# City of Irvine GIS-Based Energy Data Pilot Project

January 15, 2013

#### **Pilot Overview**

#### Objectives

 Design a prototype GIS tool that analyzes community utility usage data and evaluates geographic areas for target marketing and evaluation of effectiveness of EE programs to support EE Strategic Plan

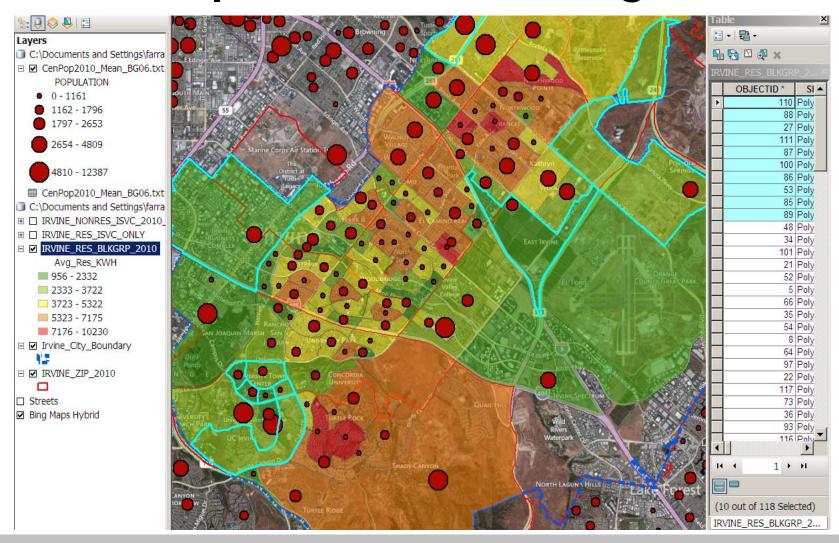
#### Criteria

 Visualize and analyze energy intensity data, Target specific attributes, Evaluate Program participation

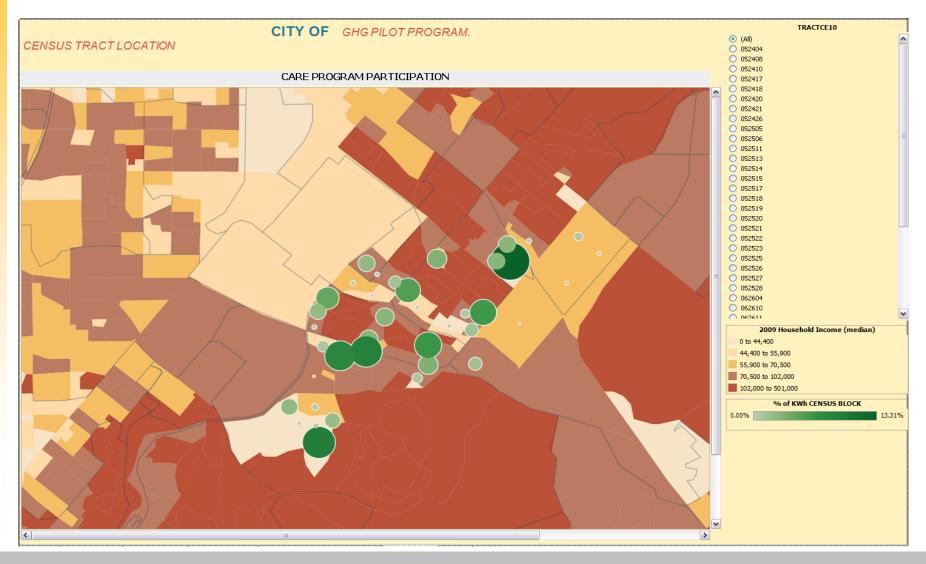
#### Four Guiding Principles

 Applicability, Scalability, Extensibility, Capability for long term management

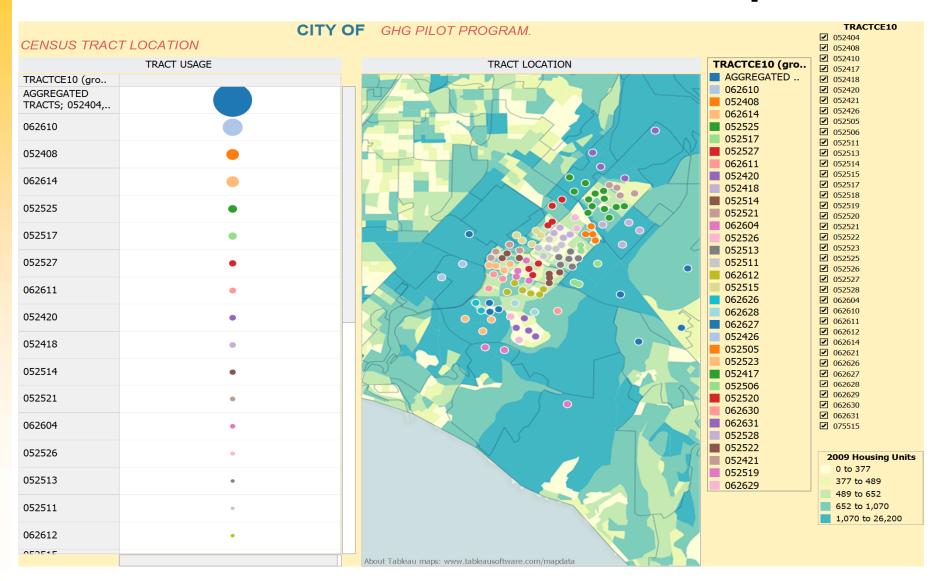
# KHW Heat Map, Population, Top 10 EE KWH Savings



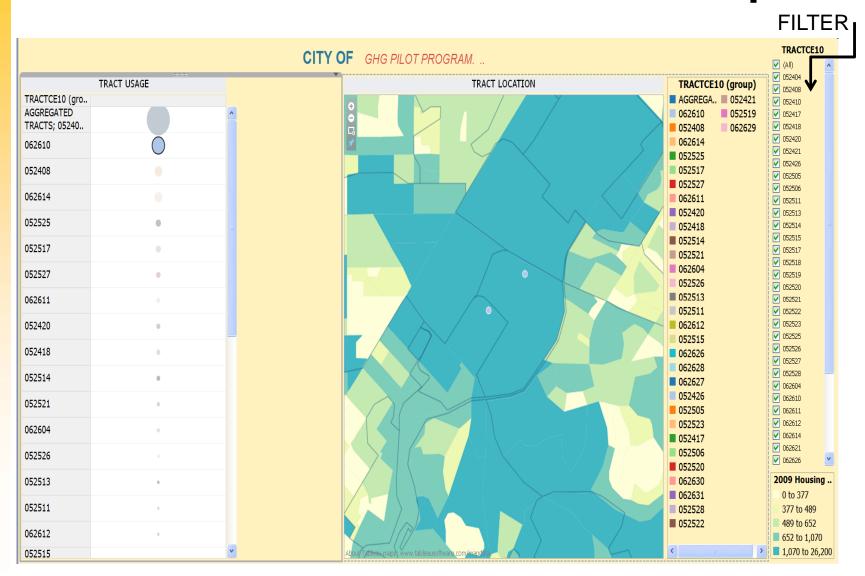
## Comparison of CARE Program with Low Income. Residential



## **Census Tract Commercial Hot Spots**



## **Census Tract Commercial Hot Spots**



## Market Segment Rankings



#### CITY OF IRVINE GHG PILOT PROGRAM

#### 2012 NAICS ELECTRICITY USAGE SEGMENT **SECTOR** 25.68% Real Estate and Rent.. Manufacturing 31, 32, 33 16.45% Information 9.61% Wholesale Trade 42 8.44% **Retail Trade** 44, 45 7.73% Professional, Scientif... 5.53% Accommodation and ... 5.29% 4.45% **Educational Services** Utilities 3.67% 3.40% Health Care and Soci.. Finance and Insuran.. 2.00% Other Services (exce.. 1.62% Arts, Entertainment, .. 1.38% **Public Administration** 1.18% Administrative and S., 1.16% 0.79% Construction 23 0.70% Transportation and .. 0.66% Management of Com.. 0.17% Agriculture, Forestry,... 0.09% Mining, Quarrying, a.. 0.01% 0% 2% 4% 10% 12% 14% 16% 18% 20% 22% 24% 26% 28% % of Total kWh\_yr

% of Total kWh\_yr for each SECTOR broken down by SEGMENT. Color shows % of Total kWh\_yr. Size shows details about One (generated). The marks are labeled by % of Total kWh\_yr. The data is filtered on % of Total kWh\_yr, which ranges from 0.008249963% to 68.962537925%. The view is filtered on SEGMENT, which keeps multiple members. Percents are based on the whole table .

% of Total kWh\_yr

0.008249963% to 68.962537925%

SEGMENT

✓ Null

Accommodation and Food S..

Administrative and Support a..

☑ Agriculture, Forestry, Fishing...

Arts, Entertainment, and Rec.. Construction

Educational Services

Finance and Insurance

✓ Health Care and Social Assist... ✓ Information

✓ Management of Companies ...

✓ Manufacturing

✓ Mining, Quarrying, and Oil a..

✓ Other Services (except Publi..

✓ Professional, Scientific, and ..

Public Administration

Real Estate and Rental and L..

✓ Retail Trade

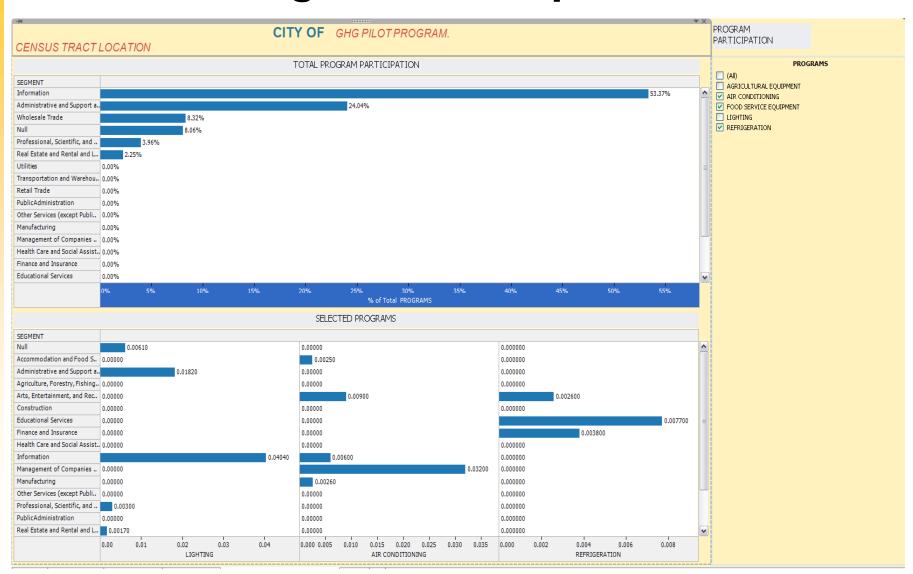
✓ Transportation and Warehou..

Utilities

✓ Wholesale Trade

% of Total kWh\_yr 0.01% 25.68%

## **Program Participation**



## **Next Steps**

- Ongoing: Seek additional Local Government Feedback
- February: Continue development of GIS tool with feedback from Local Governments
- March: Test the model with various inputs
- April: Implement and test program at the City of Irvine