



# DATA ANALYTICS BOOTCAMP IRONHACK 2019

FRANCLIM CARDOZO

# NYC ENERGY CONSUMPTION



# PROBLEM

NEW YORK WASTED MORE ENERGY PER CAPITA THAN  
ANY OTHER MEGACITY IN THE WORLD IN 2015



Source:  
<https://blogs.ei.columbia.edu/2015/09/28/how-much-energy-does-nyc-waste/>

# QUESTIONS

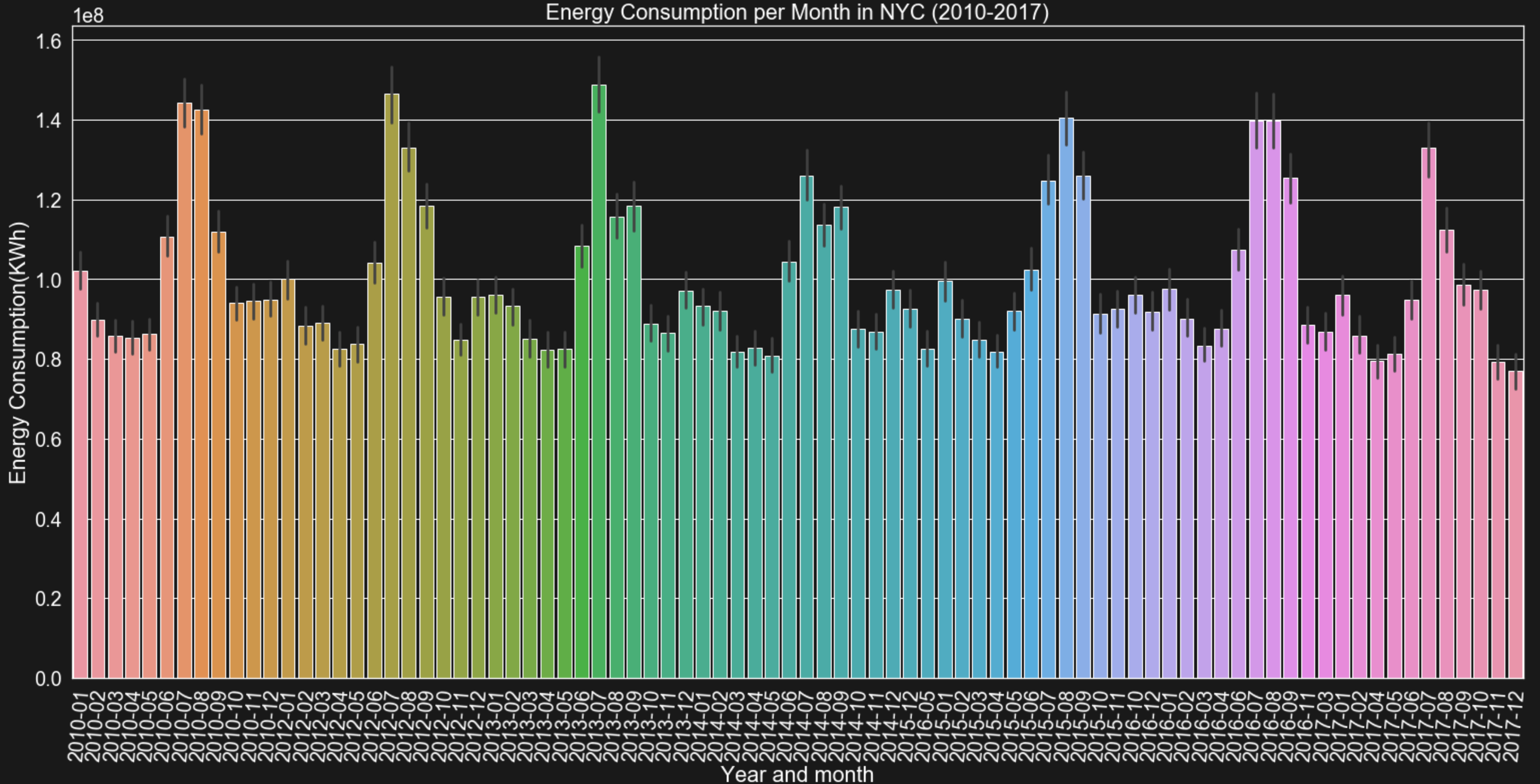
- IN WHICH MONTH THERE IS MORE ENERGY CONSUMPTION SINCE 2010?
- WHAT'S THE TOTAL ENERGY CONSUMPTION PER BOROUGH?
- IS NYC WASTING MORE ENERGY FROM SUMMER 2015 ONWARDS?

# DATA

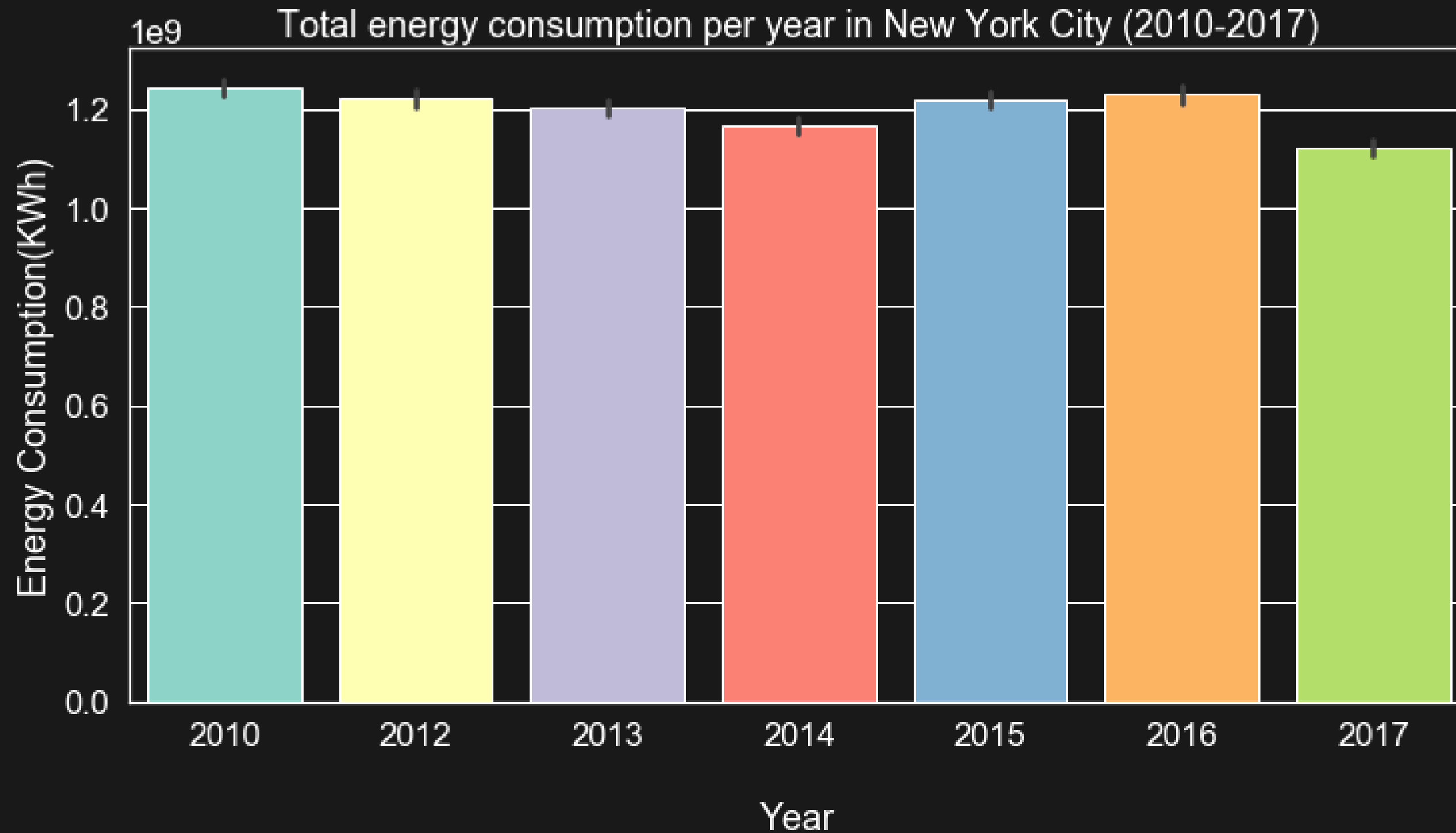
The image is a screenshot of the NYC OpenData website. The header is white with the 'NYC OpenData' logo on the left and a navigation menu on the right containing links for Home, Data, About, Learn, Contact Us, Blog, and Sign In. The main content area has a blue background. On the left, there is a large white heading 'Open Data for All New Yorkers' followed by a paragraph about open data and a call to action to sign up for a mailing list. Below this is a white search bar with the placeholder text 'Search Open Data for things like 311, Buildings, Crime'. On the right, there is a promotional graphic for 'The Next Decade of Open Data' which includes the text '2019 Open Data for All Report' and a photograph of people working together.

Source:  
<https://data.cityofnewyork.us/Housing-Development/Electric-Consumption-And-Cost-2010-March-2019-/jr24-e7cr>

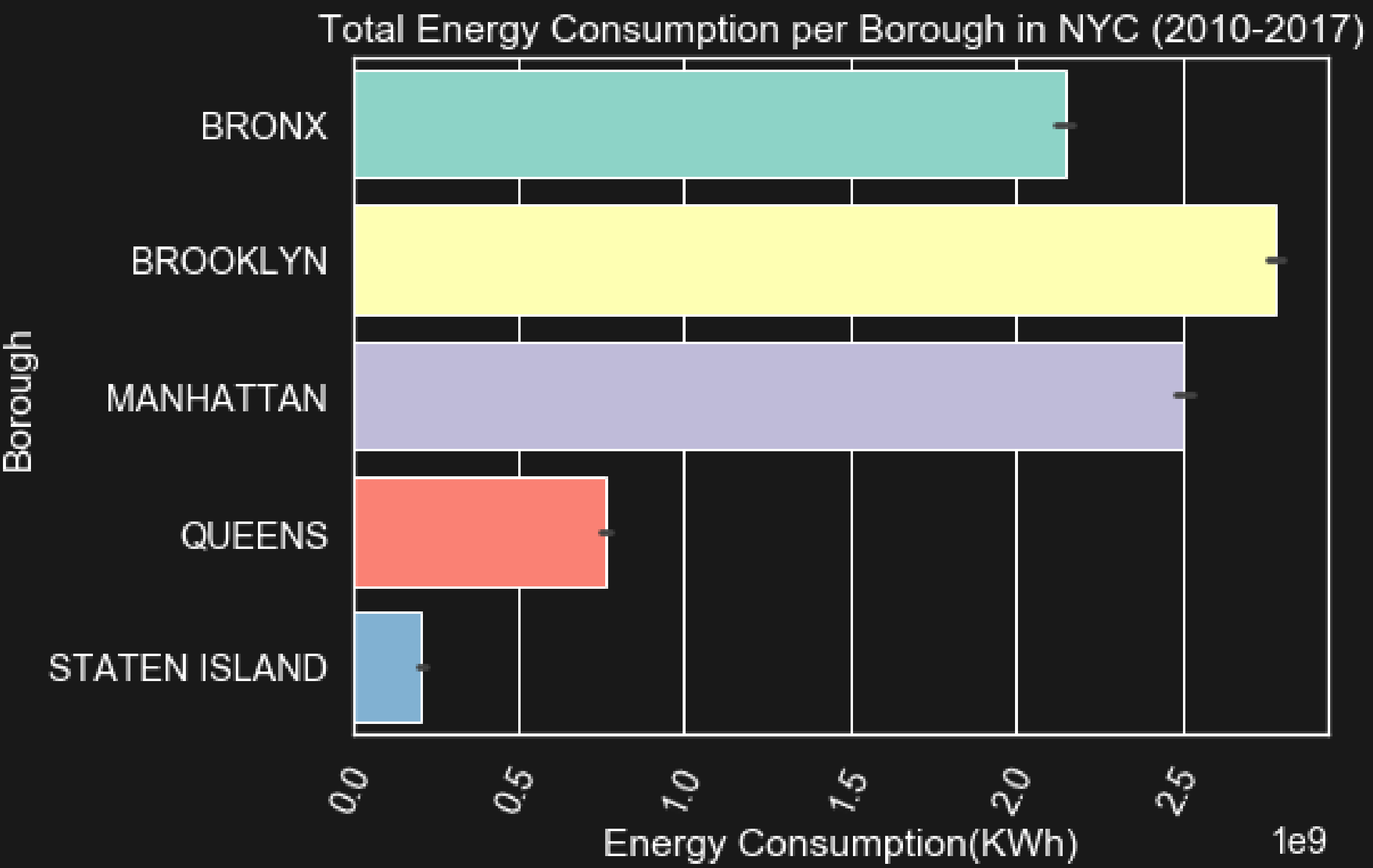
# ENERGY CONSUMPTION PER MONTH



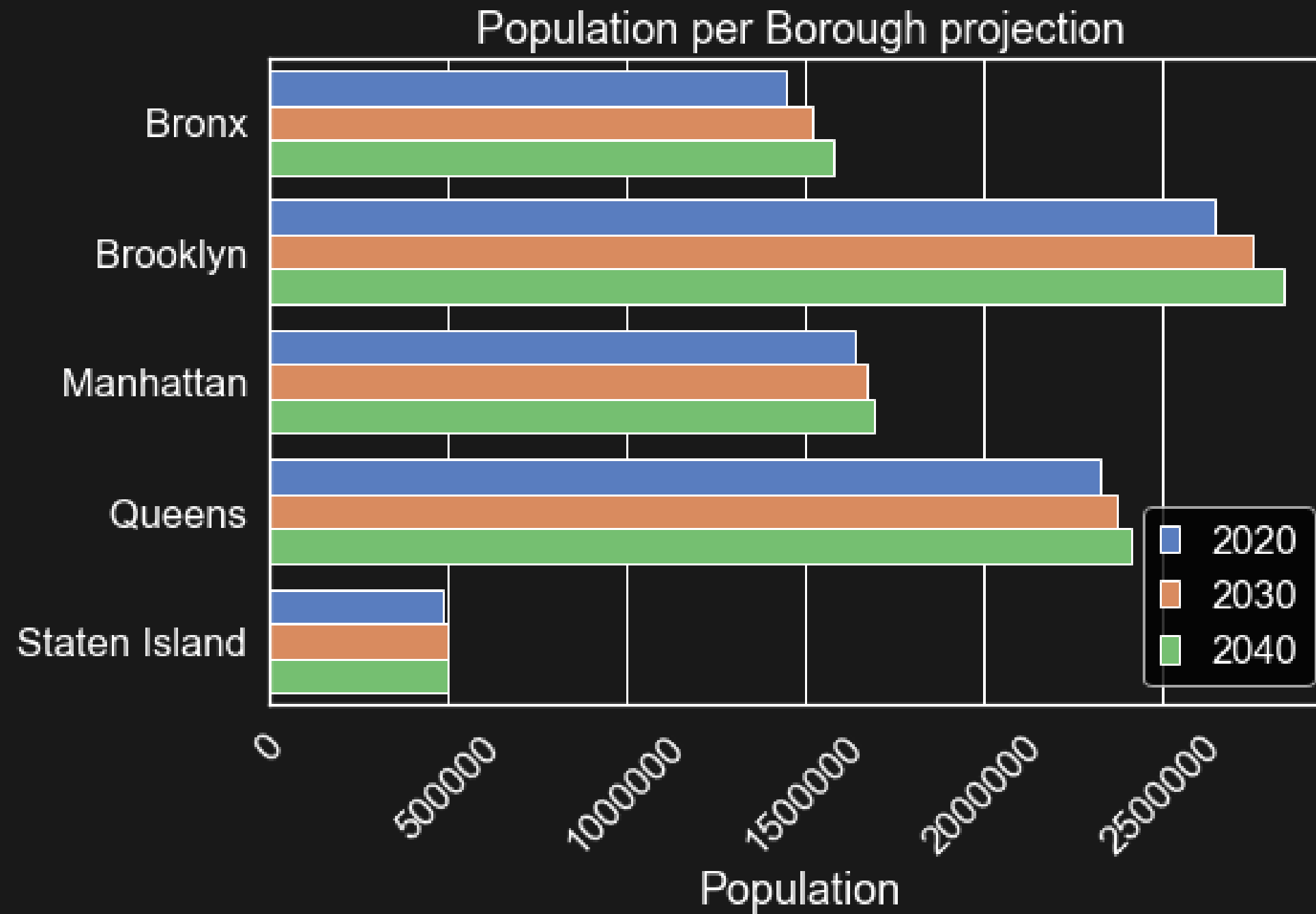
# ENERGY CONSUMPTION PER YEAR



# ENERGY CONSUMPTION PER BOROUGH

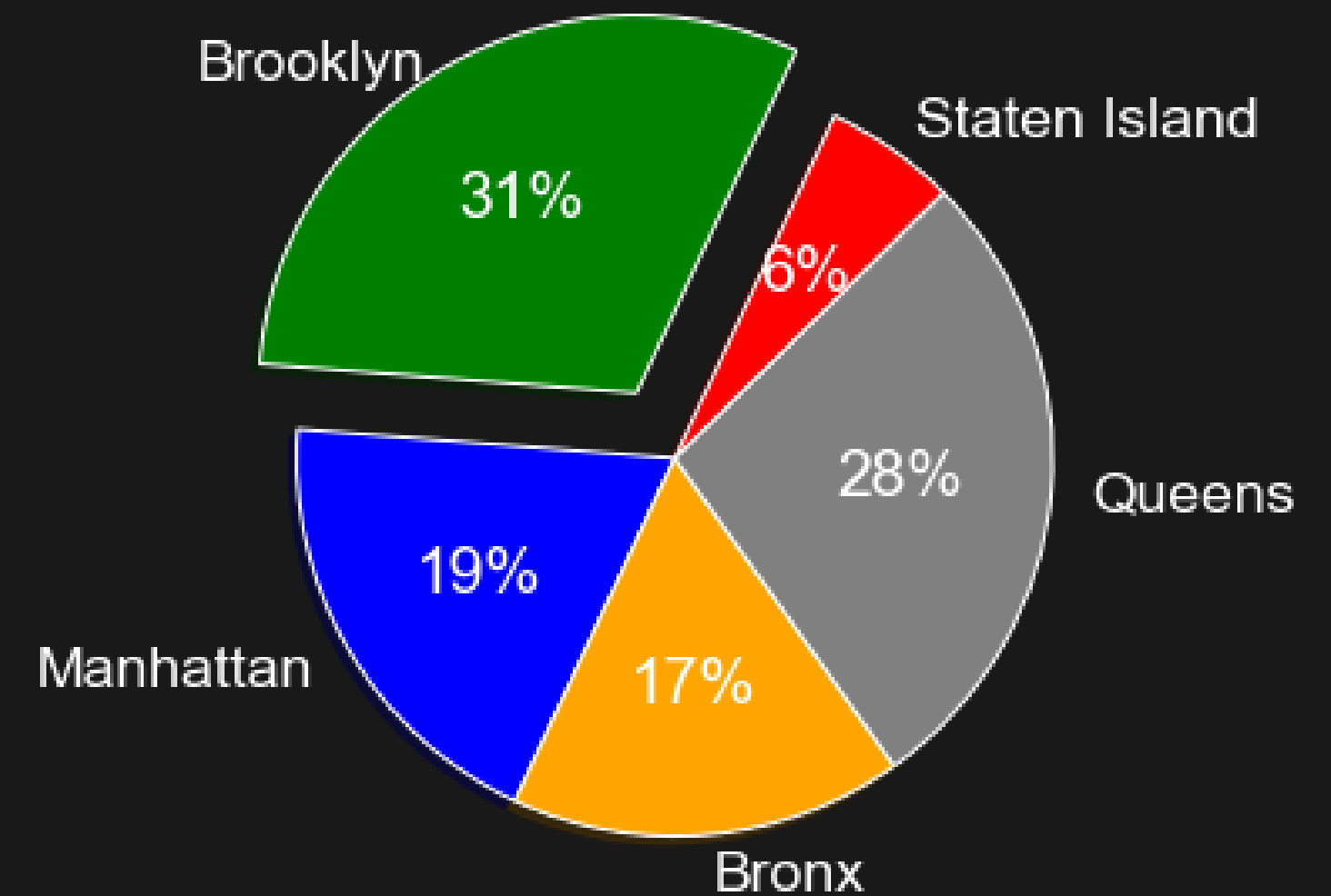


# ANALYSING NYC POPULATION



TOTAL NYC POPULATION IS  
CURRENTLY 8.5 MILLION AND KEEPS  
GROWING

Population per borough in NYC (2019)





IS ENERGY BEING MORE WASTED OR NOT?

GET THREE SAMPLES FROM JULY IN 2015, 2017 AND 2019

COMPARE IF THE MEAN ENERGY CONSUMED IN JULY OF  
THE CORRESPONDING YEARS IS EQUAL

# RESULTS

## TEST 1

JULY 2015 AND JULY 2017  
(SAMPLE SIZE = 500)

THERE ARE NO  
SIGNIFICANT  
DIFFERENCES BETWEEN  
THESE TWO PERIODS OF  
TIME

## TEST 2

JULY 2015 AND JULY 2019  
(SAMPLE SIZE = 500)

THERE ARE SIGNIFICANT  
DIFFERENCES BETWEEN  
THESE TWO PERIODS OF  
TIME

# CONCLUSIONS

JULY AND AUGUST ARE MONTHS WHERE ENERGY IS MORE CONSUMED

BROOKLYN IS THE BOROUGH WITH HIGHER ENERGY CONSUMPTION

AVERAGE ENERGY CONSUMPTION WAS SIGNIFICANTLY THE SAME IN  
JULY 2015 AND JULY 2017

AVERAGE ENERGY CONSUMPTION WAS SIGNIFICANTLY DIFFERENT IN  
JULY 2015 AND JULY 2019

# FURTHER WORK...

ANALYSE ENERGY CONSUMPTION AND POPULATION TRENDS FOR  
THE NEXT 10 YEARS

REDUCE ENERGY CONSUMPTION IN NYC WITH BUILDING'S  
ENERGY EFFICIENCY IMPROVEMENTS WHERE EFFICIENCY IS  
LOWER THAN 50%

ANY QUESTIONS?