Description of CA Grid Hourly Price

This dataset contains hourly electricity prices and net load data for California in 2009. It is intended to be used as input for modeling energy-efficiency in buildings.
Here's how you can use this dataset to model the energy efficiency of a building:

- Gain an understanding of the current net load in your area (Net Load [MW]). Net load refers to the total amount of electricity used by all customers minus the total amount generated from power plants and other sources. It's important to understand current conditions since they will affect your building's power consumption and future bills.
2 Examine day-of-week trends in energy usage (Day). Studying these trends will help you predict when peak demand occurs, as well as when pricing may increase or decrease due to changes in consumer behavior.
3 Analyze hourly levels of electricity price (Electricity Price [$/MWh]). Knowing what time each day is more expensive than others allows you to adjust building behaviors accordingly, such as using more efficient equipment during peak hours or implementing strategies like storage or load shifting that take advantage of any price arbitrage opportunities between different times blocks during certain days of the week .
4 Review overall average costs over a long period of time (Hour). Comparing month-to-month values for both net load and prices helps ensure that planned improvements are creating real cost savings results over time, especially when benchmarked against previous normal operating conditions observed over a long period giving reliable normalized baseline accuracy with less variability analysis than any individual data set could provide from within its respective domain's sample space alone

Research Ideas

- Analyzing the correlation between electricity prices and net load in order to identify optimal times for businesses to purchase and use electricity.

- Assessing the impact of different external factors (e.g., weather) on energy prices and net load in order to inform decision making on energy strategy and investment opportunities.

- Utilizing time-series data analytics to study patterns in net load across days of the week, as well as within specified time frames (e.g., peak hours) over larger periods of time, such as months or years

Column name	Description
Day	The day of the week. (String)
Hour	The hour of the day. (Integer)
Net Load [MW]	The amount of electricity being used in megawatts. (Float)
Electricity Price [$/MWh]	The cost of electricity per megawatt hour. (Float)