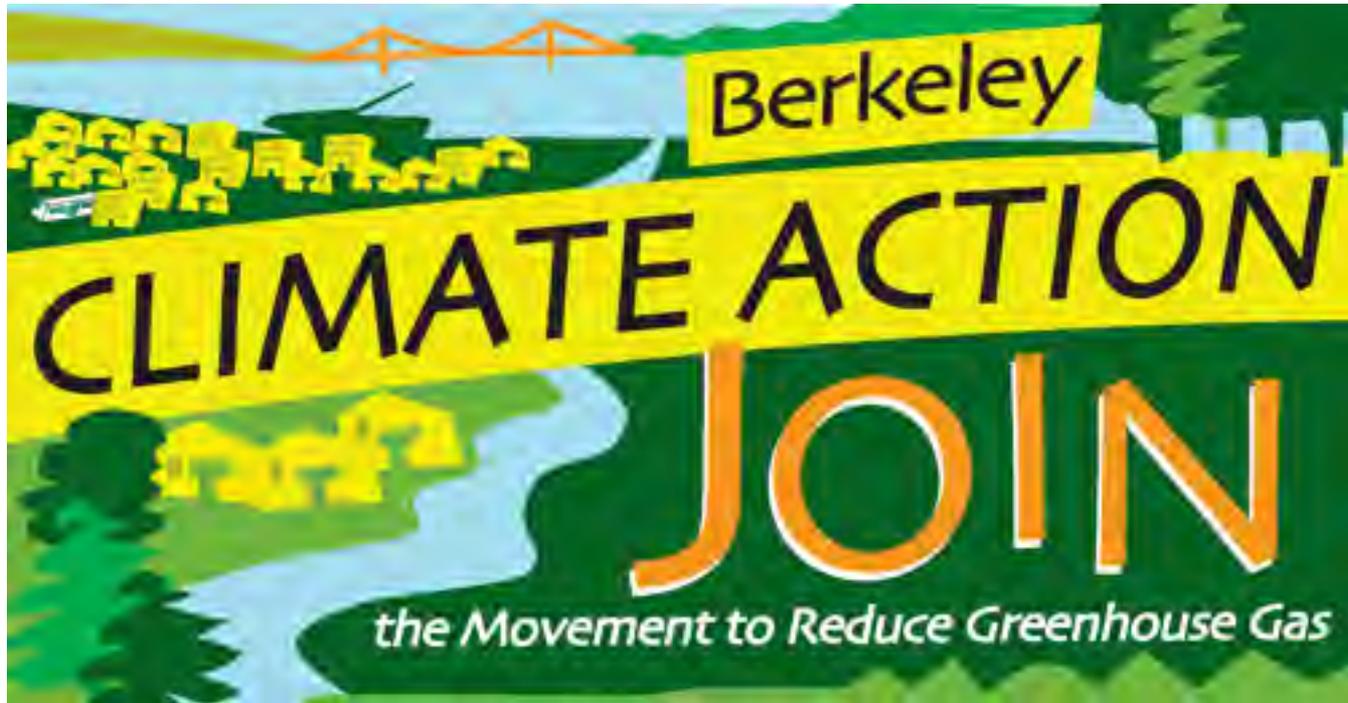


# The Berkeley Climate Action Plan: Overview & Opportunities for Collaboration with LBNL



September 10, 2009

LBNL

# Presentation Overview

- **Overview of the Climate Action Plan**
- **Energy and Sustainable Development FY 2010 Work Plan**
- **Elements Not in Current Work Plan**
- **Opportunities for LBNL Collaboration**



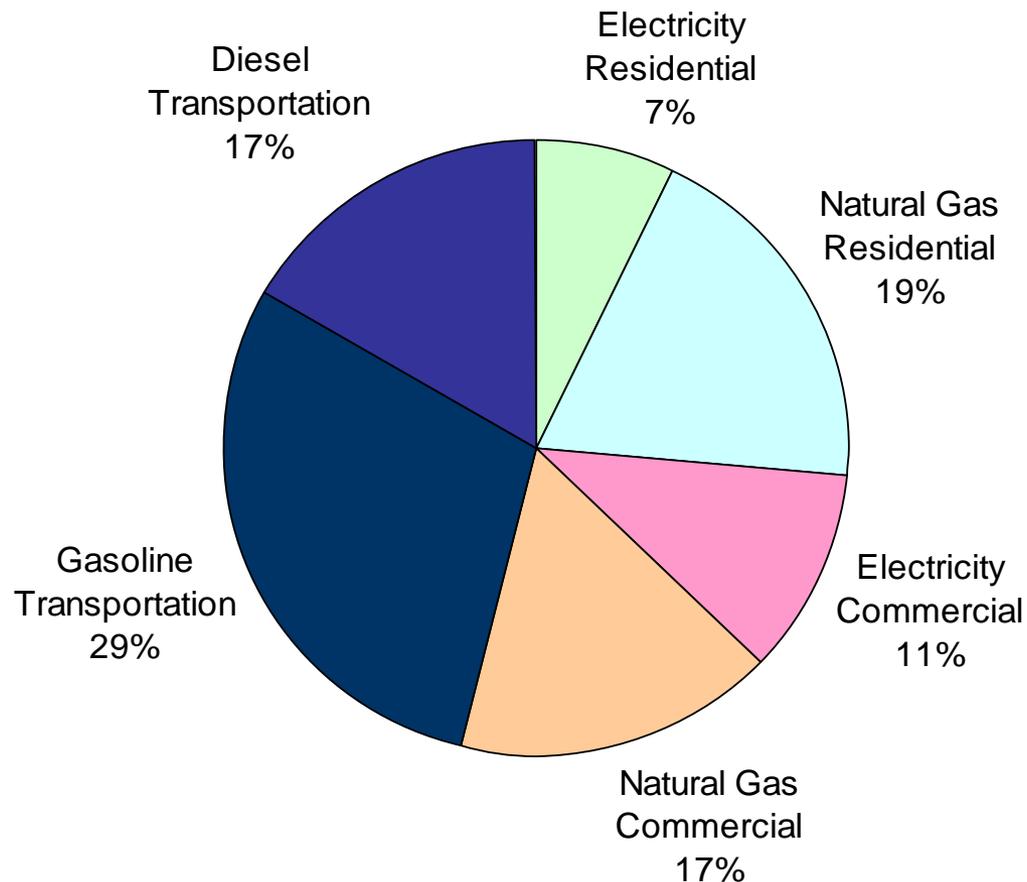
# Berkeley's Measure G

## Measure G:

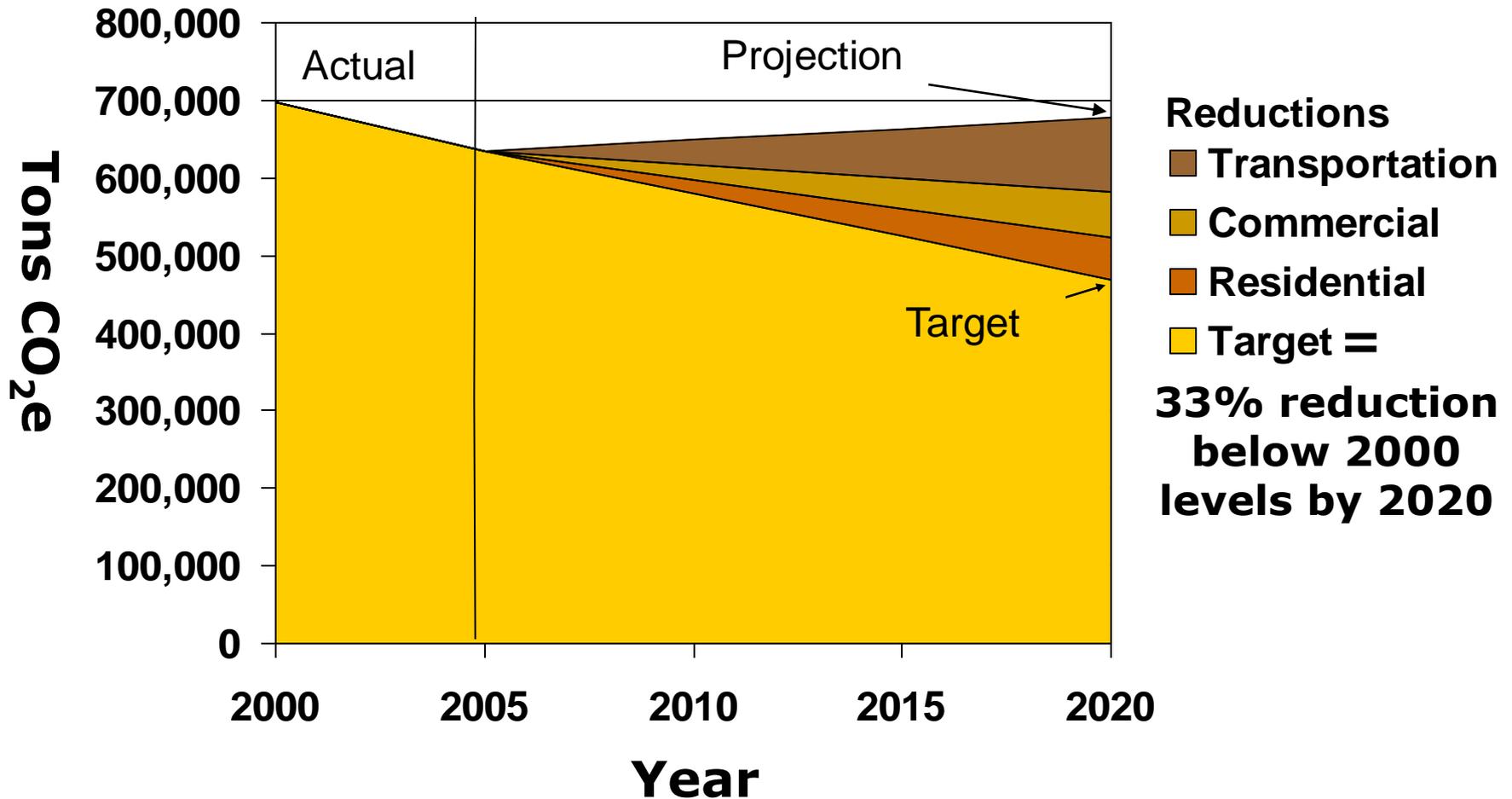
- **Reflects community concern about climate change**
- **Sets a target of an 80% reduction in community-wide GHG emissions by 2050**
- **Passed with 81% of the vote**



# Transportation = Single largest source of Berkeley's GHG emissions



# Getting to 2020: Berkeley Emissions Trends & Targets



# Transportation & Land Use

## The Vision:

**Reduce vehicle miles traveled.**

**Make the remaining motor vehicle usage less carbon-intensive.**



# Waste Reduction & Recycling



Chronicle / Paul Chinn

**Timothy & his Worm Bin**

## The Vision:

**Eliminate solid waste at its source.**

**Maximize recycling & composting.**



# Building Energy Use



## The Vision:

**Use less energy.  
Use cleaner energy.**

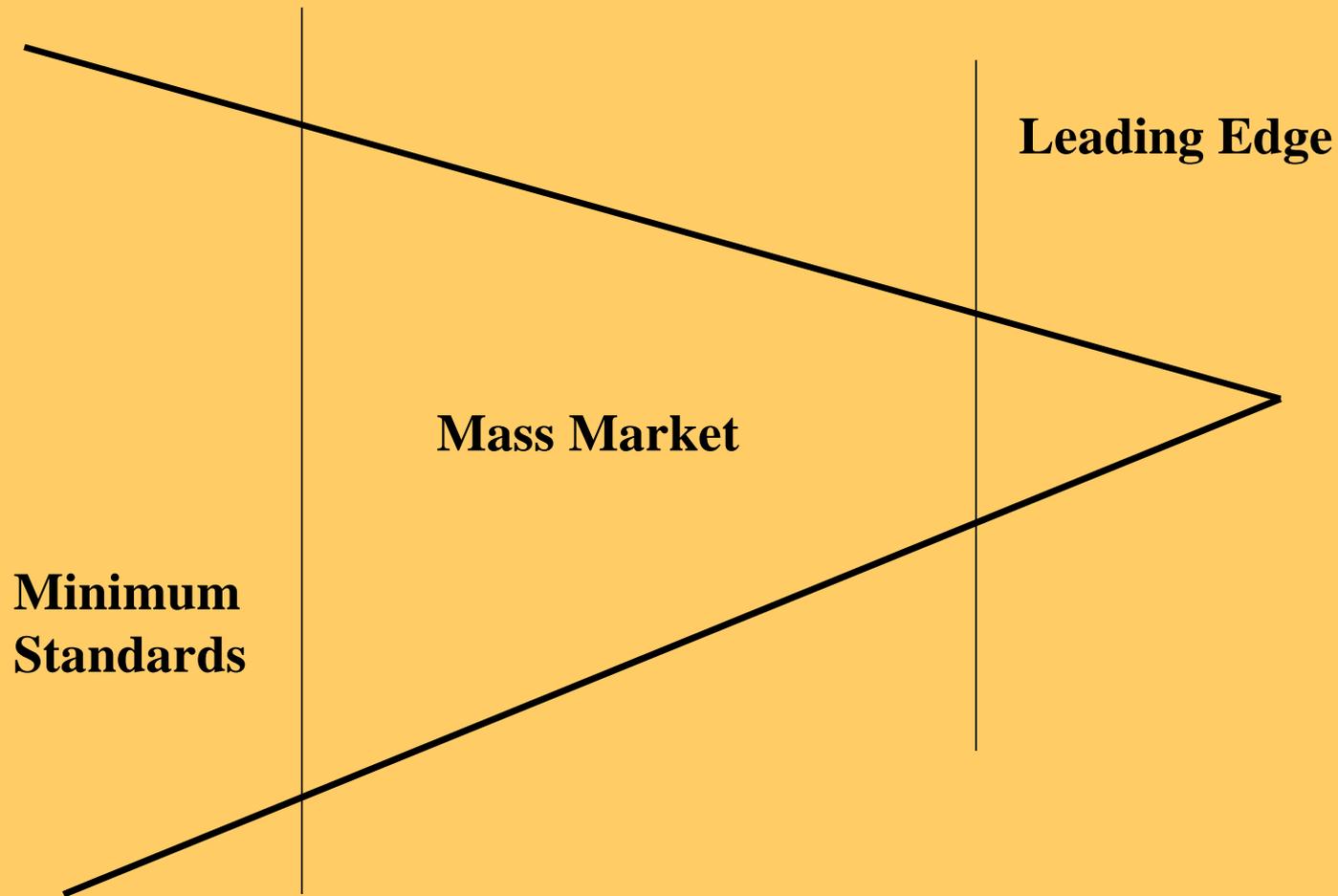
# Details, details, details

Summary of Targets, Projected Savings, Total Costs and Direct Savings

	Target Reduction				Projected Performance				
	Therms (1,000)	mWh	Motor fuels (1,000 gals.)	Metric tons	Metric tons	Share of Target	Savings (\$1,000)*	Costs (\$1,000)*	Benefit to Cost
<b>Residential 2020 Reduction</b>	<b>6,338</b>	<b>58,724</b>	<b>-</b>	<b>48,000</b>	<b>58,045</b>	<b>31%</b>	<b>\$ 302,176</b>	<b>\$ 272,405</b>	<b>1.11</b>
Single-Family Energy Efficiency					31,492	17%	\$ 164,587	\$ 127,916	1.29
Multi-Family Energy Efficiency					16,996	9%	\$ 88,677	\$ 57,779	1.53
Local renewables					9,557	5%	\$ 48,912	\$ 86,710	0.56
<b>Commercial 2020 Reduction</b>	<b>5,791</b>	<b>92,826</b>	<b>-</b>	<b>53,000</b>	<b>46,967</b>	<b>25%</b>	<b>\$ 162,989</b>	<b>\$ 87,489</b>	<b>1.86</b>
Energy Efficiency					44,912	24%	\$ 153,387	\$ 68,065	2.25
Local renewables					2,055	1%	\$ 9,602	\$ 19,423	0.49
<b>Transportation 2020 Reduction</b>	<b>-</b>	<b>-</b>	<b>9,242</b>	<b>87,000</b>	<b>87,000</b>	<b>46%</b>	<b>\$ 18,925</b>	<b>na</b>	<b>na</b>
<b>Total</b>	<b>12,129</b>	<b>151,550</b>	<b>9,242</b>	<b>188,000</b>	<b>192,012</b>	<b>102%</b>	<b>\$ 484,090</b>	<b>\$ 359,893</b>	<b>na</b>



# “Wedge” Strategy for Berkeley Buildings



# ***EECBG Rebates for Deep Savings***

- **Residential**
  - **Rebates for HERS II Ratings**
  - **Rebates for Improvements to HERS II score**
- **Multifamily/Non Residential**
  - **Rebates for Audits**
  - **Mini grants for improvements**
- **Needs**
  - **Market Analysis**



# *Property Based Financing*

- **Pilot for PV only**
  - *KISS principle*
- **Test of Mechanism**
- **Close rates are low**
  - *Limited slots*
  - *Low entry barrier*
  - *No wait list*
- **Needs**
  - *Regional expansion*



# Municipal Buildings

- **Benchmarking with EPA Portfolio Manager**
- **Retrofits**
  - **Recommissioning**
  - **Building Performance**
- **New Construction**
  - **Animal Shelter**
  - **Library Master Plan**
- **Needs**
  - **LED Streetlights**





## FREE SOLAR ADVICE

VISIT OUR WEBSITE  
EMAIL OR CALL

[www.ebenenergy.org/smartsolar](http://www.ebenenergy.org/smartsolar)

[smartsolar@ebenenergy.org](mailto:smartsolar@ebenenergy.org)

(510) 981-7750

CESC  
1013 Pardee Street  
Berkeley CA 94710

# SmartSolar

Helping you achieve your solar potential

- Want to lower your utility bill and reduce your greenhouse gas emissions?
- Unsure of the solar potential of your home or business?
- Want help from an independent 3rd party before you negotiate your solar contract?

SmartSolar is a free, independent service for Berkeley residents and businesses. We can help you pursue the best solar solution for your home or business through energy education and site-specific project advice.

In partnership with:



SmartSolar is operated by Community Energy Services Corporation (CESC) in partnership with the City of Berkeley and the U.S. Department of Energy's Solar America Cities Initiative. CESC is a 501(c)(3) non-profit organization dedicated to building sustainable communities in the greater Bay Area through innovative and hands-on energy and building improvement.



# East Bay Energy Watch

## ➤ Programs/Services

- Smart Solar/Smart Lights
- California Youth Energy Services/GETS Moderate income weatherization and training
- Tenant/landlord program
- Marketing through realtors
- Demand response, large commercial
- Portfolio Manager, private buildings
- HVAC retirement

## ➤ Needs

- Strategic Planning and Analysis



# *Enhanced RECO*

- *Point of Sale/Major Renovation*
- *HERS II Rating*
- *Prescriptive Measures*
- *Needs*
  - *Market Analysis*
  - *Evaluation*



## Start at Home:

Berkeley plans to use stimulus funds to help you fix the old energy efficiency programs!

## You're invited to a FREE workshop!



What energy efficiency measures and benefits:

- Save Energy & Money!
- Eliminate Drafts
- Improve Comfort
- Increase Home Value

Start at Home

**Drafty home?**

Fixing drafts can save energy & money and make your home healthy and comfortable!

**Considering Solar?**

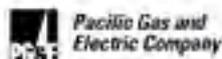
Find out why the experts say **Efficiency FIRST!**

**Come Join Us!**

The City of Berkeley plans to launch new energy efficiency programs for Berkeley homes. Learn about new policies and how you may be eligible for federal stimulus funds. Meet local contractors & energy specialists. **FREE** giveaways and food!

Date:	Time:	Location:
Thursday September 17, 2009	7-8:30 pm	St. Paul African Methodist Episcopal 2024 Ashby Ave. (@ Adeline) 94703
Thursday October 8, 2009	7-8:30 pm	St. Johns Presbyterian Church 2727 College Ave. (@ Forest Ave) 94705
Thursday October 22, 2009	7-8:30 pm	Epworth Unified Methodist Church 1953 Hopkins St. (@ The Alameda) 94707

RSVP: (510) 981-7473 / mschwartz@cityofberkeley.info



THIS WORKSHOP IS SPONSORED BY THE CITY OF BERKELEY. FOR MORE INFORMATION, VISIT THE OFFICE OF ENERGY & SUSTAINABILITY AT [WWW.CITYOFBERKELEY.INFO/ENERGY](http://WWW.CITYOFBERKELEY.INFO/ENERGY)



# Green Building Standards

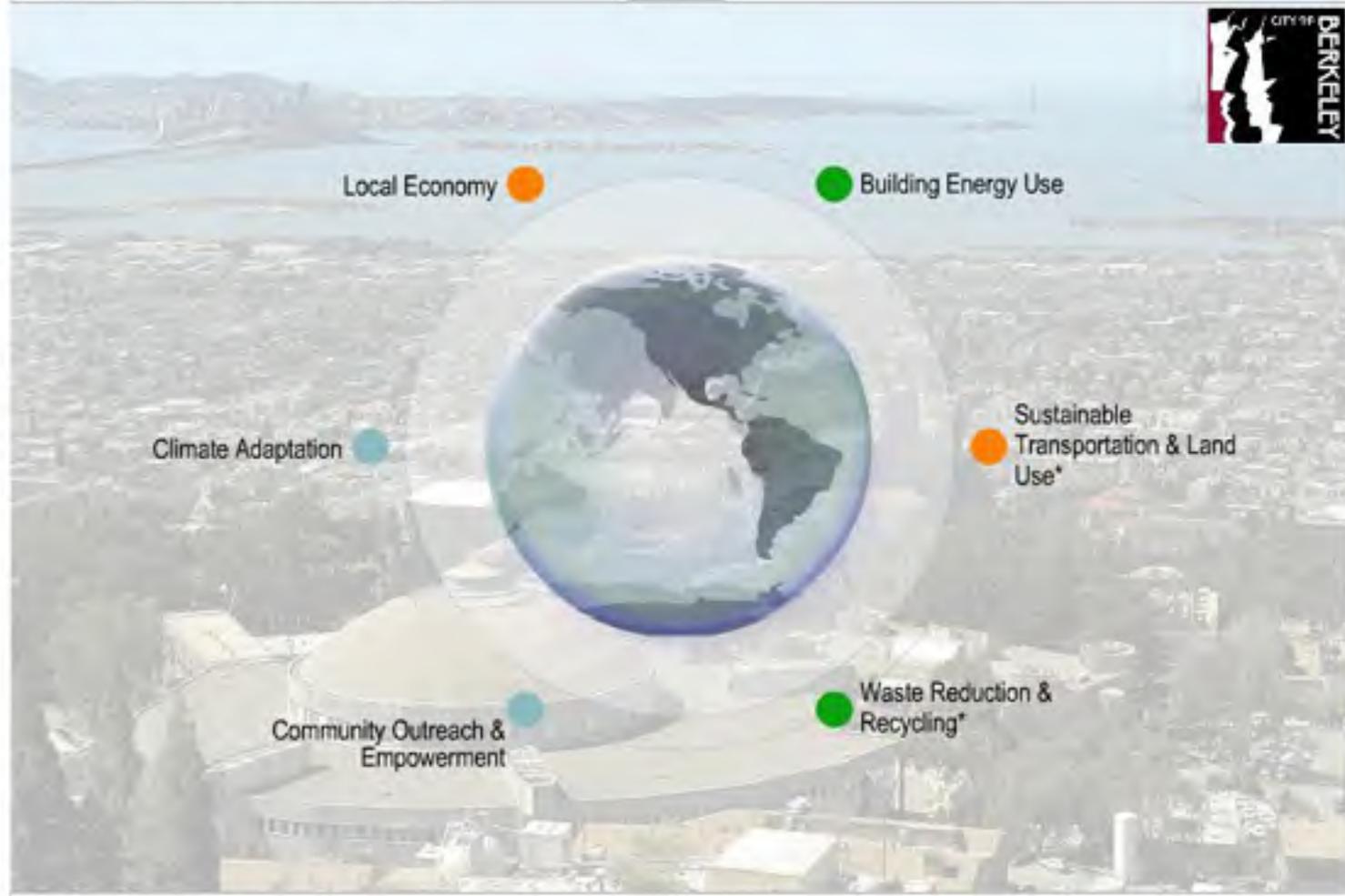
- **Improvements upon Title 24**
- **Needs**
  - **Cost/benefit analysis**
  - **Training**



# Carbon Tax

- **Current tax of 7.5% for natural gas and electricity**
- **Dedicated tax could support Climate Action Plan**
  - **Requires 2/3 voter approval**



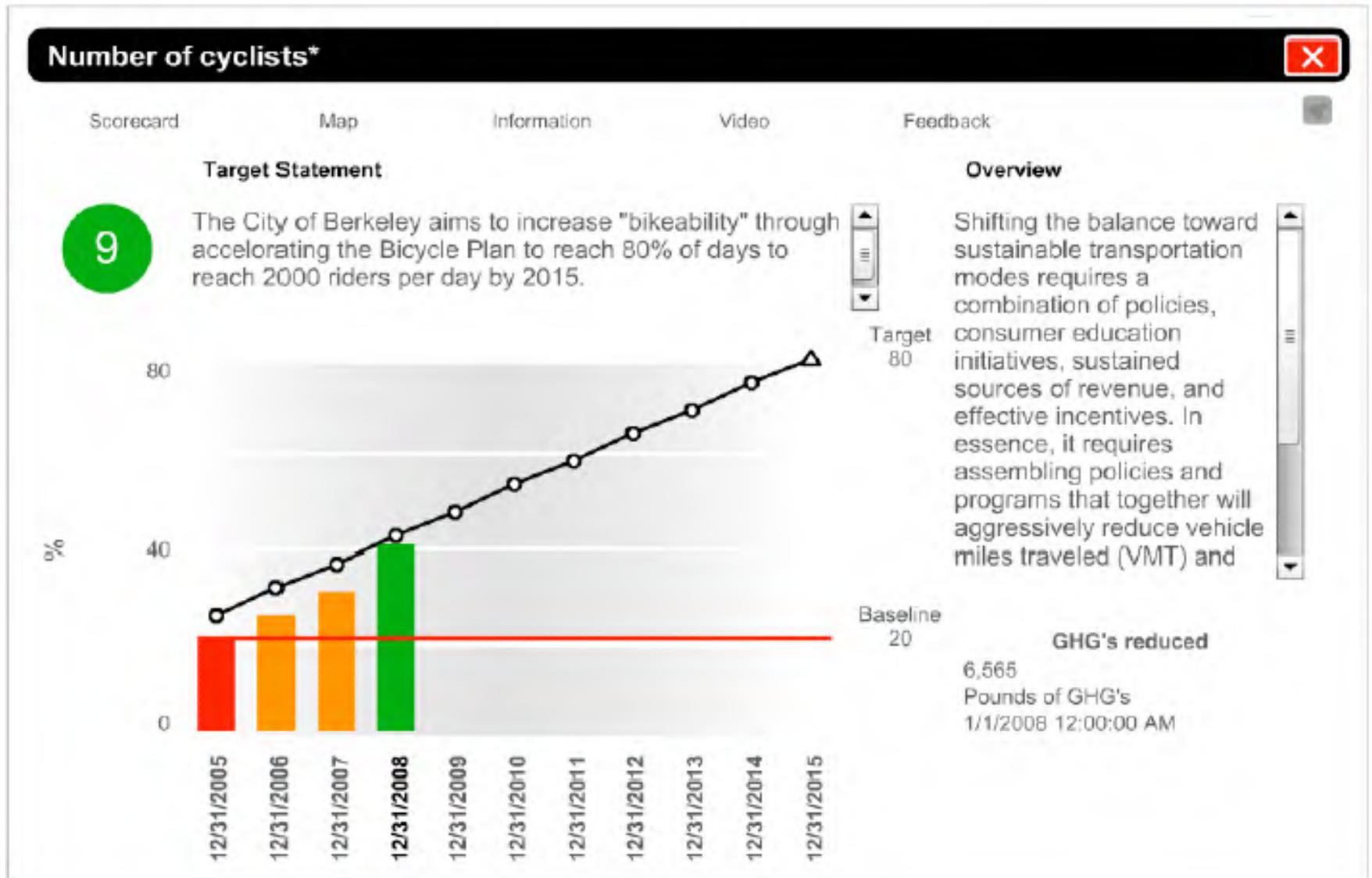


Open Welcome Box

Legend



# Sample Scorecard



# The Laundry List

- Strategic Planning - market analysis, cost/benefit analysis
- Update Commercial Energy Conservation Ordinance
- Establish a revolving loan fund for multi-family properties
- Energy rating on unit vacancy
- Establish green landlord databases
- Require lighting upgrades for all commercial permits
- Advanced metering and monitoring
- Promote commissioning for new and existing buildings
- Explore siting of combined heat and power facilities
- Evaluate green waste digesters
- On bill financing
- Establish energy reduction targets for City departments
- Partner with PG&E to provide personalized energy reports
- Partner with scientists to promote climate awareness
- Assess vulnerability to climate change
- Develop a strategic plan for adaptation



# *Employment Training & Development...*

## Job Training & Local Hiring

**Opportunities include:**

- **East Bay Green Corridor**
- **Green Energy Training Services**

**Develop provisions to  
encourage local hiring**



# City/LBNL Opportunities

- Technical assistance on CAP implementation
  - Strategic planning/evaluation
  - Hand held Home Energy Saver
  - Submetering/advanced metering
  - Education/awareness
  - CECO update
- LBL Transportation Issues



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**City of Berkeley Planning Department**  
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**[ndesnoo@ci.berkeley.ca.us](mailto:ndesnoo@ci.berkeley.ca.us)**  
**[www.cityofberkeley.info/sustainable](http://www.cityofberkeley.info/sustainable)**

