Hook Document

Uncover the Forces Driving America's Rising Electricity Costs

Imagine this...

You are the newly appointed Chief Energy Analysis for Exxon Mobil. During the past five years, the world has shifted a lot. On one hand, artificial intelligence has rapidly grown, pushing the increase of more data centers being built. Since then electricity prices have surged, especially in 2022, leaving many wondering what's fueling the rising cost of energy. AI seems like an obvious suspect, especially as data centers grow and the IEA warns that they could account for nearly half of global electricity-demand growth by 2030. However, other global factors also may account for this. Wars, supply chain shocks, and economic recovery efforts may affect this data as well, each affecting the electricity prices in ways that aren't immediately visible.

To investigate how electricity prices have surged over time, you will build a model that predicts electricity prices over time and compare those predictions to what actually happened. By exploring where the model succeeds and where it fails, you will uncover how technological progress and global events interact to shape the cost of electricity over time. Are you ready?

The Scenario

Energy executives, government officials, and the public need answers. They're looking to you to understand how technological disruptions and global events have shaped electricity prices, and what might happen next.

You will take state-level electricity pricing data and build predictive models that estimate prices from 2022-2025. Using historical data, you will uncover the hidden forces behind the data, compare the predicted values to actual values, and evaluate how well different models capture the story of America's electricity cost landscape.

Your High-Level Overview

- Investigate how technology and global events influence electricity prices
- Build and compare predictive models to understand and forecast price changes.
- Deliver insights that could shape future energy decisions.

The details of what you must produce and how your work will be evaluated will be revealed in the project rubric. Prepare to explore the future of energy and apply your data science skills to uncover the forces shaping the cost of electricity across the United States.

Click this link to get started: https://github.com/aryaa-desh/DS4002--CS3.git