

The dataset “IrishElectricity.txt” provides daily total electricity consumption (in kilowatt-hour (kWh)) for 151 households in Ireland for the four-month period between November 15, 2009 to March 15, 2010 (column 7-127). Each row represents a household. The dataset can be read into R using command `read.table`.

For each household, there are also six covariates (column 1-6) on demographics:

Age:	Age of the head of the household, ordinal (1 to 6: 1=youngest, 6=oldest)
Attitude-Reduce Bill:	How strongly the person feel about reducing bill, ordinal (1 to 5: 1= strongest)
Attitude-Environment:	How strongly the person feel about the environment, ordinal (1 to 5: 1= strongest)
Education:	Education level of the the head of the household, ordinal (1 to 5: 1= no edu, 2=elementary, 3=middle school, 4=high school, 5= college or above)
Bedroom:	Number of bedrooms
Resident:	Number of residents in the household

Analyze the data to address the following two questions:

1. Describe the patterns of household electricity consumption. In this regard, we are interested in learning about both population level usage as well as household level usage.
2. On January 1, 2010, there was a major change in the tariff structure on electricity consumption. Is there a difference in energy consumption pattern before versus after the policy change? During the 2.5 months after the change does the pattern of energy consumption at the household level tend to return to the pattern before the policy change?