

# AFC Summer Conference 2013

June 12-14, 2013 | San Diego, California



## Smart Energy

San Diego Community College District



# About the District

- Second Largest Community College District in California
- Centralized Facilities Management
- Four Institutions
  - City, Mesa, Miramar Colleges
  - Continuing Education Campuses



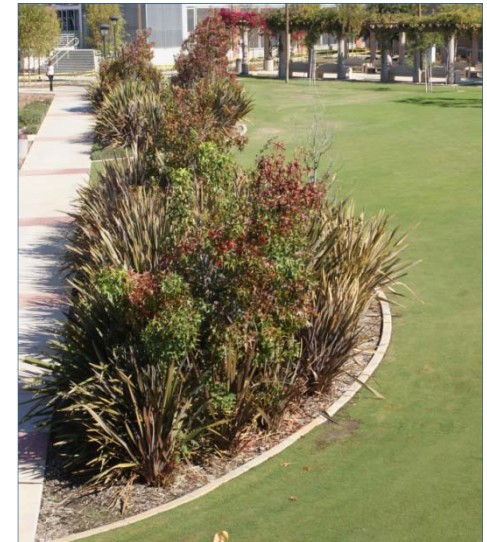
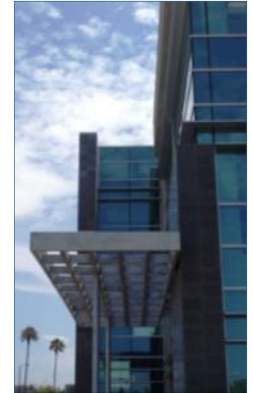
# About the District (Current State)

## Current Square Footage

2.5 Million gross square feet

## Utilities Consumption (2012)

\$4.3 Million





# About the District (Future State)

## Projected Square Footage

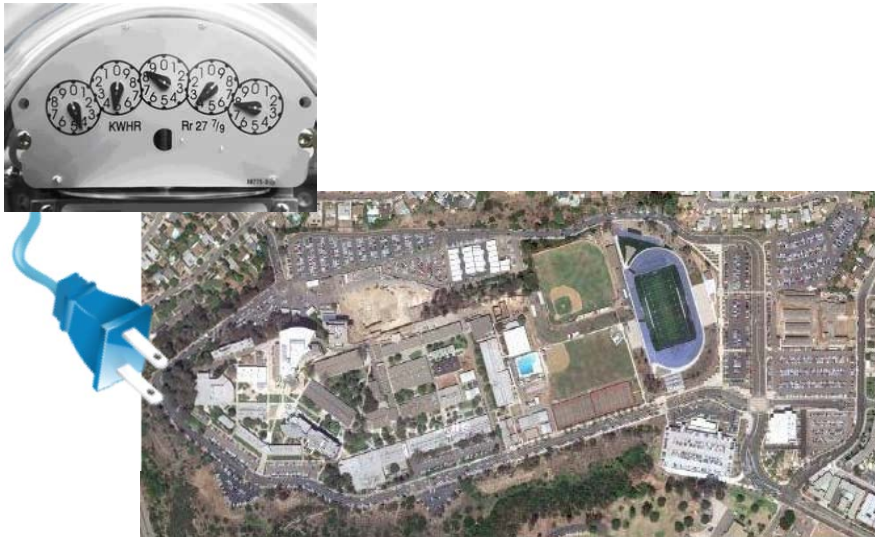
5.1 Million gross square feet



# The Challenge

## Mesa College

- 2012: 7.3 Million kWh



## Miramar College

- 2012: 8 Million kWh



- No monitoring of chilled/heated hot water consumption in buildings.





# The Challenge Continued

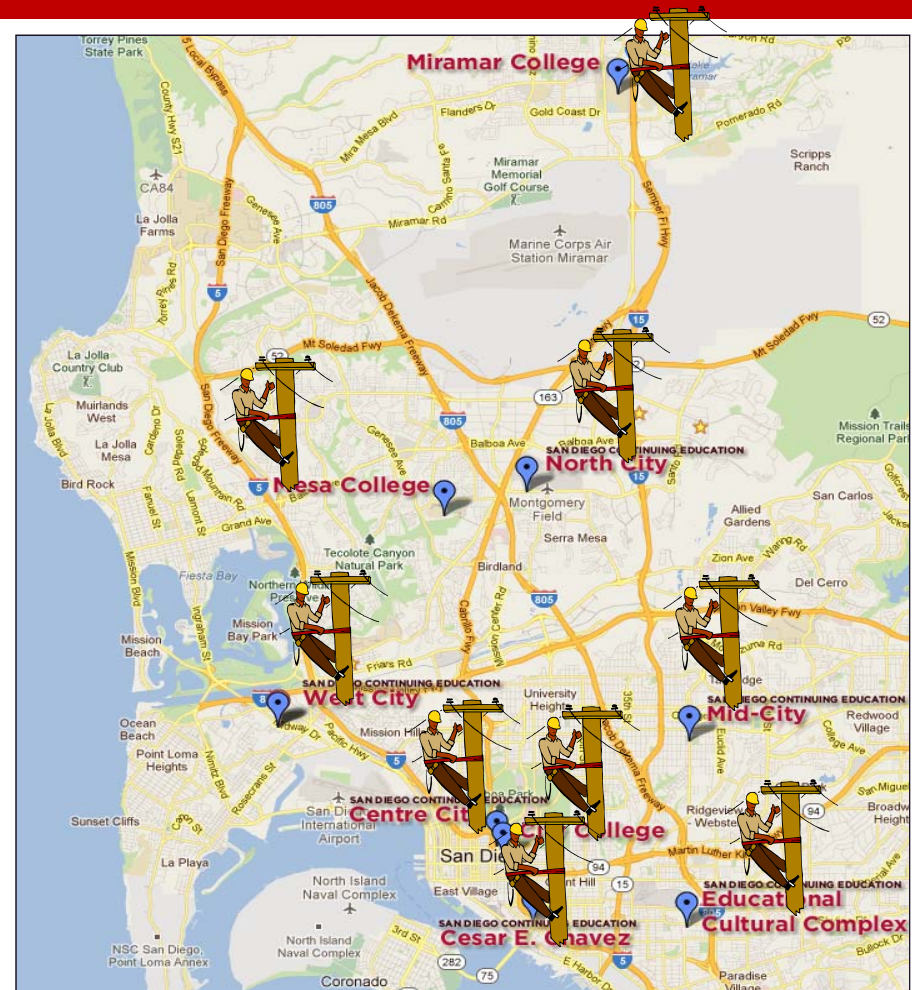
SDG&E Demand Charges

**BLENDED RATE**

**\$0.165/kWh**

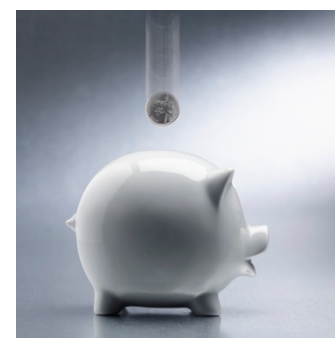
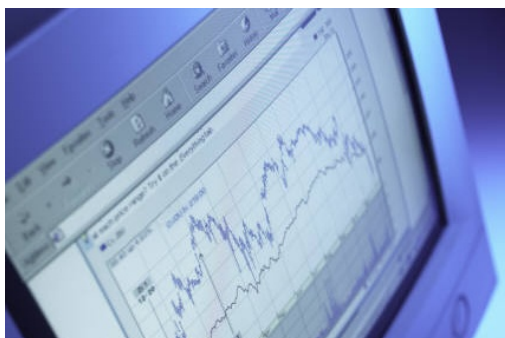
**Peak Pricing Rate**

**\$1.00/kWh**



# The Vision

- Metering of energy consumption by load type per building
- Use this data to focus maintenance efforts for building performance
- Behavior modification of building occupants



# What Should be Measured?

- Electrical load
- Therms natural gas consumed
- Therms chilled water or heating hot water





# How is Data Collected and Monitored?

- Using standard Energy Management System to monitor building performance
- Electrical and natural gas metering with IP addresses
- Tie it together with Java Application Control Engine (JACE)



# Where do we go from here...

- Set baseline for building energy performance
- Convert the data into useful information
- Use that information to make informed decisions

<http://axcess.sdccd.edu>

