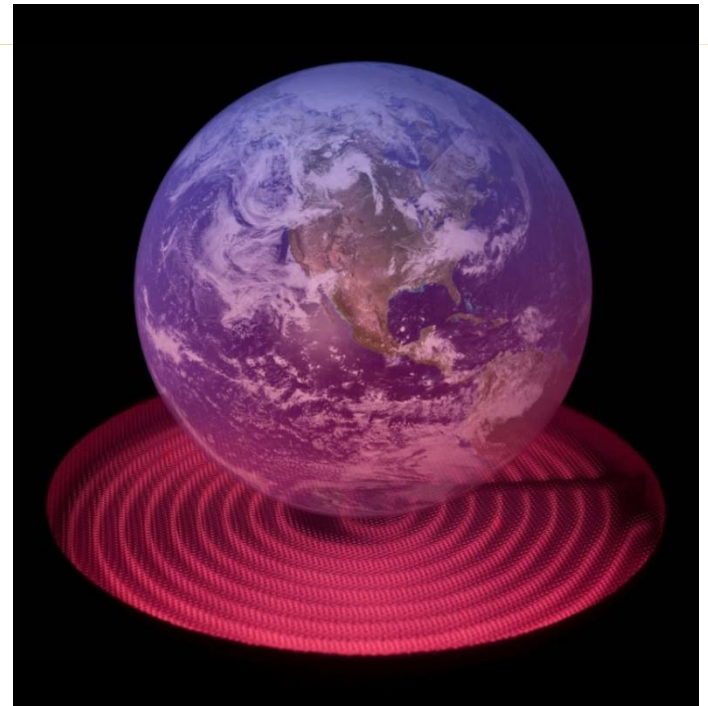


# CITY OF IRVINE 2020 CLIMATE ACTION PLAN (CAP) PROCESS



July 15, 2009

ESRI International  
User's Conference



# Chronological Background for Drivers of Change

- **Assembly Bill 32 (2006)**
  - California Air Resources Board
- **Senate Bill 97 (2007)**
  - Office of Planning and Research
- **Senate Bill 375 (2008)**
  - Southern California Association of Governments



# Procedural Steps for Irvine

- Adopted Energy Plan - DONE
- Generate Community-wide GHG Inventory - DONE
- Adopt Climate Action Plan with “enforceable” emission reduction strategies (Nov '09)
- Adopt related EIR to address impacts & for tiering for future projects (Nov '09)
- Amend General Plan with CAP (Jan '10)
- Utilize EECBG to fund training & auditing to educate community (Sept '09)



# Procedural Steps for Irvine

- Provide innovative financing mechanisms for energy efficiency retrofits of community (2010)
- Create web-based M&V program to report results of compliance with GHG Reduction Target and Energy Plan Goals (end of 2009)



# City's Energy Plan



- City Council Approved in July, 2008
- GHG inventory to be completed in 2009
- Four key goals:
  - Involve 100% of Irvine residents and businesses
  - Reduce energy use in buildings City-wide 30% by 2015 compared to 2003 levels
  - + % of renewable energy used in new buildings City-wide to 40% by 2015 and to 60% by 2020;
  - Reduce emissions to 2000 levels by 2010, to 1990 levels by 2020 and to 80% below 1990 levels by 2050.



[http://www.cityofirvine.us/files/2008\\_June\\_24\\_Energy\\_Plan\\_FINAL.pdf](http://www.cityofirvine.us/files/2008_June_24_Energy_Plan_FINAL.pdf)

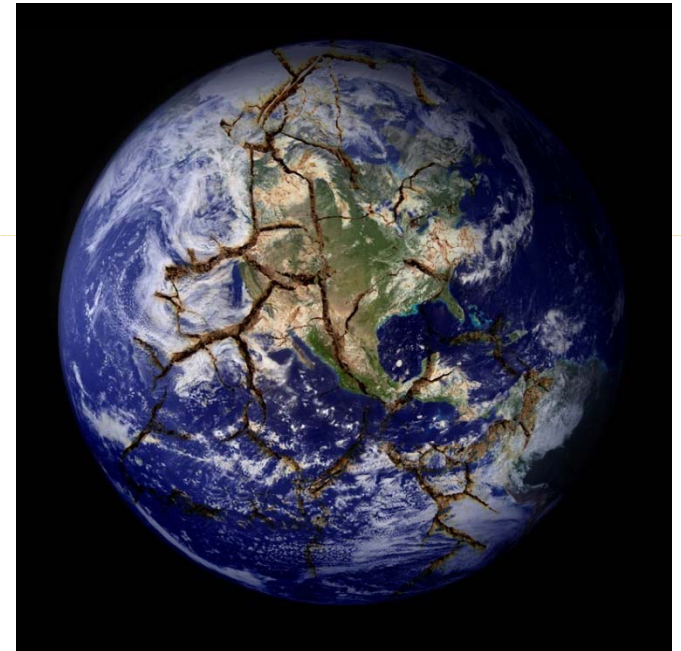
# Purpose of Irvine CAP

- Build on adopted City Energy Plan
- Establish reliable quantified tool for future project review
- CEQA Tiering
- Future land use and transportation planning for build out



# City Goals

- City-wide greenhouse gas (GHG) inventory
- GHG Emissions Reduction Target and Plan
  - Segregate by building sector and transportation
- Develop GIS tool to measure & track cumulative reduction to achieve City's GHG Goals (i.e. 30% reduction from 1990 levels)



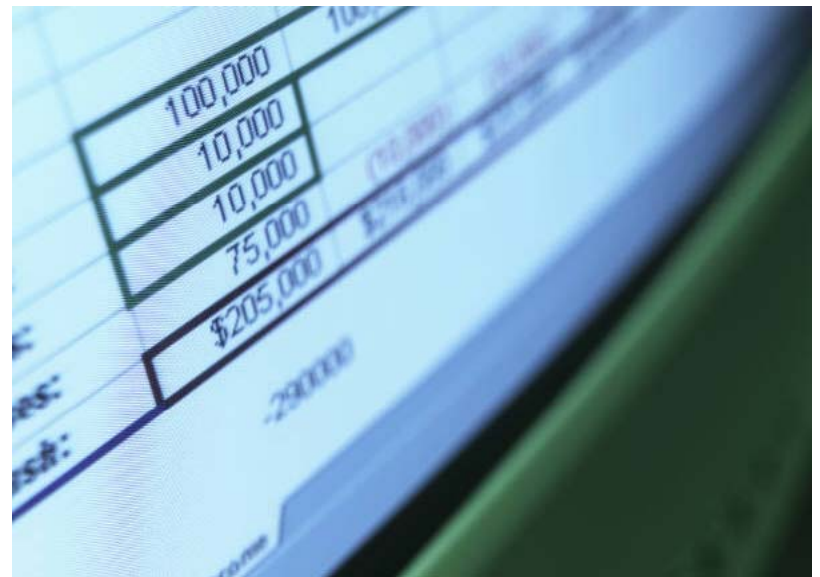
# Unique Elements of Irvine CAP

- Community-wide Targets while able to examine at Planning Area level
- Ability to prioritize projects
- Relationship between data and reality
- Stakeholder involvement
- Web-based monitoring and verification



# Irvine's Process

- Bringing ICLEI database down from regional to Irvine-specific:
  - Transportation
  - Water
  - Utilities

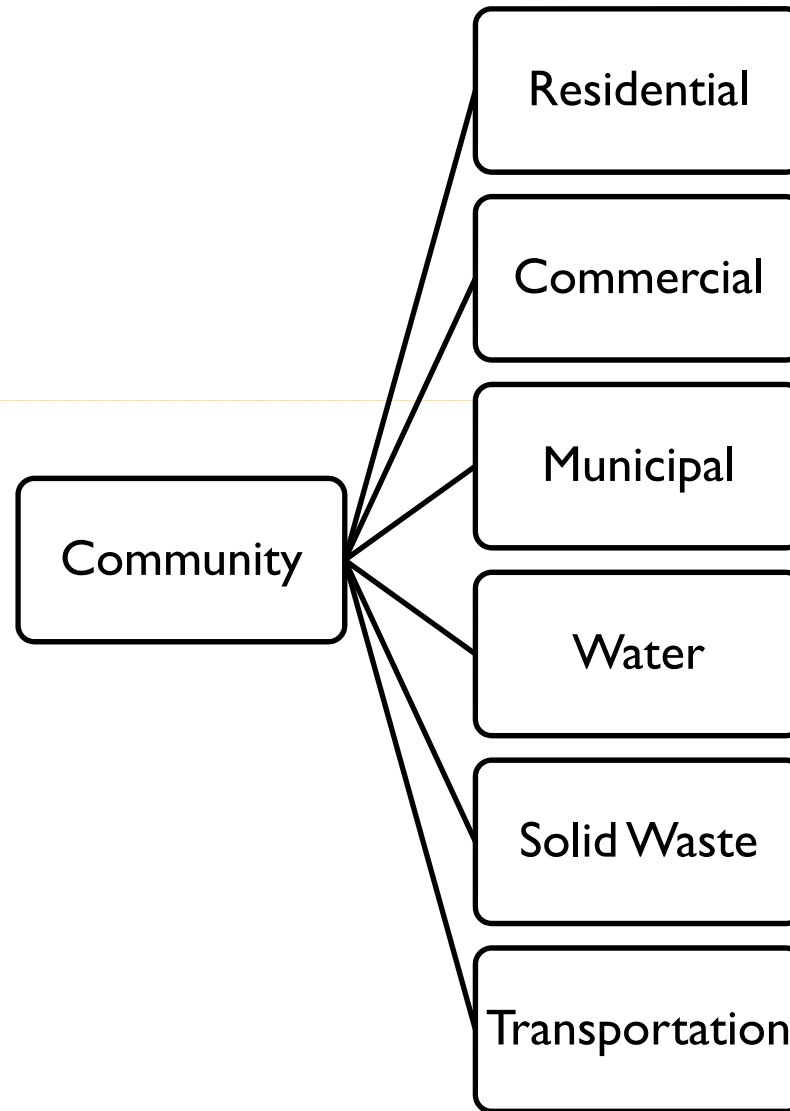


A close-up photograph of a computer screen displaying a spreadsheet. The spreadsheet contains several rows of numerical data. The visible values are 100,000, 10,000, 10,000, 75,000, and \$205,000. There is also a value of -290,000 visible in a lower row. The text is slightly blurred due to a shallow depth of field.

100,000
10,000
10,000
75,000
\$205,000
-290,000



# Irvine Emissions Sectors



# Irvine CAP Six-Step Process

Step 1: Identify Emissions – Today Through 2020



Step 2: Identify Reduction Strategies



Step 3: Analyze Potential of Reduction Strategies



Step 4: For Each Strategy - Decide on Realistic Implementation Scenarios



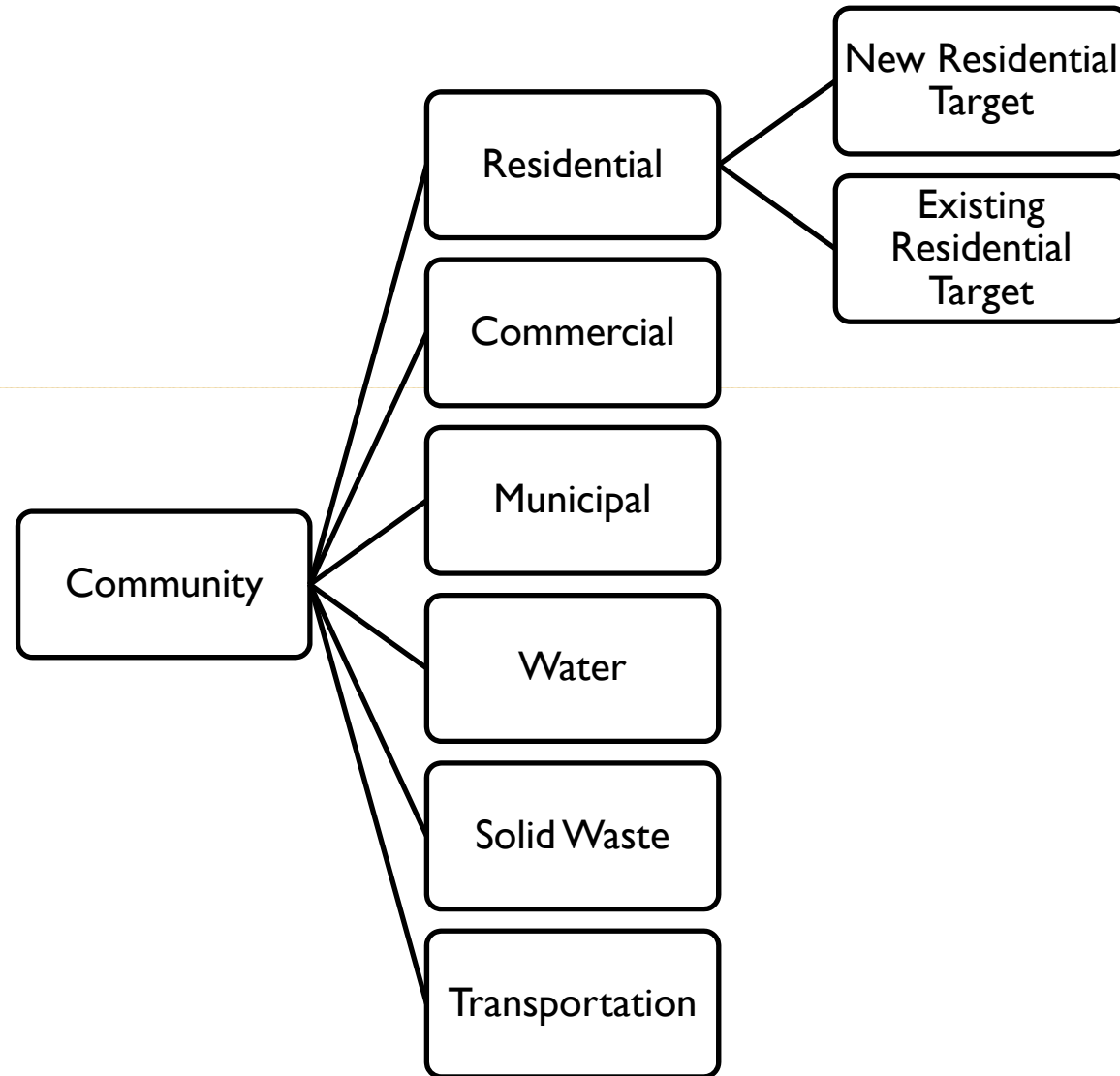
Step 5: Create Implementation Scenarios and Decide on and Implement



Step 6: Implement M & V Plan On



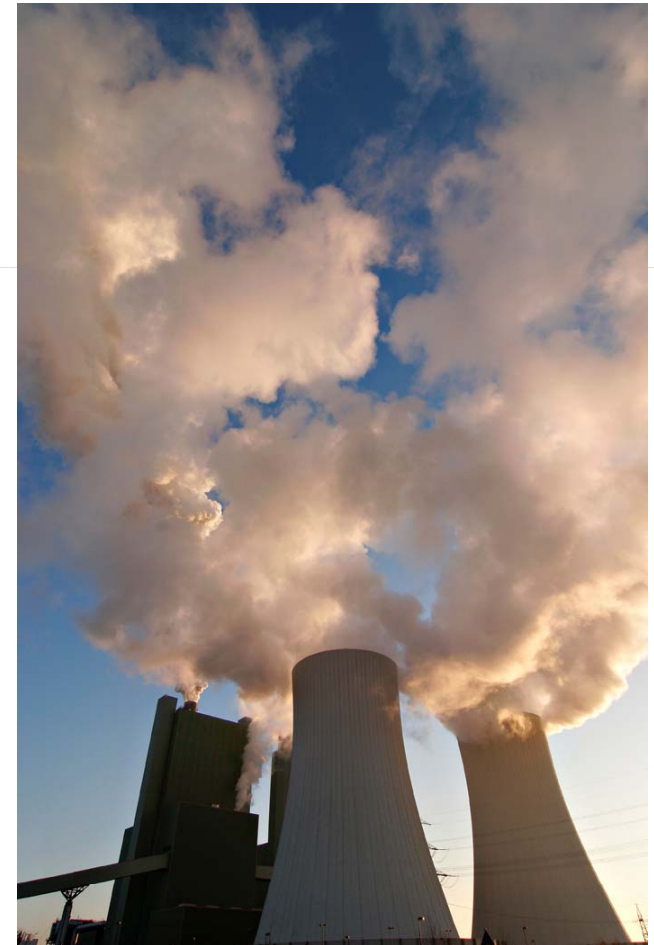
# CAP Targets by Sector



# Elements of the Irvine CAP

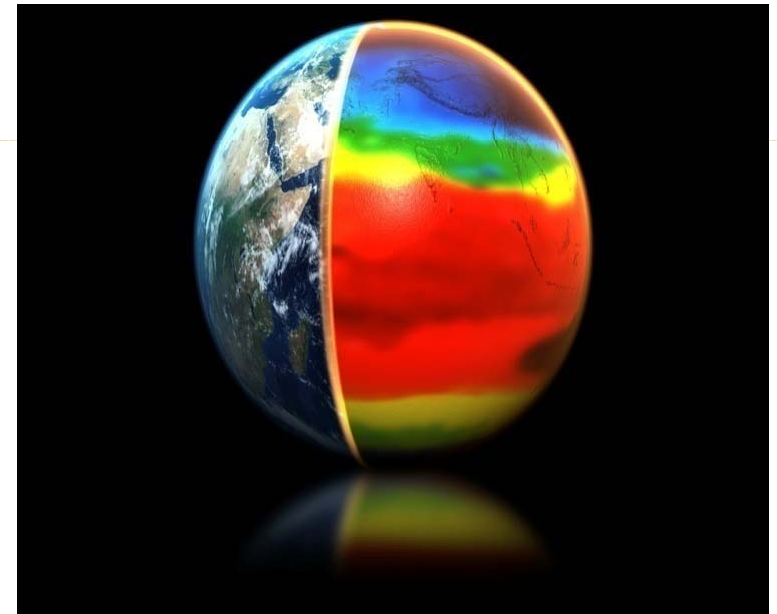
## Emissions reduction strategies include:

- Actions that can reduce emissions in a sector or sub-sector
- Address all or part of emissions in a sector
- Applied over some time schedule between now and 2020



# Actionable Information

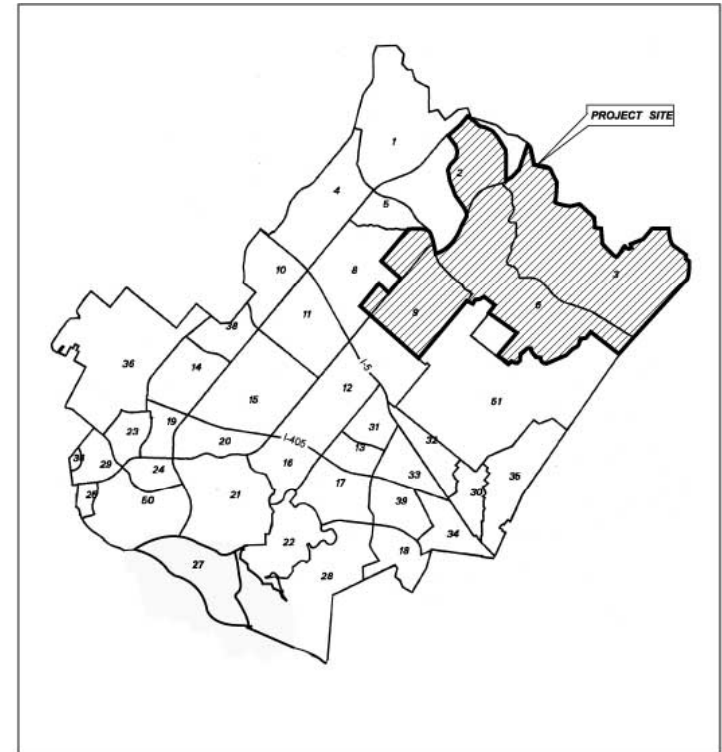
- Most communities focus on municipal or community-wide emissions
- The City of Irvine makes critical decisions with respect to projects in individual planning areas
- **Need to integrate data at the planning area level to support project evaluation**



# Spatial Assessment Protocol

The CAP will be disaggregated from the community-wide scale to 50+ individual planning areas:

- Planning area-specific growth scenarios
- Potentially planning area-specific targets for growth and existing land use
- Planning area specific monitoring and reporting



SOURCE: City of Irvine, March 9, 1999

# Four Types of Reduction Strategies

## Reductions include:

- State actions
  - e.g., Renewable Portfolio Standard
- Existing city programs
  - e.g., Irvine Green Building Program
- Proposed (unrealized) city programs
  - e.g., municipal building retrofit program
- New actions
  - e.g., community-wide building retrofit program



## Analyze Potential of Reduction Strategies

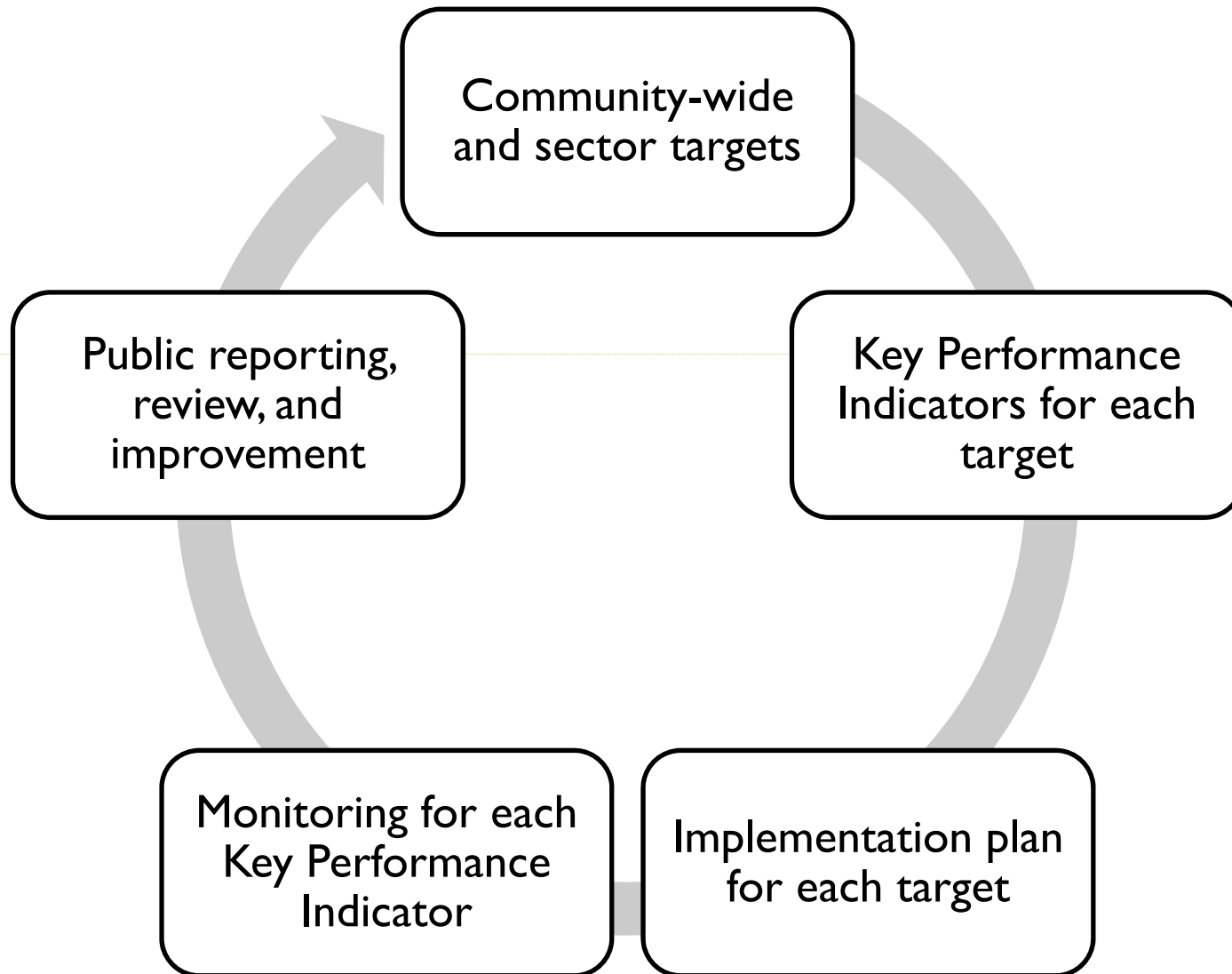
- High Level Measures:
  - Energy Modeling
  - Transportation Analysis
  - Water Analysis



- Examples:
  - Reduction Potential of Increasing Mixed-Use
  - Reduction Potential of Using Weather-Based Controllers
  - Reduction Potential of Retrofitting Lights

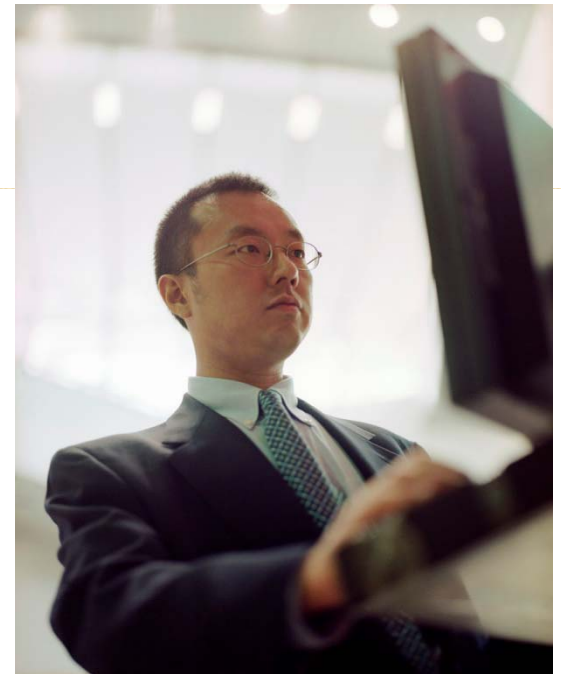


# CAP Implementation



# M & V Plan

- Identify Key Performance Indicators to Measure (Based on Sensitivity Analysis)
- Update Inventory and Actual Performance on an Ongoing Basis (at least annual)
  - This will calibrate inventory as well as creating a feedback loop on progress.



# Funding

Energy Master Plan = Approx. \$100K

GHG Protocol Development =  
Approx. \$100K

Climate Action Plan Development =  
Approx \$135K

Web-based Monitoring and  
Verification = Approx. \$200K



# Contact Information

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