalization of the energy market in Europe. Given that price changes could be a major driver of churn, a predictive model was developed to identify customers at high risk of churning. The model aims to inform a targeted discount strategy, particularly a 20% discount to retain these high-risk customers.

Key Metrics:

- Recall Score: The most crucial metric for this project is the Recall, which currently stands at 29% after applying SMOTE and hyperparameter tuning. While this is a moderate improvement from the initial model, it shows that we are identifying only about a third of the customers who will actually churn.

- Precision Score: The precision score for identifying churn is 18%, indicating a considerable number of false positives that could inflate retention costs.

Financial Impact:

- Cost Savings: Implementing the predictive model, despite its limitations, can still result in substantial cost savings. It is generally cheaper to retain existing customers than to acquire new ones. If we assume that retaining a customer is 70% less expensive than acquiring a new one, the model offers significant potential for cost-saving through targeted discounts.

Recommendations:

1. Model Improvement: Further fine-tuning is needed to balance the Recall and Precision metrics better. More advanced techniques and additional features can be considered for this.

2. Discount Strategy: The 20% discount strategy should be applied cautiously given the model's current precision rate. An indiscriminate discount policy could erode profit margins.

3. Monthly Implementation: Given the dynamic nature of the energy market and customer behavior, the model should be updated and implemented monthly as planned.

Takeaway:

While the predictive model has room for improvement, it provides a starting point for targeted retention efforts. The financial upside of applying this model cautiously could be significant, even as we continue to refine its predictive power.

The key takeaway here is that although the model is not perfect, it offers actionable insights that can significantly impact PowerCo's bottom line. We recommend proceeding with its monthly implementation while concurrently working on improving its predictive accuracy.