**Team Members:** Prashil Negandhi, Mahesh Latnekar, Amit Kumar Yadav

For our final project, we are will be using past energy consumption data of buildings in the form of meter readings of four different types of meter along with building meta-data and local weather data to predict the future meter readings for buildings. For each type of resource used we will be modelling their usage by linear regression. We are more interested in examining variables that contribute to this predictive model and how well can a linear model describe this data.

The predictors we will be using for making predictions on how much a building should ideally consume are:

1. Primary Use of the building

2. Weather Data for the site of the building

3. Square Feet of the Building

4. Year the building was constructed

5. Floors in the building

This dataset contains nearly 1,000 observations. Each observation corresponds to a building and is taken over a 3-year time frame. Of this, the meter readings are only available for time period of one year which we will use in our project. It can be accessed here:

<https://www.kaggle.com/c/ashrae-energy-prediction/overview>

Analysis:

Step 1: Explore how meter readings vary with time and filter out outliers.

Step 2: Explore correlation matrix and find dependent predictor variables.

Step 3: Summary of Data.

Step 4: Explore different methods for time series imputation of missing values.

Step 5: Tuning linear model and explore other complicated models.