DYNAMIC ENERGY TARIFF OPTIMIZER

Presented by

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Abstract

- TNEB currently charges based on total units, ignoring the time of usage.
- This causes grid overload during peak hours and limits cost-saving opportunities.
- Our project introduces a Time-of-Use (TOU) tariff model for smarter billing.

Description

- A tool that recommends optimal time slots to use appliances.
- It simulates TOU pricing to help users save on electricity bills.
- The system also promotes balanced grid usage and future smart integration.

Tech Stack

Frontend

- HTML/CSS – For creating UI
- Flask Templates – To display results on the webpage

Backend

- Python – Main language for logic
- Flask – To connect frontend and backend
- JSON – To store sample tariff data

ML Logic

- Basic rule-based algorithm – To suggest best time slot

Reference

Time of Use Electricity Tariff – A Key Enabler for Renewable Energy Usage

Provider: Infosys Consulting

Source: Infosys Electricity Tariff

What it does:

- Explains how Time-of-Use (TOU) tariffs can shift electricity usage from peak to off-peak hours.
- Emphasizes TOU as a strategy to promote renewable energy adoption (e.g., solar usage during daytime).
- Highlights the economic, behavioral, and infrastructure challenges of TOU implementation.

Relevance:

- This paper supports the core idea of your project: using TOU tariffs to optimize usage and reduce costs.
- It offers a real-world perspective on TOU adoption in India

THANK YOU

For your attention