



# Red Planet Consulting

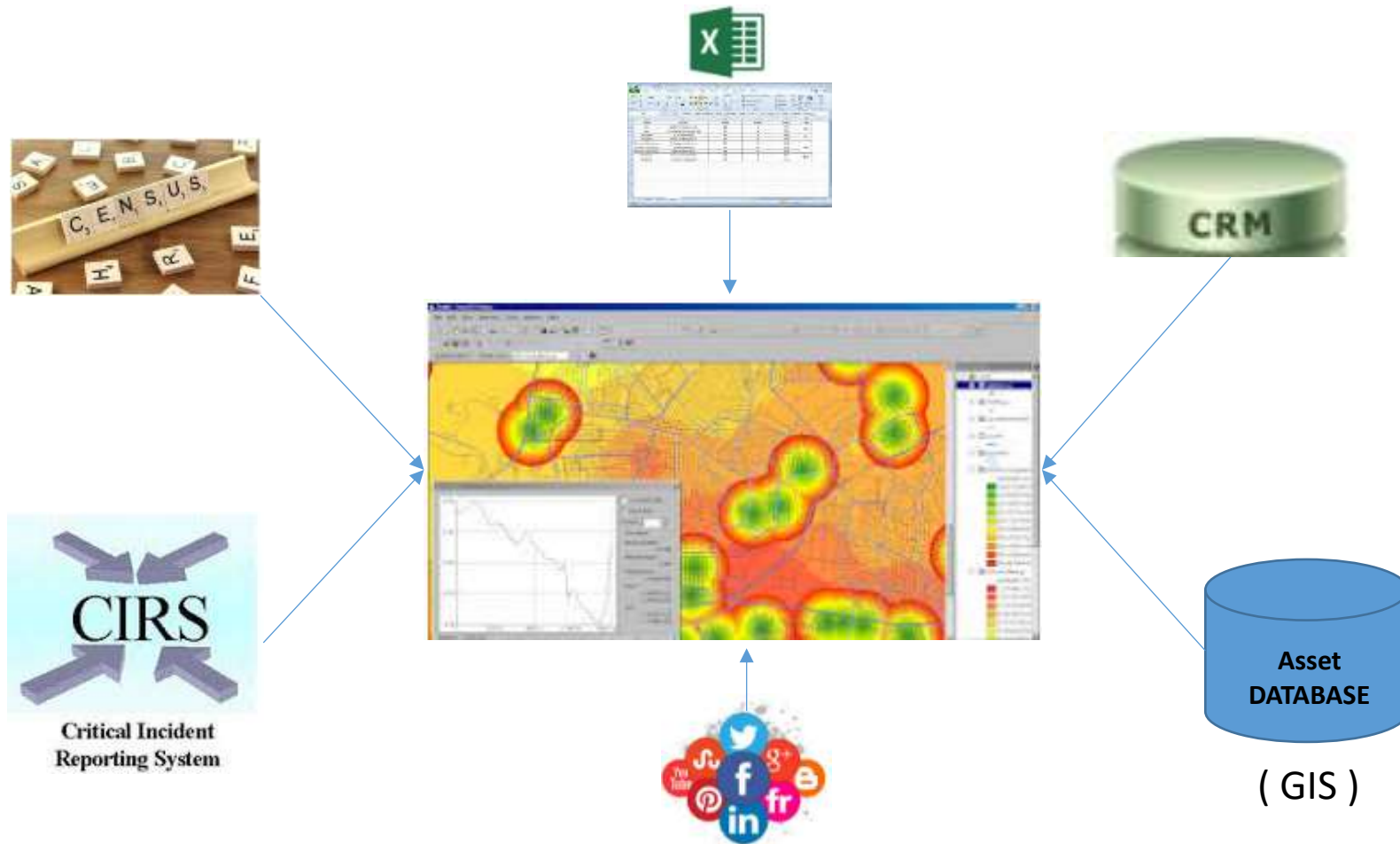
GIS Consulting Services

Tajuddin Ahmed Baig  
( Utility Consultant )

# Spatial Analytics in Utilities

# WHAT

Viewing and Analyzing a utilities Enterprise Data within a Spatial Context.



# NOT A NEW CONCEPT



# WHY SPATIAL ANALYTICS IN UTILITIES

REGULATORY CHANGES

ASSET SAFETY

PROACTIVE ASSET RISK AND INTEGRITY MANAGEMENT

RISK MITIGATION

USAGE PATTERNS

FINANCIAL IMPACT

COST STRUCTURE

# CHARACTERISTICS OF A SPATIAL ANALYTICS APPLICATION

IS MAP DRIVEN

LIGHTWEIGHT

ABLE TO PULL DATA FROM DISPARATE SYSTEMS

ABLE TO GENERATE STATISTICAL INFORMATION

EMBED STATISTICAL INFORMATION ON A MAP

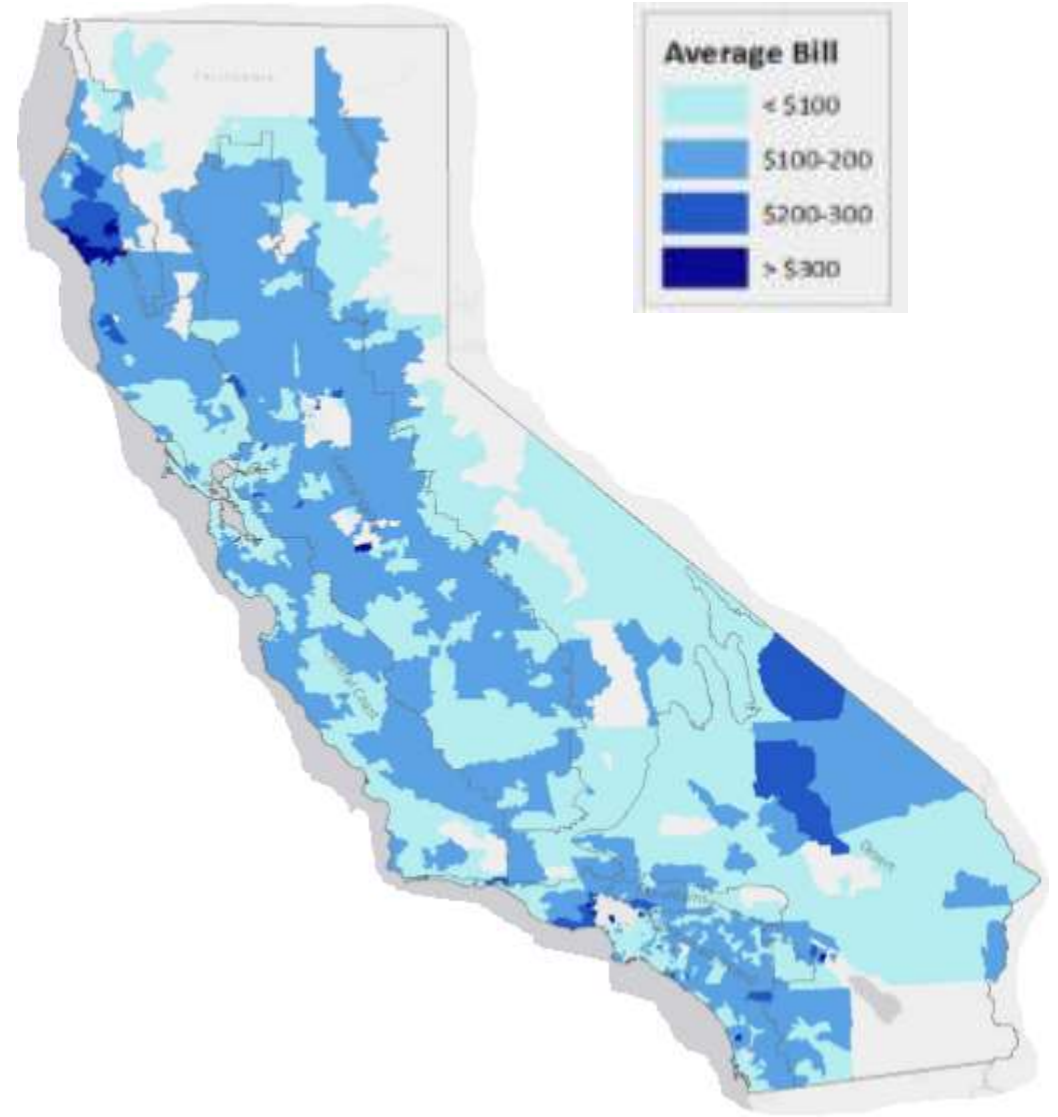
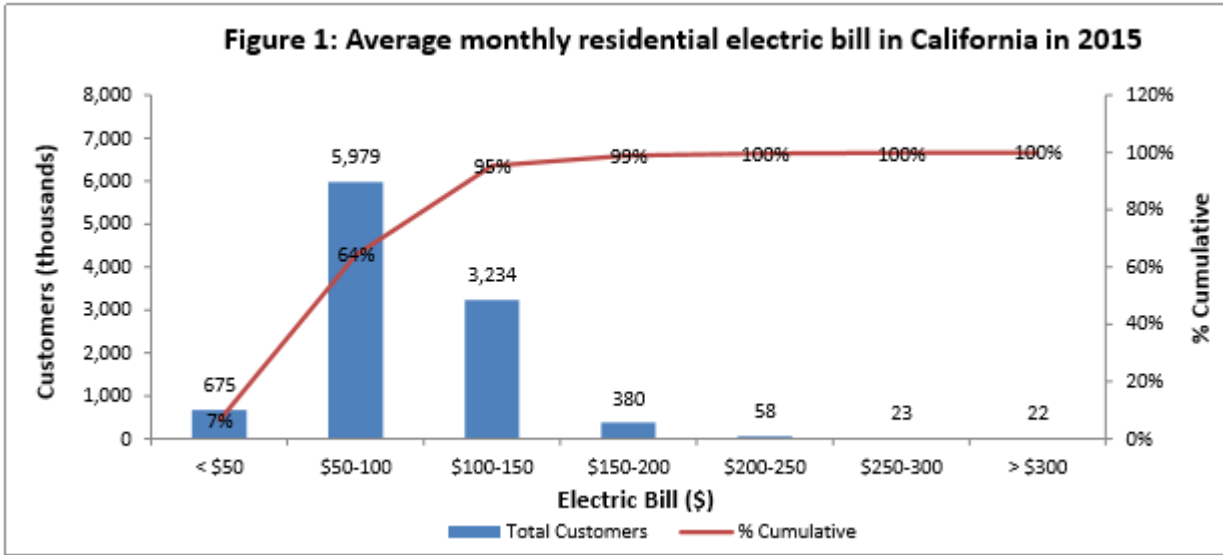
PUSH ANALYSIS RESULTS OVER WEB

PROVIDE INSIGHTFUL VISUALIZATIONS

# CASE STUDY

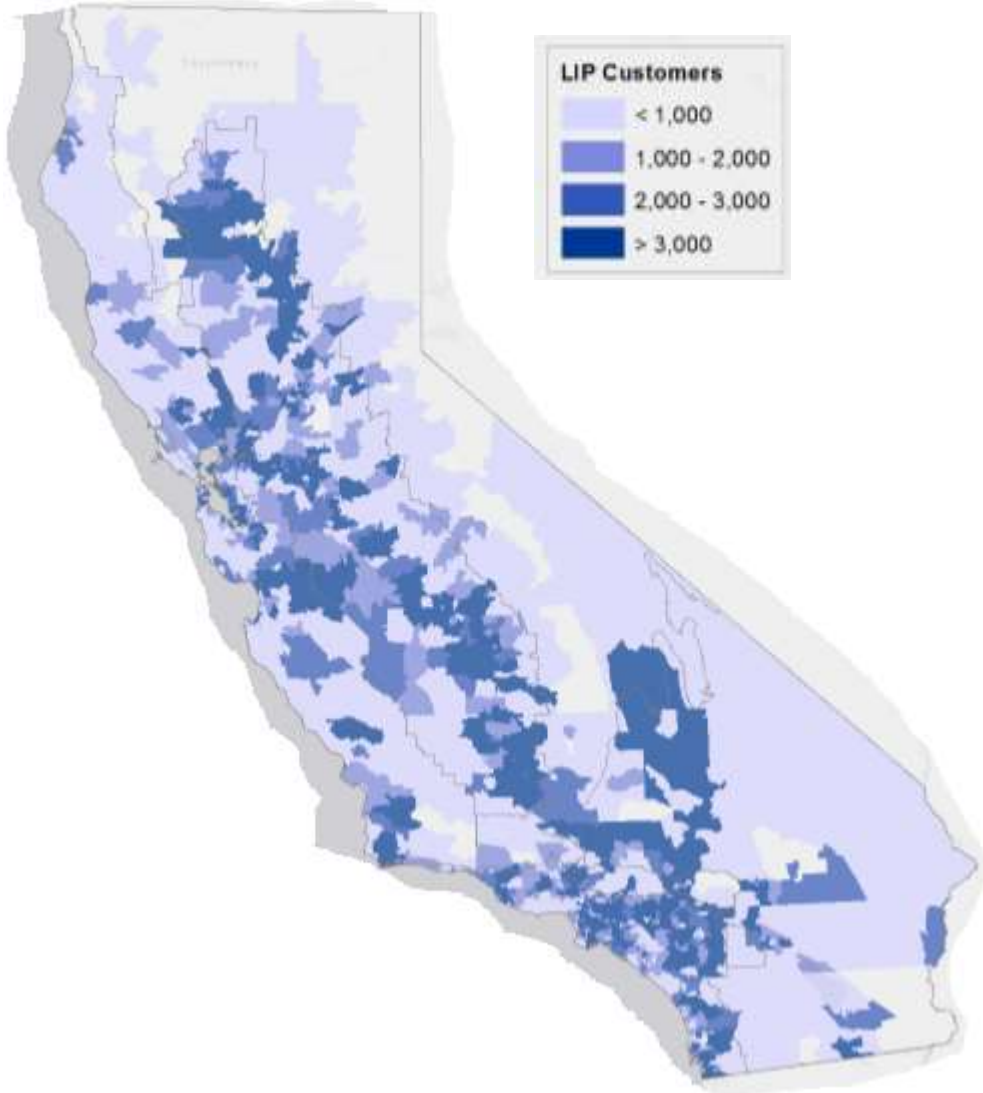
## CALIFORNIA'S AVERAGE MONTHLY ELECTRIC BILL BY ZIP CODE

Figure 1: Average monthly residential electric bill in California in 2015

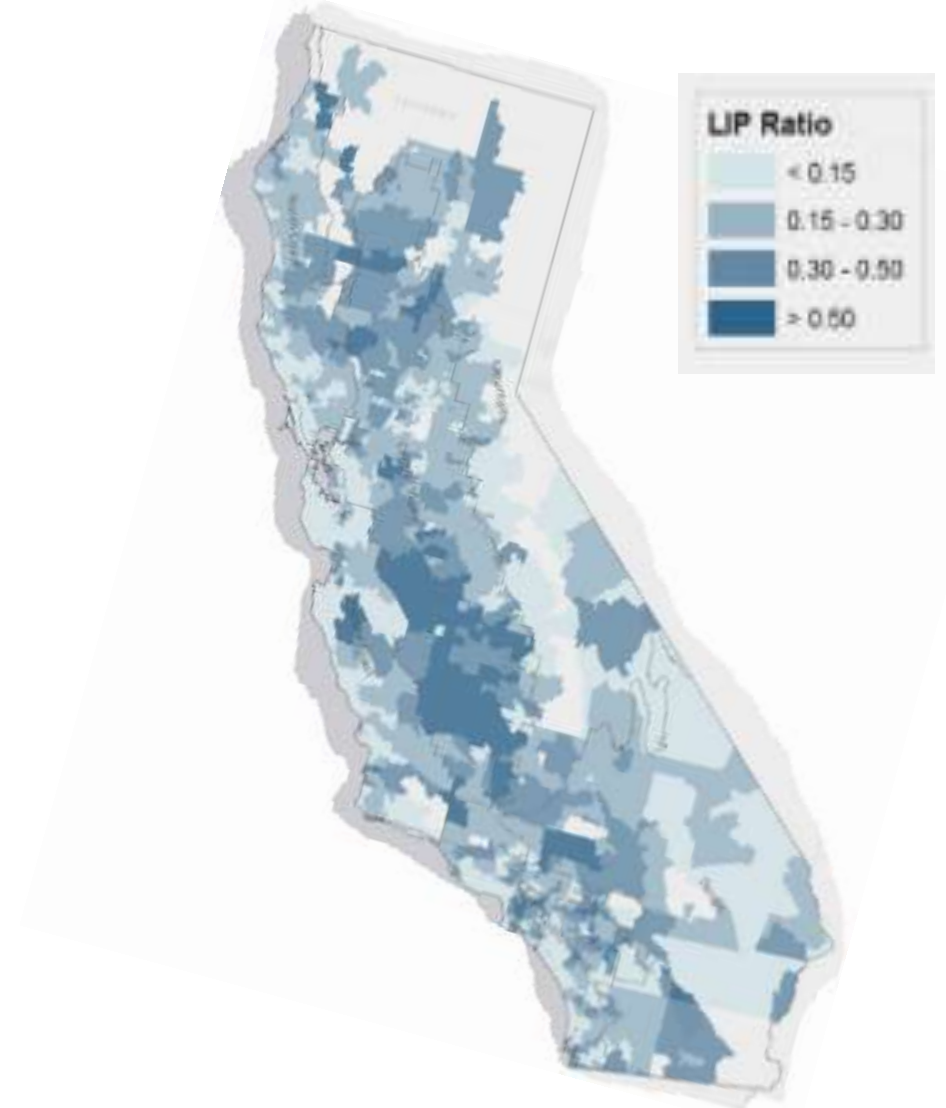


# CASE STUDY

ENERGY LOW-INCOME PROGRAM (LIP) CUSTOMERS IN CALIFORNIA

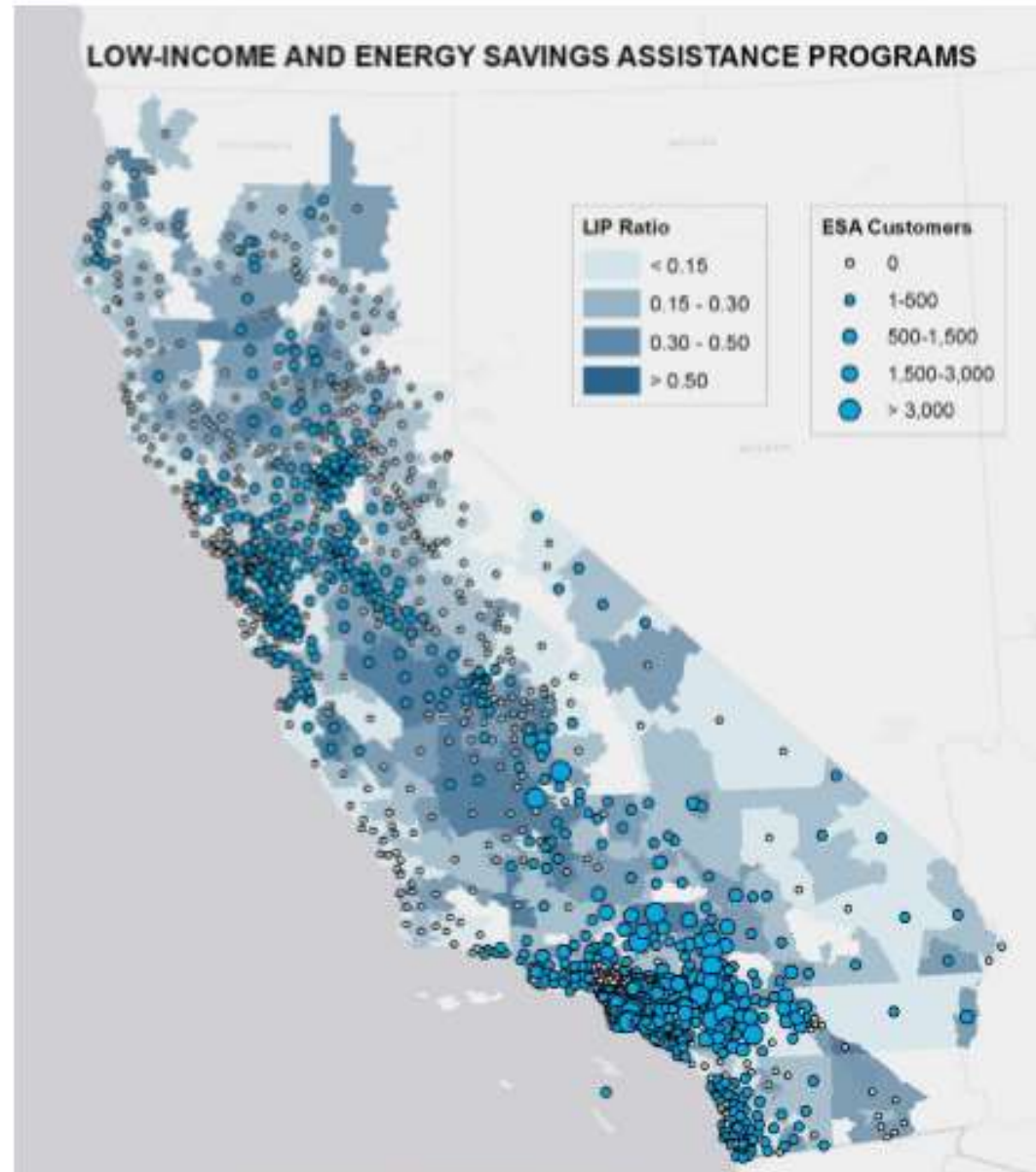


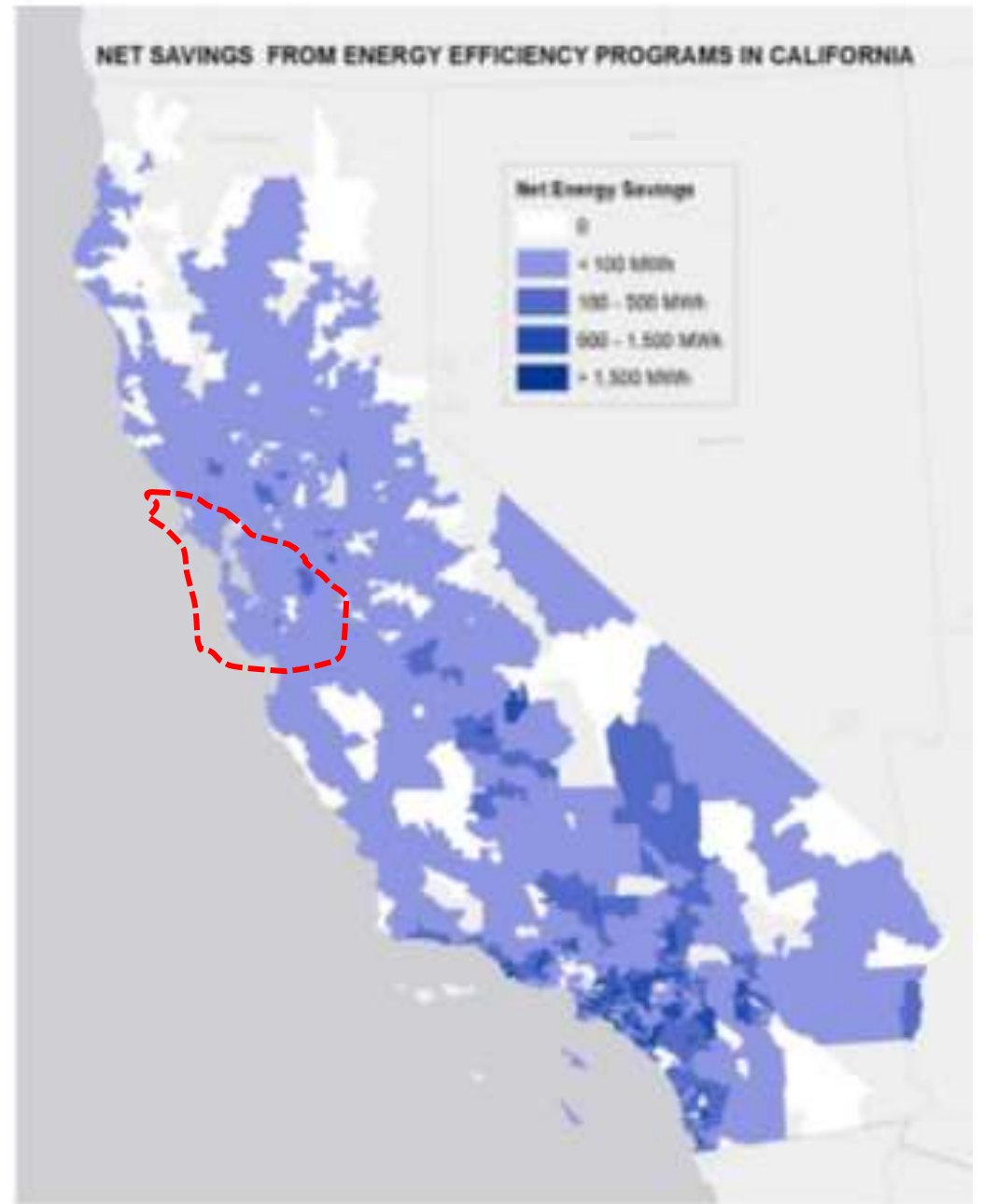
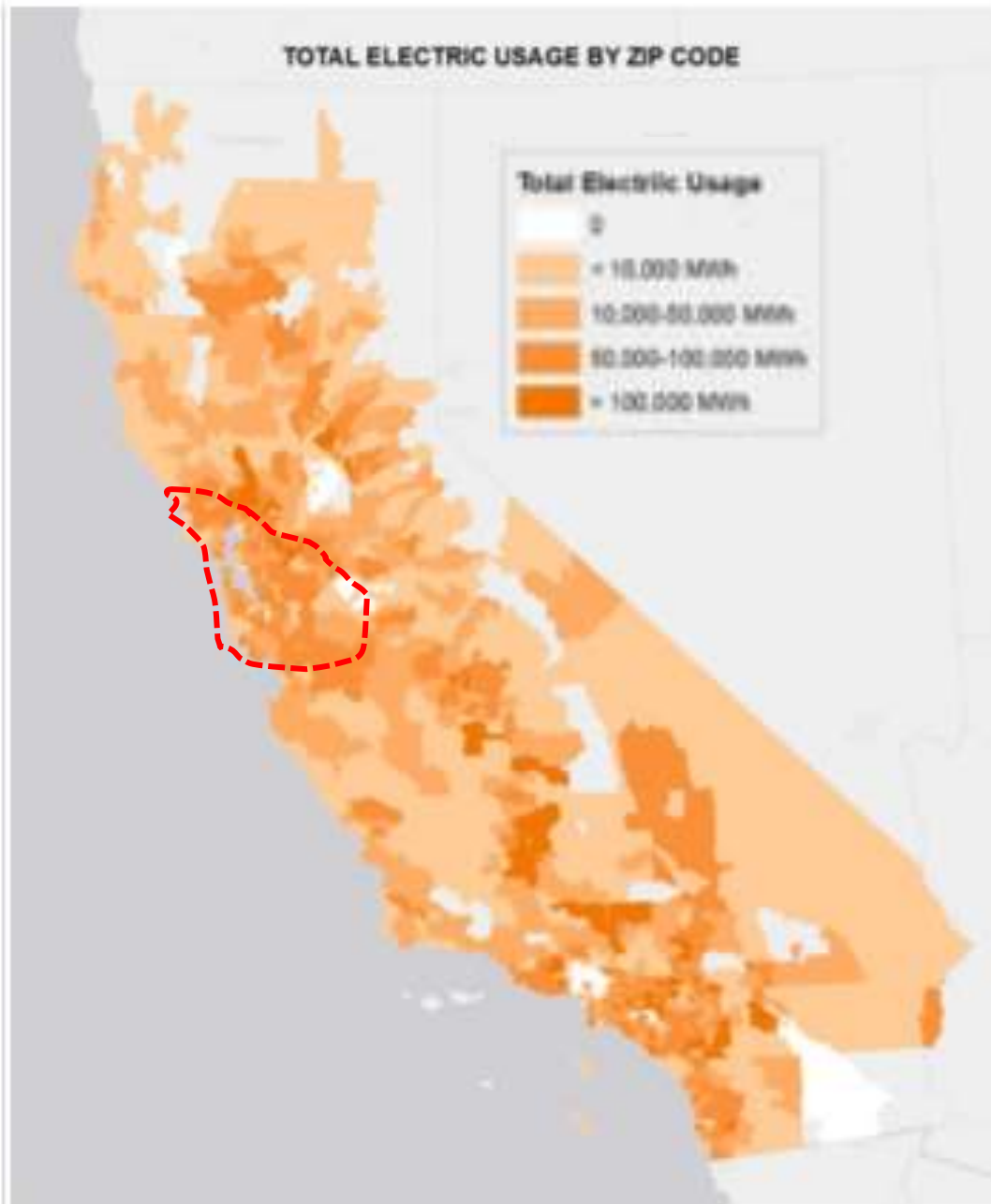
RATIO OF LIP CUSTOMERS TO ALL CUSTOMERS





# CASE STUDY



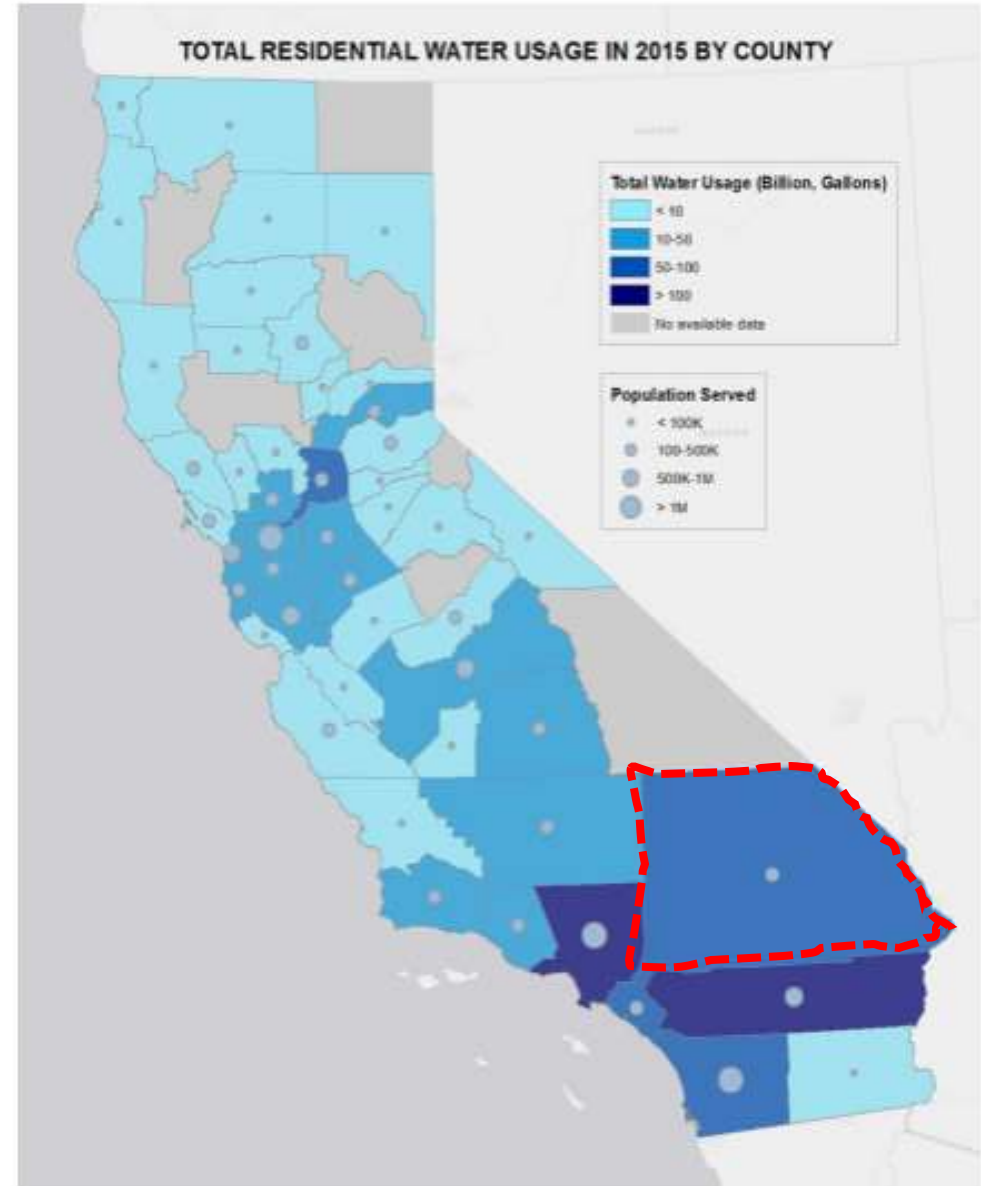


Map 10

# U.S. Drought Monitor California



Map 11



# CASE STUDY

## WHAT WAS GATHERED

Monthly electric and Gas Bill amounts, Usage data, Data from various Energy Saving Programs.

Energy Statistics from State and Federal organizations.

Water Consumption and Conservation Data.

## WHAT WAS ANSWERED

How is the spatial distribution of average residential electricity and gas bill by Zip code.?

Where are the high-consumption areas for electricity , gas and water?  
Energy Statistics from State and Federal organizations.?

How do income and regional climate affect usage of utility services?

Where are the low-income customers located in the state.?

Which areas are the most in need of low-income and conservation programs?

# CONCLUSIONS

Not a Complementary but a very Crucial tool for Utilities.

Very useful in arriving contextual based educated decisions.

Plays a very important roles in Regulatory and Compliance requirements.

Need not be complicated.

Allows Dissimilar and Disparate data to be viewed under one context.

Sources:

California Public Utilities Commission

THANK YOU