

**California Air Resources Board
Public Workshop**

**Local Government Assistance to
Reduce GHG Emissions:
An Overview of ARB Programs Related to
AB 32 and SB 375**

March 9, 2009
Cal/EPA Headquarters
Coastal Hearing Room
1001 I Street
Sacramento, CA

Agenda

- Climate Change Scoping Plan – AB 32 and Local Government
- SB 375 – Local Participation in Regional Planning
- Local Government Toolkit
- Climate Leadership Recognition Program
- Demonstration of Local Government Toolkit
- Next Steps, Contacts, Adjourn

AB 32 and Local Government

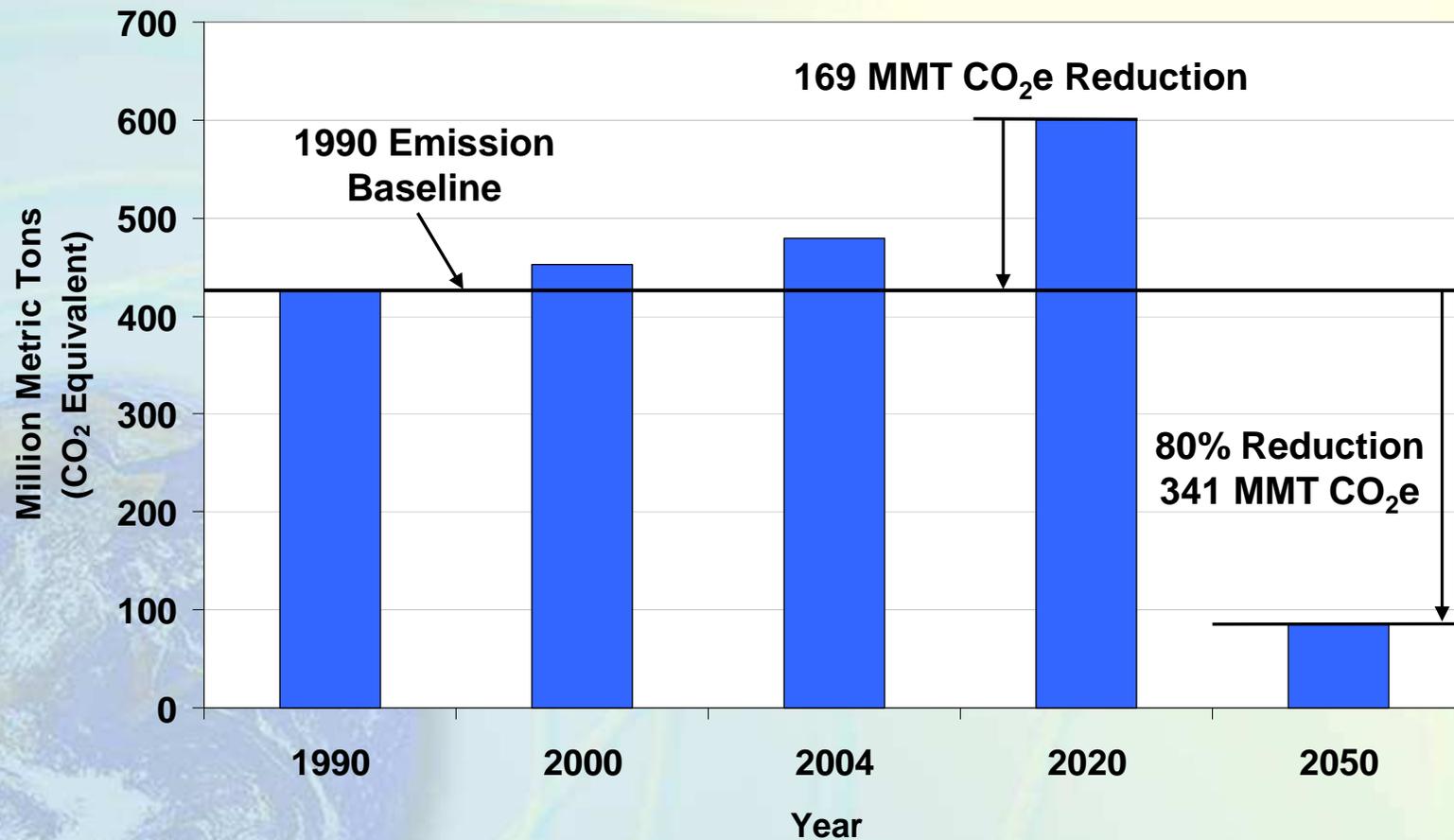
Scoping Plan Implementation and Local Government Role

What is AB 32 and the Scoping Plan?

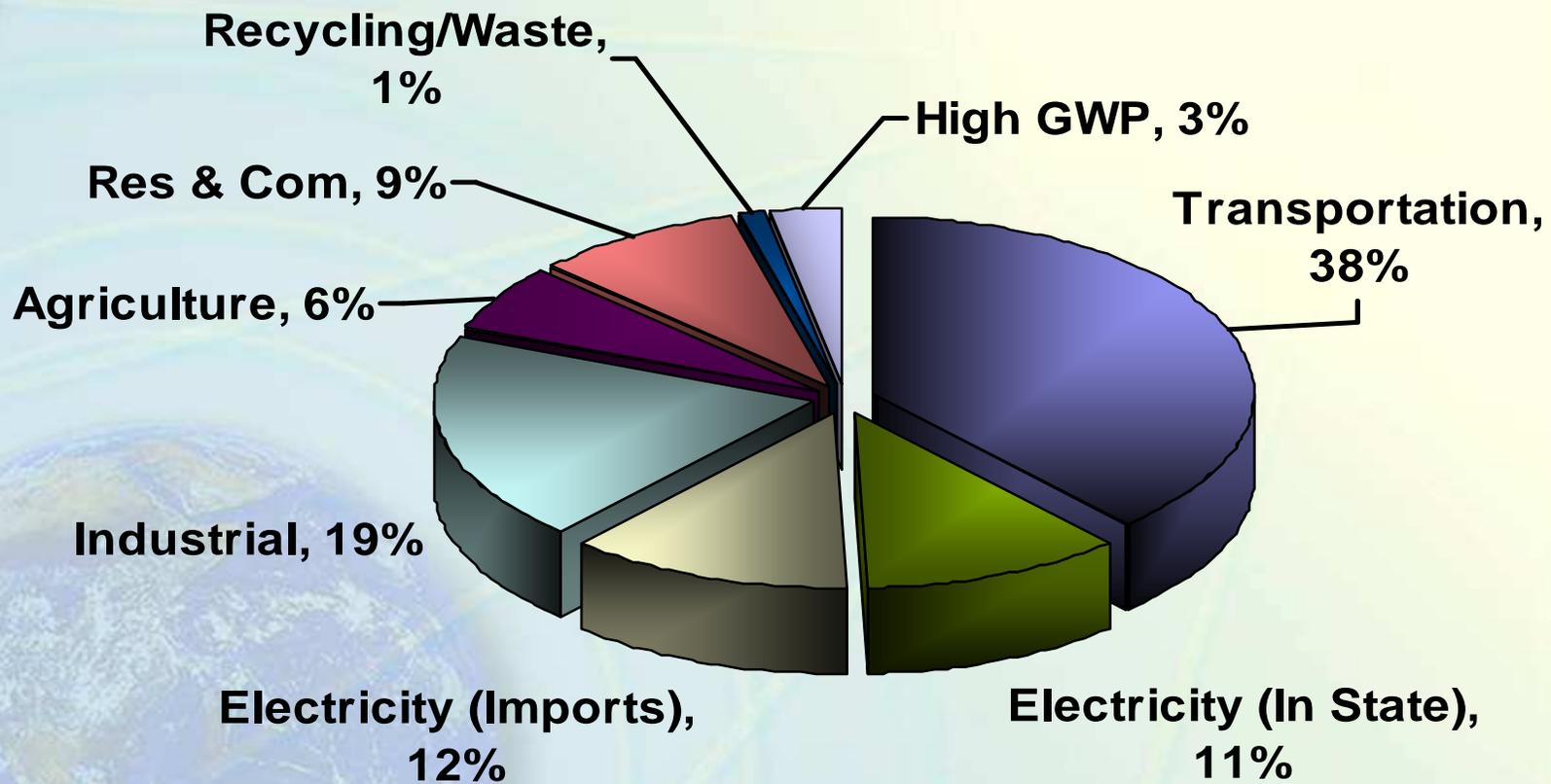
- AB 32 signed by Governor Sept. 27, 2006
- Directed ARB to develop Scoping Plan
- Board adopted Plan Dec. 12, 2008
- Scoping Plan goals:
 - By 2020 reduce GHGs back to 1990 levels
 - On track to reduce 80% from 1990 level by 2050
- Includes mix of strategies that combine market mechanisms, other regulations, voluntary measures, and fees

Magnitude of the Challenge

ARB Emissions Inventory



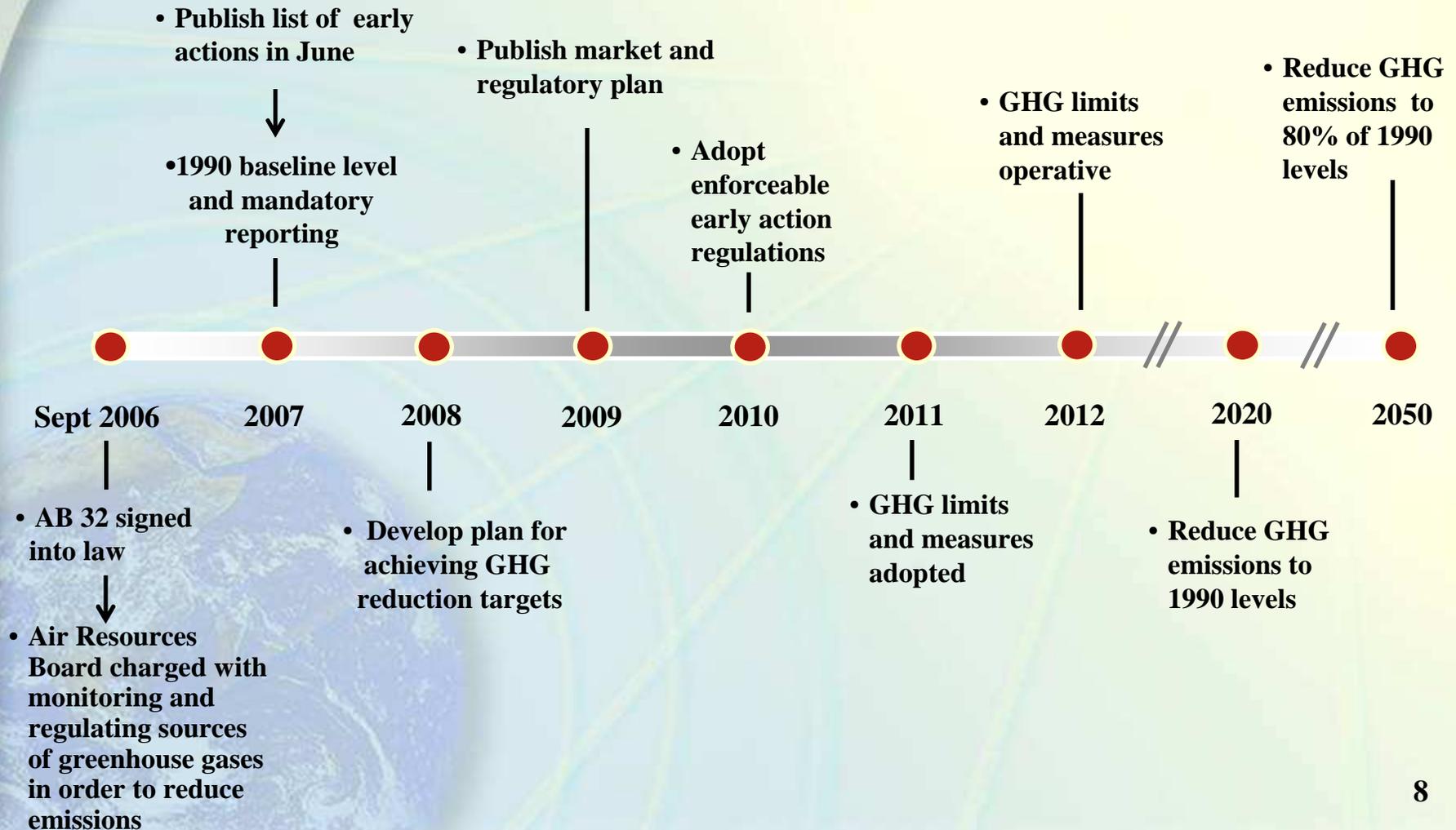
2002-2004 GHG Emissions (469 MMT CO₂e)



What the Scoping Plan Includes

- Broad-based cap & trade program
 - Electricity, industry, transportation fuels, natural gas
- Complementary measures
 - Energy efficiency programs
 - Renewable energy
 - Vehicle emission and fuel standards (Pavley, LCFS)
 - Targets for transportation-related emissions
 - High global warming potential measures
 - Targeted fees

Overview of AB 32 California Global Warming Solutions Act



Actions Adopted To Date

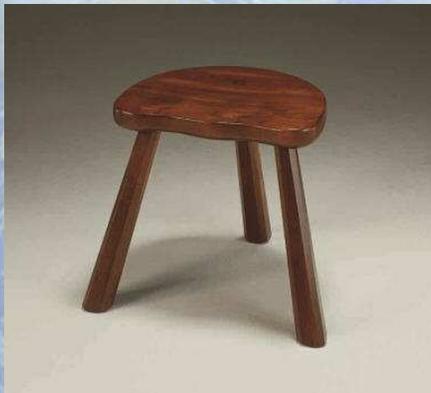
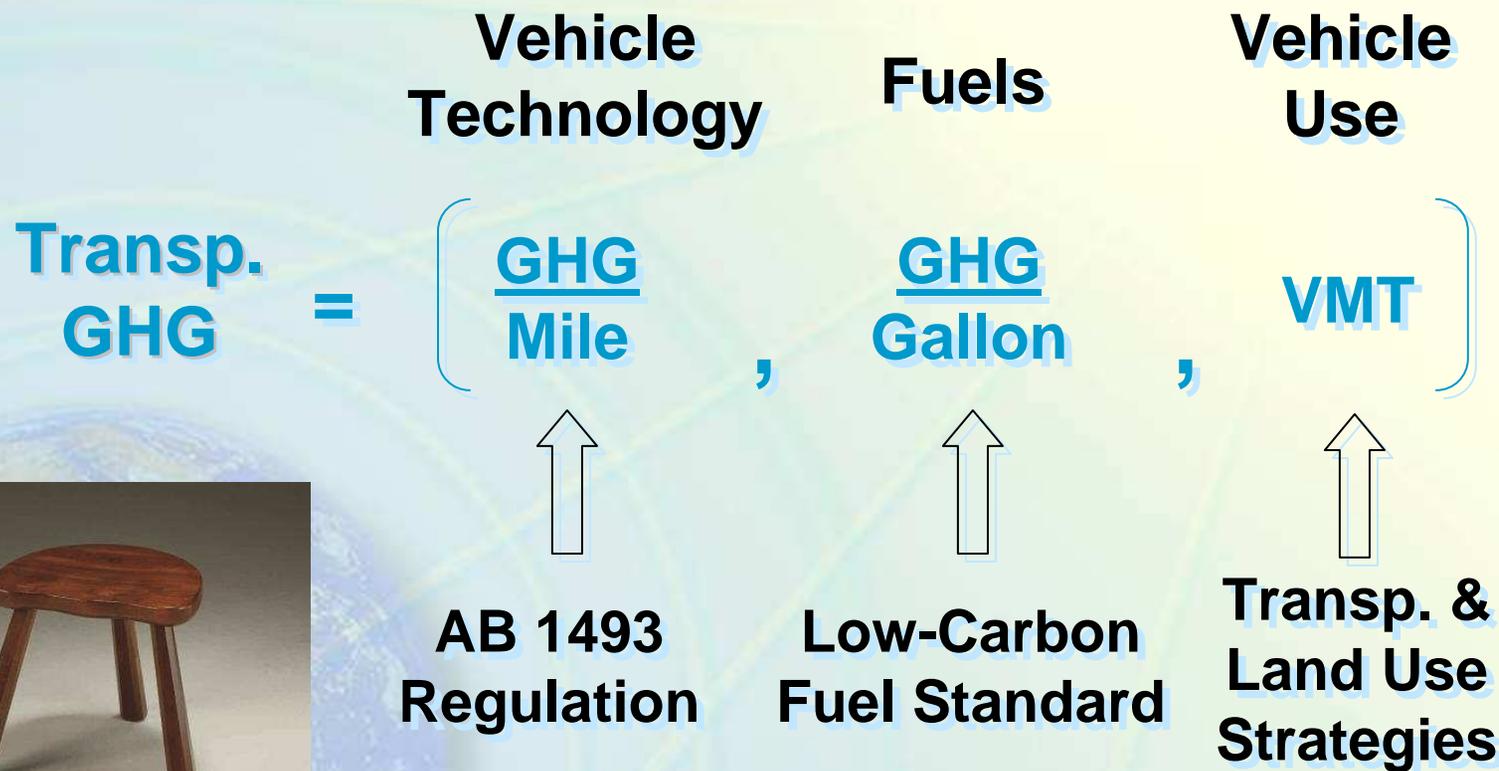
- Pavley AB 1493 automobile rule: Sept. 04
- Ship electrification in ports: Dec. 07
- Port and rail yard cargo trucks: Dec. 07
- High GWP in consumer products: June, 08
- Heavy duty truck efficiency: Dec. 08
- Motor vehicle DIY refrigerant cans: Jan. 09
- SB 375 Regional Targets Advisory Committee: Jan. 09
- GHG reduction in semiconductors: Feb. 09
- Sulfur hexafluoride emission reductions: Feb. 09

Transportation is #1 Contributor

Cars, Trucks, Goods Movement and Fuel

- Light-duty vehicle greenhouse gas reductions (Pavley I and Pavley II)
- Low carbon fuel standard
- Efficiency measures for cars
- Aerodynamic improvements for big-rig trucks
- Hybridization for urban and short-haul trucks
- Implement adopted goods movement strategies and improve efficiency
- High speed rail

Transportation GHG



Energy is #2 Contributor

Electricity and Natural Gas

- Cutting energy use saves money while creating fewer GHG emissions
- Plan includes aggressive energy efficiency goals and increases renewable energy
- Meeting the goals in the Scoping Plan will require
 - Expanded utility-based energy efficiency programs
 - More stringent building and appliance standards
 - Green buildings and waste reduction
 - Innovative strategies that go beyond traditional approaches
- Plan relies on expanded efforts by the CEC and CPUC

Plan's Major Sectors

- Transportation
- Electricity & Natural Gas
- Industry
- Water, Forests, Agriculture
- Green Buildings, Waste & Recycling
- High GWP Gases
- State Government, Local Gov't. & Land Use

Important Role of Local Government

- Achieving the goals of AB32 will require a strong partnership between State, Regional and Local governments.
- Local governments have led the way on climate policy.
- Local government decisions have significant direct and indirect impact on greenhouse gas emissions.

Main Areas of Scoping Plan Affecting Local Government

- **Regional Transportation-related Greenhouse Gas Targets (SB 375)**
- **Local Government GHG Reduction Actions**
 - Encourage LG to set reduction goals consistent with State's goals
 - Will provide significant emission reduction

What Scoping Plan Measures Intersect with Local Government?

- Energy Efficiency
- Renewable Energy
- Green Buildings
- Recycling and Waste
- Water
- Transportation
- Vehicle Efficiency
- High GWP Gases
- Sustainable Forests
- Community Design

(See handout)

Presentations Up Next:

- SB 375 – Regional Transportation-Related GHG Reduction Targets
- Proposed Local Gov't Toolkit
- GHG Emissions Inventory Methods



Questions and Answers (Q&A)

Senate Bill 375

Local Participation in Regional Planning Efforts

SB 375 – Basics

- Regional greenhouse gas targets
- Regional plans to meet targets
- Regional housing needs assessment (RHNA)
- Environmental document streamlining

Regional Targets

- Regional Targets Advisory Committee
- Passenger vehicles and light duty trucks -- 2020 and 2035
- Targets established for 18 MPOs
- Extensive stakeholder input
- Final targets set by Sept. 30, 2010
- SB 375 targets replace statewide estimate in Scoping Plan

Regional Planning

- MPOs must devise a plan that meets the regional targets
 - Sustainable Communities Strategy (SCS)
 - Alternative Planning Strategy (APS)
- Key components of SCS include identifying building densities, housing/jobs balance, forecasted development patterns

SB 375 Incentives

- 'Transit Priority Projects' get relief from certain environmental review requirements if consistent with plans that meet targets
 - Minimum 50% residential use
 - Minimum density of 20 dwellings units per acre
 - ½ mile from major transit stop
- Other projects can get CEQA relief from growth inducing impacts or cumulative GHG impacts from car or light truck trips generated by projects

Local Government Participation

- Success of SB 375 ultimately relies on local governments
- Local decisions are key to regional strategy to reduce greenhouse gases
- Cities and regions are diverse--work within context of regional efforts
- Collaborate/partner with Metropolitan Planning Organizations

Opportunities for Local Government

- SB 375 streamlines environmental review for good projects
- Provides framework to support visionary planning efforts (regional blueprints, climate action plans, smart growth policies)
- Preserves open space, agricultural lands, supports mobility options (including bicycling/pedestrians/public transit)
- Integrated planning improves quality of life

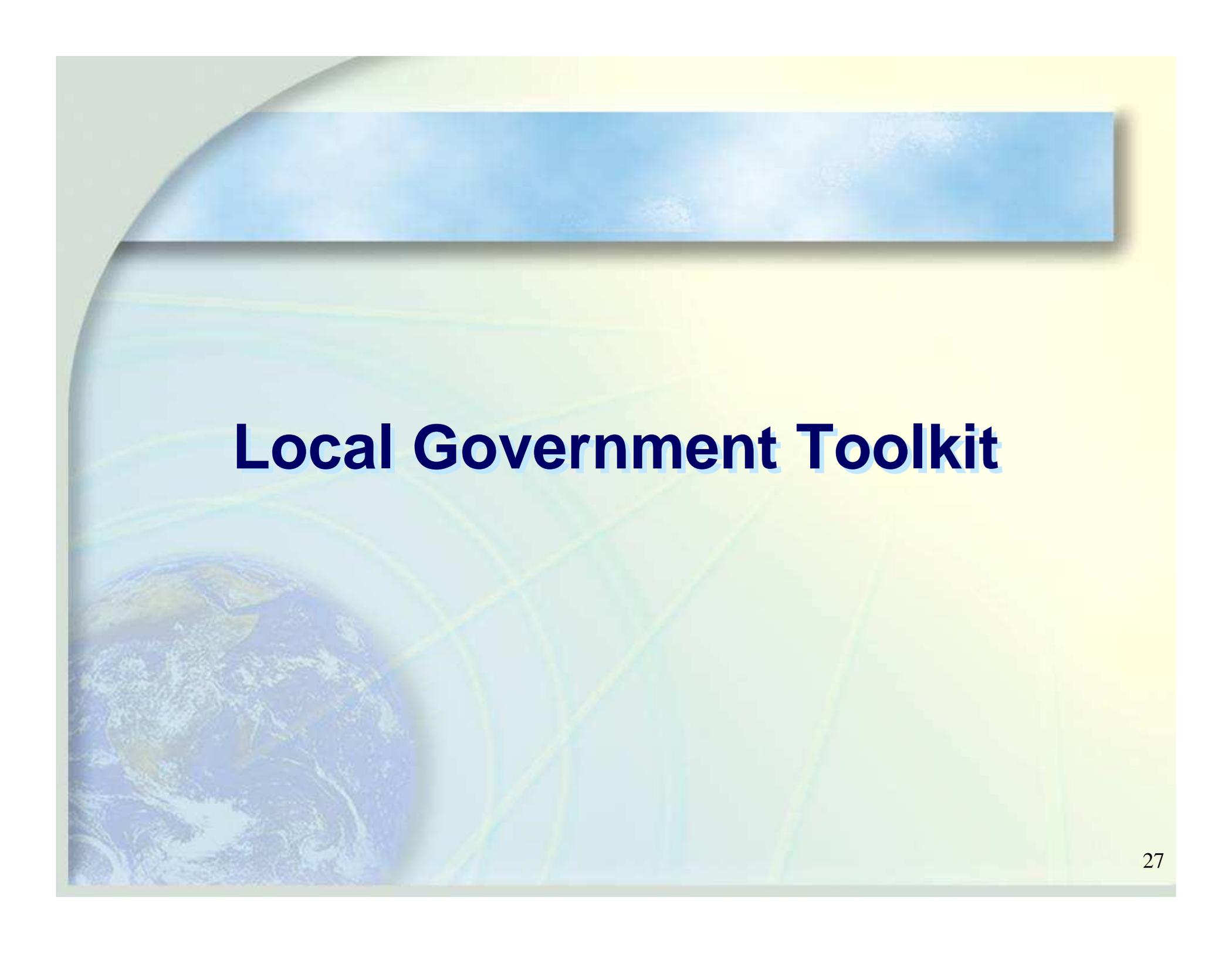
SB 375 Resources

Website:

www.arb.ca.gov/cc/sb375/sb375.htm

- Program implementation
- Regional Target Advisory Committee (RTAC)
- Listserve
- On-line Comments

Phone: (916) 322-0285

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Local Government Toolkit

Local Government Action Climate Leadership

- ARB encourages local goals be consistent with State's goal to reduce GHG emissions by 15% below today's levels by 2020.
- State, Regional, Local, and Individual Effort
- ARB is Building a
“Local Government Toolkit”
 - Listed as an Early Action
 - Consistent with Policy Statement
 - Assist Local Governments with GHG Emission Reductions



DRAFT Toolkit will be Available at <http://Beta.CoolCalifornia.org>

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What tools do we offer?

- Cost-saving Actions to Reduce Global Warming
- California Case Studies
- Financial Resources
- Climate Award Programs
- Peer-Networking Opportunities

BE PART OF THE GLOBAL WARMING SOLUTION

REDUCE YOUR CLIMATE IMPACT!

Join millions of Californians already working to solve **Global Warming** and keep California Cool.

About CoolCalifornia.org:
Our mission is to provide all Californians with the tools they need to voluntarily reduce global warming pollution. [More about us](#)

HIGHLIGHTS

- What is Global Warming?
- How will California's climate law affect me?
- Nulla dui purus, eleifend vel, consequat non, dictum porta.

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Climate Action Planning

GHG Emission Reductions

- Lead By Example in Municipal Operations
- Set Policy for Community Action
- Conduct a Baseline GHG Inventory
- Establish a GHG Reduction Target
- Develop a Climate Action Plan
- Implement Policies and Measures
- Monitor and Track GHG Emission Reductions
- Challenge Residents and Businesses

Toolkit Components

Local Government Toolkit

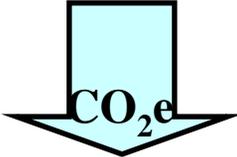
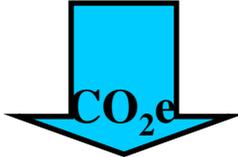
- Cost-Saving Strategies
- Financial Resources
- California Case Studies
- GHG Inventory Methodologies
- Climate Calculators
- Decision Support Tool
- Peer-Networking Online Discussion Forum
- Award Program



Cost-Saving Strategies Toolkit Component

- Energy Efficiency and Conservation
- Green Transportation
- Renewable Energy
- Water Efficiency
- Waste Reduction and Recycling
- Environmentally Preferable Purchasing
- Green Building
- Promoting Individual and Community Action

Cost-Saving Strategies Checklist Prioritization

Upfront Investment	Annual Cost Savings	GHG Reduction Potential
No-to-Low Cost		
Medium Cost		
High Cost		

Financial Resources Toolkit Component

- Organized by Cost-Saving Strategy
- Up-to-date Summary of Available Resources
 - Grants
 - Rebate Programs
 - Federal Tax Incentives
 - Loans
 - Third Party Financing
- Links to More Information



California Case Studies Toolkit Component

- 2-Page Overview with Pictures and Quotes
- Highlight GHG Reductions Achieved
- Climate Action Plan Summary
- Initial Investment/Annual Cost Savings
- Lessons Learned
- Contact Information
- Video Testimonials



GHG Inventory Methodologies

Toolkit Component

- Local Government Operations Protocol
 - Methodologies to Calculate GHG Emission Inventory
 - Guidance for Municipal Operations
 - Approved by ARB, CCAR, and ICLEI Boards
 - Available Online:
 - www.arb.ca.gov/cc/protocols/localgov/localgov.htm
- Community-Scale GHG Emissions Inventory Methods
 - Public Workshop Anticipated April, 2009
 - Focus on Non-Transportation Inventory
 - Coordinate Transportation Methods Through SB 375 Process

Climate Calculators Toolkit Component

- Assist Local Governments with Calculating GHG Emissions Inventory
- Showcase Calculators Consistent with Local Government Operations Protocol
- Feature Comprehensive Calculators
 - Clean Air and Climate Protection Software
 - ICLEI (Local Governments for Sustainability)
 - Climate Registry Information System (CRIS)
 - The Climate Registry
- Highlight Sector-Specific GHG Calculators
 - GreenPoint Rated Climate Calculator
 - Build It Green

Decision Support Tool Toolkit Component

- Climate and Air Pollution Planning Assistant (CAPPA)
- Under Development by ICLEI
- Primary Decision Support Tool for Local Governments
- Tool Provides Assistance to Develop Customized Plans
- Comprehensive Library of Emission Reduction Strategies
- Estimates GHG Emission Reductions, Local Air Pollution Benefits, and Cost Savings

Recognition Program Toolkit Component

- Partnering with the ILG California Climate Action Network (CCAN)
- Climate Leadership Recognition Program
- Recognize Achievements of Cities and Counties
- Based on Measurable GHG and Energy Reductions



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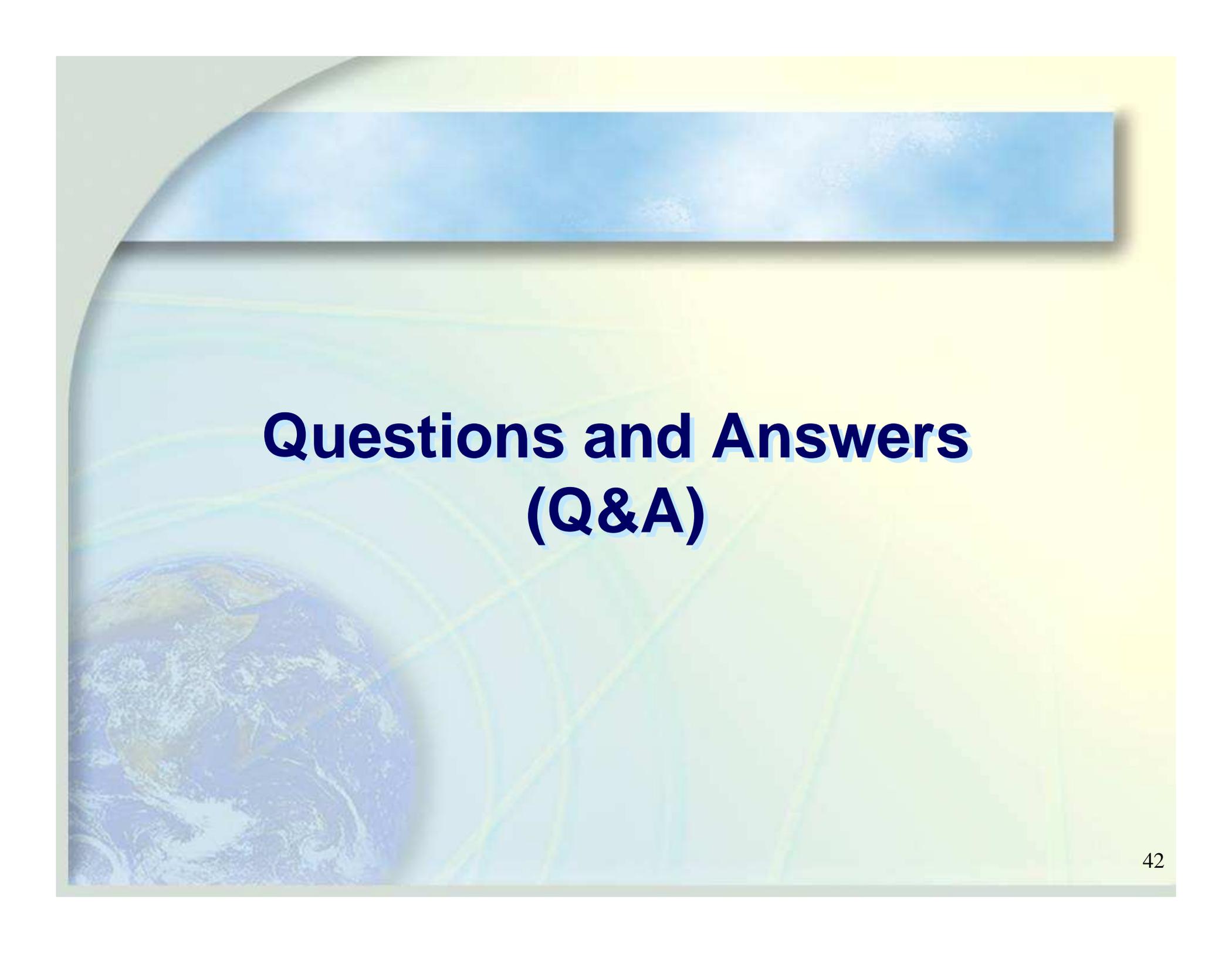
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Tentative Timeline

Local Government Toolkit

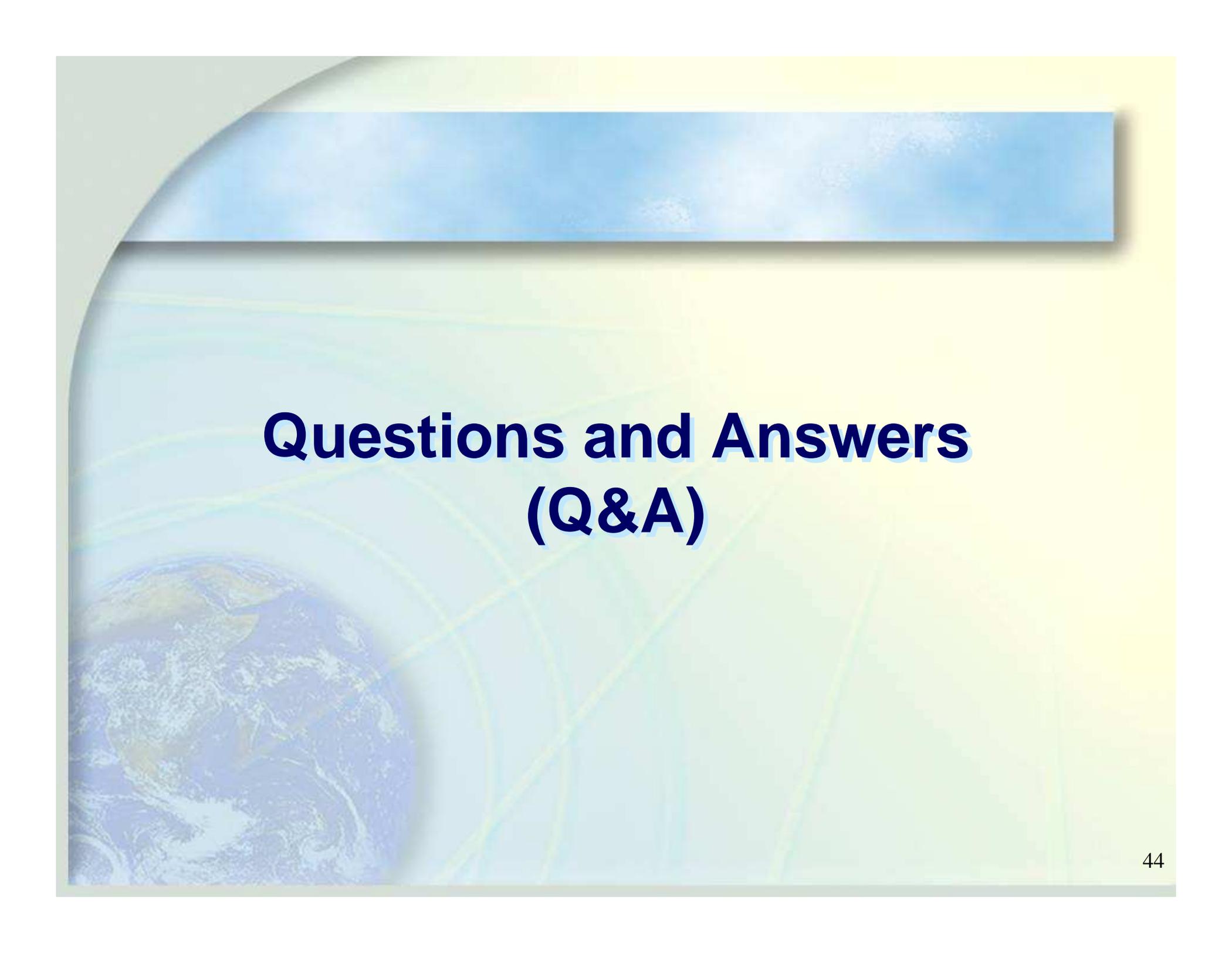
Toolkit Content Development	Ongoing
ARB Internal Review of Toolkit Content	Ongoing
Kick-Off Public Workshop	March 9, 2008
Release Beta Toolkit for Public Comment	March 9, 2009
Advisory Group Meeting	March 25, 2008
Public Workshops (Nor Cal and So Cal)	Early April, 2009
Advisory Group Meeting	Mid-April, 2009
Finalize Toolkit Content	May, 2009
Board Hearing	May 28-29, 2009



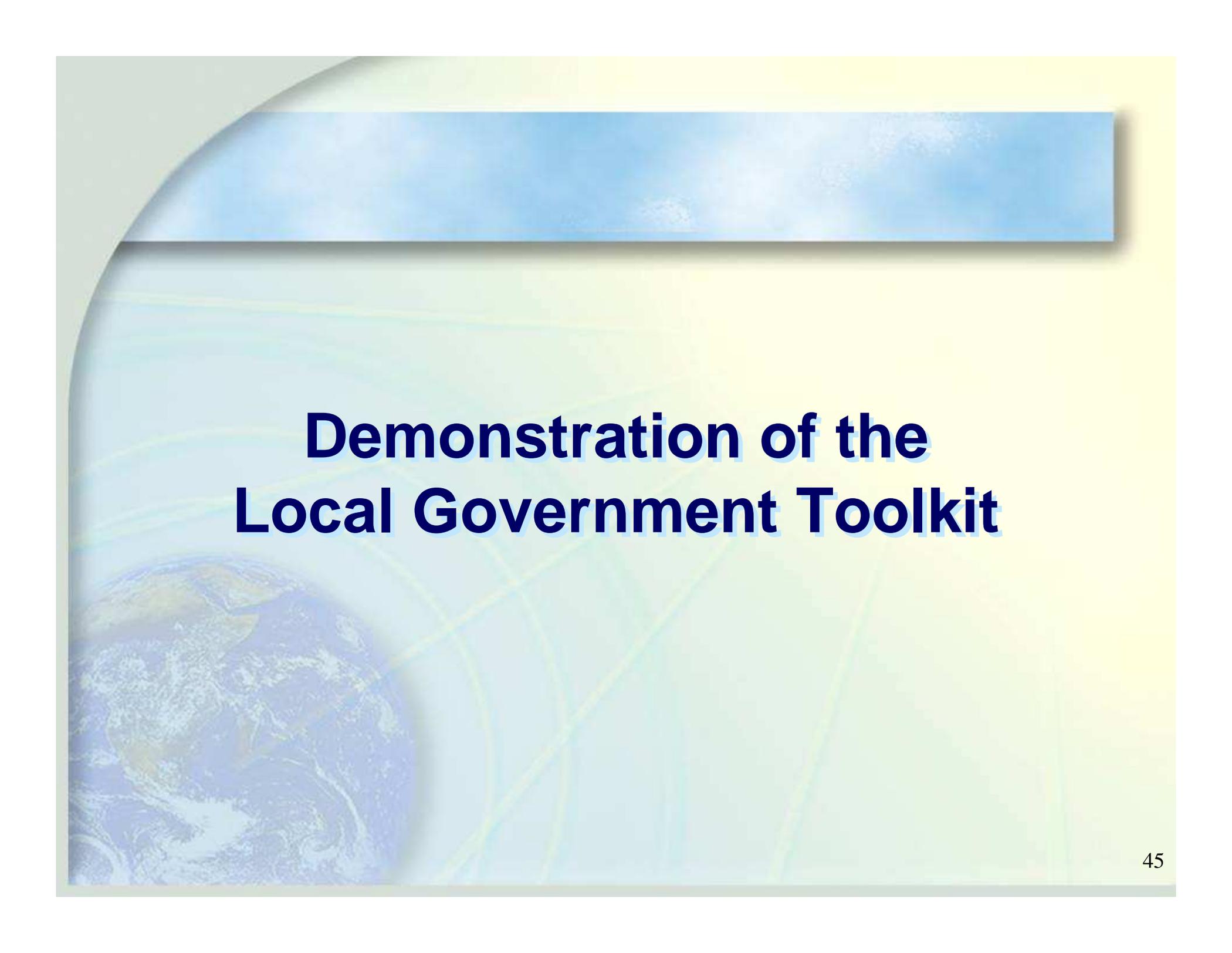
Questions and Answers (Q&A)

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Climate Leadership Recognition Program



Questions and Answers (Q&A)

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Demonstration of the Local Government Toolkit

Climate Action Local Government Toolkit

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Local Government Toolkit

A "one-stop-shop" of guidance and resources to help local governments reduce greenhouse gas emissions and save money.

Local governments can contribute significantly to California's efforts to reduce greenhouse gas (GHG) emissions. Many cities and counties are already taking action to be part of the solution to address climate change. The purpose of this Local Government Toolkit is to identify cost saving actions, financial resources, and case studies to assist local governments with achieving GHG emission reductions. Read on to learn how your local jurisdiction can be part of the solution!

Highlights

- Local Government 1
- Local Government 2
- Local Government 3
- Local Government 4

Cost-Saving Strategies

Demonstration of Toolkit Components

- Highlight Examples of Guidance and Resources
 - Tools
 - Technical Assistance
 - Financing Opportunities
 - Case Studies
- Focus on Five Action Areas
 - Energy Efficiency and Conservation
 - Green Transportation
 - Renewable Energy
 - Water Efficiency
 - Green Building

Energy Efficiency and Conservation Local Government Toolkit

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ENERGY EFFICIENCY & CONSERVATION

Nearly half of the greenhouse gas (GHG) emissions within cities and counties may be attributed to electricity and natural gas consumption in buildings. This estimate is double statewide GHG emissions where buildings represent 22% of overall emissions. However, for California cities and counties that have conducted community-scale GHG inventories where building-related emissions represent nearly half of overall emissions, energy efficiency and conservation becomes increasingly important to help local governments to reduce GHG emissions. Energy efficiency can be achieved as part of the design and construction of new buildings as well as retrofits to existing buildings. Additional energy savings can be achieved in local government infrastructure by installing energy efficient outdoor lighting such as traffic signals and street lights.

Plan a Comprehensive Energy Management Program

- [Appoint an Energy Manager](#)

By appointing an energy manager, local governments identify a lead staff person responsible for developing and implementing a comprehensive energy management program. An energy manager is in charge of planning, procurement and utilization of energy resources at a property, facility, or portfolio of properties. Energy managers often recommend policy for energy efficiency and conservation, develop long-range plans, and provide reports on the effectiveness of the energy program.

- [Adopt an Energy Policy](#)



Assess Energy Performance

Energy Efficiency and Conservation

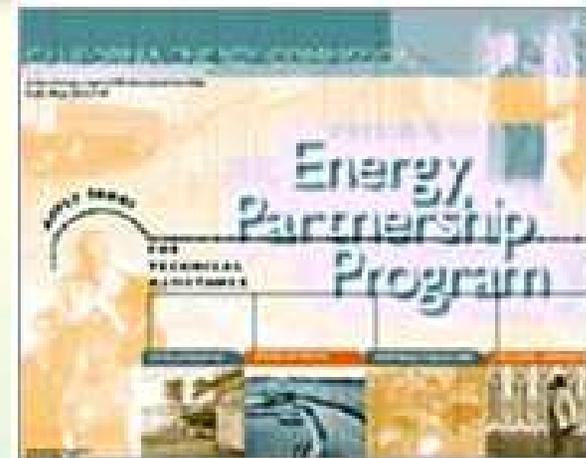
- Measure and Track Energy Usage
 - Energy Star Portfolio Manager
 - Contact Utility to Upload Energy Consumption Data
 - Verify and Track Progress of Improvement Projects
- Benchmark Municipal Facilities
 - EnergyIQ: Action-Oriented Energy Benchmarking Tool
 - Generates List of Opportunities for Efficiency Upgrades
 - Recommendations to Save Energy, Money, and GHG Emissions



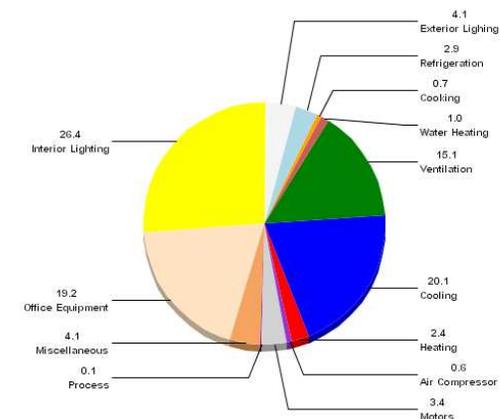
Assess Energy Performance

Energy Efficiency and Conservation

- Conduct Energy Audits of Municipal Facilities
 - CEC's Energy Partnership Program
 - Technical Assistance Available to Retrofit Facilities
 - Financing Up to \$20,000 Available
- Retrofit Existing Buildings
 - Interior Lighting Retrofits
 - Main Focus for Office Buildings
 - Represents 26% of End-Use Energy Demand (CEUS)



Electric End-use Energy Distribution



City of Berkeley Case Study

Municipal Building Energy Efficiency

- Conducted energy audits and retrofit city buildings
- Reduced 2.1 million kilowatt hours of electricity and 37,520 therms of heat
- Saving the city \$370,000 annually and 1,200 tons CO₂e/year



City of Tracy Case Study

Municipal Building Energy Efficiency

- Replaced incandescent lighting with compact fluorescent bulbs in several buildings
- Reduced 192,000 kilowatt hours of electricity
- Saving the city \$32,000 annually and 80 tons CO₂e/year



Green Transportation Local Government Toolkit

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GREEN TRANSPORTATION

Nearly 40% of statewide greenhouse gas emissions are generated from the transportation sector. These emissions can be reduced as local governments implement green transportation policies into municipal operations and establish targets for community level action.

Fleet Maintenance, Operation and Management

• Properly Maintain your Vehicle Fleet

Basic vehicle maintenance including checking tire pressure and ensuring proper tire inflation rates can improve fuel efficiency and save money. Proper vehicle maintenance also includes completing annual tune-ups and maintenance checks. By properly maintaining your vehicle fleet, local governments can purchase less fuel and reduce greenhouse gas (GHG) emissions.
www.arb.ca.gov/cc/tire-pressure/tire-pressure.htm

• Train Drivers to Practice "Eco-Driving" Behavior

"Eco-driving" behavior includes "smart, smooth and safe driving techniques that lead to average fuel savings of 5-10%." It can help to reduce fuel consumption, GHG emissions, and prevent accidents.
www.ecodrive.org/What-is-ecodriving.228.0.html

• Eliminate Excess Vehicles

By eliminating excess vehicles, cities and counties can achieve cost savings due to fewer vehicles in

Greening Fleets

Green Transportation

- Adopt a Green Fleet Policy
 - Greener Vehicles
 - Greener Fuels
 - Reduced Vehicle Miles Traveled
 - Vehicle Retrofits: Convert Fleets to Alternative Fuels
 - Buy Greener Vehicles
 - California's Drive Clean Guide
- DRIVECLEAN**.CA.GOV
A GUIDE TO CLEAN AND EFFICIENT VEHICLE TECHNOLOGIES
- Resource to Assist with Purchasing Decisions
 - Small Difference in Fuel Efficiency Can Make a Big Difference in Reducing GHG Emissions

Community Action Green Transportation

- Improve Public Transportation Infrastructure
- Create Bicycle and Pedestrian Friendly Travel Routes
- Financial Assistance Available
 - Community-Based Transportation Planning Grants
 - Caltrans Offers Up to \$300,000 in Grant Assistance to Local Governments
 - Transportation and Land-Use Planning
 - Applications Due April 1, 2009
 - www.dot.ca.gov/hq/tpp/grants.html

Clean and Green LA

Green Transportation Case Study

- Converted city fleets to alternative fuels, saving 10 million gallons of fuel in 2006 or about \$20 million and 100,000 tons of CO₂e annually
- Focusing on mobility for people, not cars
 - “Cops on Bikes”
 - Transit information easily available
 - Expand employee ride share program
 - Promote walking and biking to work



Renewable Energy Local Government Toolkit

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RENEWABLE ENERGY

Electric power generated by the combustion of fossil-fuels is a significant source of California's greenhouse gas (GHG) emissions. California local governments are uniquely positioned to reduce GHG emissions in their communities by increasing renewable energy generation and purchasing green power. Local governments that own and operate municipal utilities can replace fossil-intensive power generation with renewable energy and zero emission generation. Cities and counties can encourage local residents to purchase renewable energy to stimulate increased production of renewable power in the community. Lastly, local governments can increase the amount of on-site power generated in government owned facilities and encourage community members to do the same.

Green Power Purchasing and Generation

• Purchase Green Power

Green power is electricity produced from renewable resources, such as solar, wind, geothermal, biomass, and hydro. Local governments are encouraged to purchase green power from utilities for municipally owned buildings. Buying green power can be an easy and effective way to improve environmental performance.

• Join the US EPA Green Power Partnership

The US EPA Green Power Partnership provides assistance to local governments that are buying or planning to purchase green power. The US EPA offers credible benchmarks for green power purchases, market information, and opportunities for recognition and promotion of leading

Green Power Purchasing Renewable Energy

- Join the US EPA Green Power Partnership
 - Assistance to Local Governments that are Buying or Planning to Purchase Green Power
 - Promotes and Recognizes Green Power Partners
 - Environmental Benefits Analysis
 - www.epa.gov/greenpower



Incentives to Encourage Installations Renewable Energy

- Implement a Financing Incentives for Renewable Technology (FIRST) Program
 - Local Governments Provide Loans for Solar Installations
 - Repaid Through Tax Assessment (AB 811)
 - Berkeley FIRST – Pilot Program
 - CityFIRST Turnkey Solution
 - Renewable Funding Offers Administration and Financing Package

RENEWABLE  FUNDING

Water Efficiency Local Government Toolkit

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WATER EFFICIENCY

"California could save enough energy to power 150,000 homes and slash carbon emissions by a half-million metric tons annually if it made full use of secondary and tertiary recycled water supplies," according to a new study from the California Sustainability Alliance (CSA). Local governments can help to reduce the climate impacts with energy usage to transport and treat potable water by using the most efficient water system equipment and implementing water efficiency conservation & reclamation programs to use recycled water for landscaping or other non-potable uses.

Planning a Comprehensive Water Efficiency Program

• Appoint a Water Efficiency Coordinator

A water efficiency coordinator is essential in implementing all aspects of your city/county water efficiency program. Depending on the scope of the water efficiency program, the coordinator may also assemble a water conservation team. Local government officials must give this team the responsibility and authority to research, design and implement the water efficiency program.

Water Efficiency Retrofits

• Install Water Efficient Devices in Municipal Buildings

Local governments can replace plumbing fixtures and appliances with water efficient models. Cities and counties can offset the cost to purchase water efficient equipment by applying for water efficient

Water Efficiency Retrofits

Water Efficiency

- Use WATERGY Software to Estimate Water, Energy, and Cost Savings
 - Software Analyzes Potential Water and Energy Savings of Installing Water Efficient Devices
 - Estimates Total Cost and Payback Times
 - Assist with Decision Making and Prioritizing Retrofits
- Install Water Efficient Devices in Municipal Buildings
 - Bathrooms: High Efficiency Toilets and Faucets
 - Kitchens: Aerators or Laminar Flow Devices in Faucets

Water Efficiency Retrofits

Water Efficiency

- Financial Assistance Available
 - Smart Rebates Program
 - Administered by the California Urban Water Conservation Council
 - Offers Water Efficient Appliance Rebates
 - \$200 for High Efficiency Toilets
 - Available on a First-Come, First Serve Basis
 - Customers of Participating Water Utilities May Qualify



Town of Windsor Water Reuse Case Study

- Irrigating 400 Acres of Vineyards, Golf Course, Parks, Pasture, and Fodder Croplands with Recycled Water
- Saving the Town 275 million gallons of Drinking Water Per Year
- Estimated 1,000 tons of CO₂e Avoided Annually



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GREEN BUILDING

Buildings contribute significantly to the greenhouse gas (GHG) emissions that cause climate change. Nearly one quarter of California's annual GHG emissions can be attributed to buildings. Significant GHG emission reductions can be achieved through the design and construction of new green buildings as well as the sustainable operation and renovation of existing buildings.

Green buildings are energy, water, and material efficient structures constructed with low-emitting products that contribute to healthy indoor air quality. Sustainably-sited green buildings encourage alternative transportation, installation of environmentally preferable building materials, and construction and demolition waste recycling. Also known as high performance buildings, green buildings that incorporate proper daylighting and adequate ventilation result in increased productivity for building occupants, reduced operating costs, and minimized impacts to the environment. Below is a list of green building climate actions that local governments can take to achieve measurable GHG savings.

Establish a Green Building Program

- [Create a Taskforce to Recommend a Green Building Policy](#)

A Green Building Task Force can be convened to provide guidance on appropriate policy mechanisms that can be employed in both agency and community buildings to achieve GHG reduction goals. This task force can be appointed by the city council and include a variety of stakeholders with a range of perspectives on environmental and policy issues.

- [Develop and Implement a Green Building Program](#)

Policy for Community Action Green Building

- **Adopt a Green Building Ordinance**
 - Establish Green Building Requirements for New Construction and Existing Buildings
- **Adopt Green Building Codes and Standards**
 - California Building Standards Commission Adopted Green Building Standards Code
 - Includes Voluntary “Reach” Standards
 - Model Code Language Locals Can Adopt in Building Codes
- **Encourage Green Development in Master Planned Communities**
 - Federal Tax Incentives for Green Communities
 - \$800 million Available to Assist State and Local Gov’t

City and County of San Francisco Green Building Case Study

- Passed a Local Green Building Code, which requires:
 - LEED Silver Certification for Municipal, Commercial and High Rise Residential
 - GreenPoint Rated for Low-rise Residential
- 60,000 tons CO₂e Reduced Annually



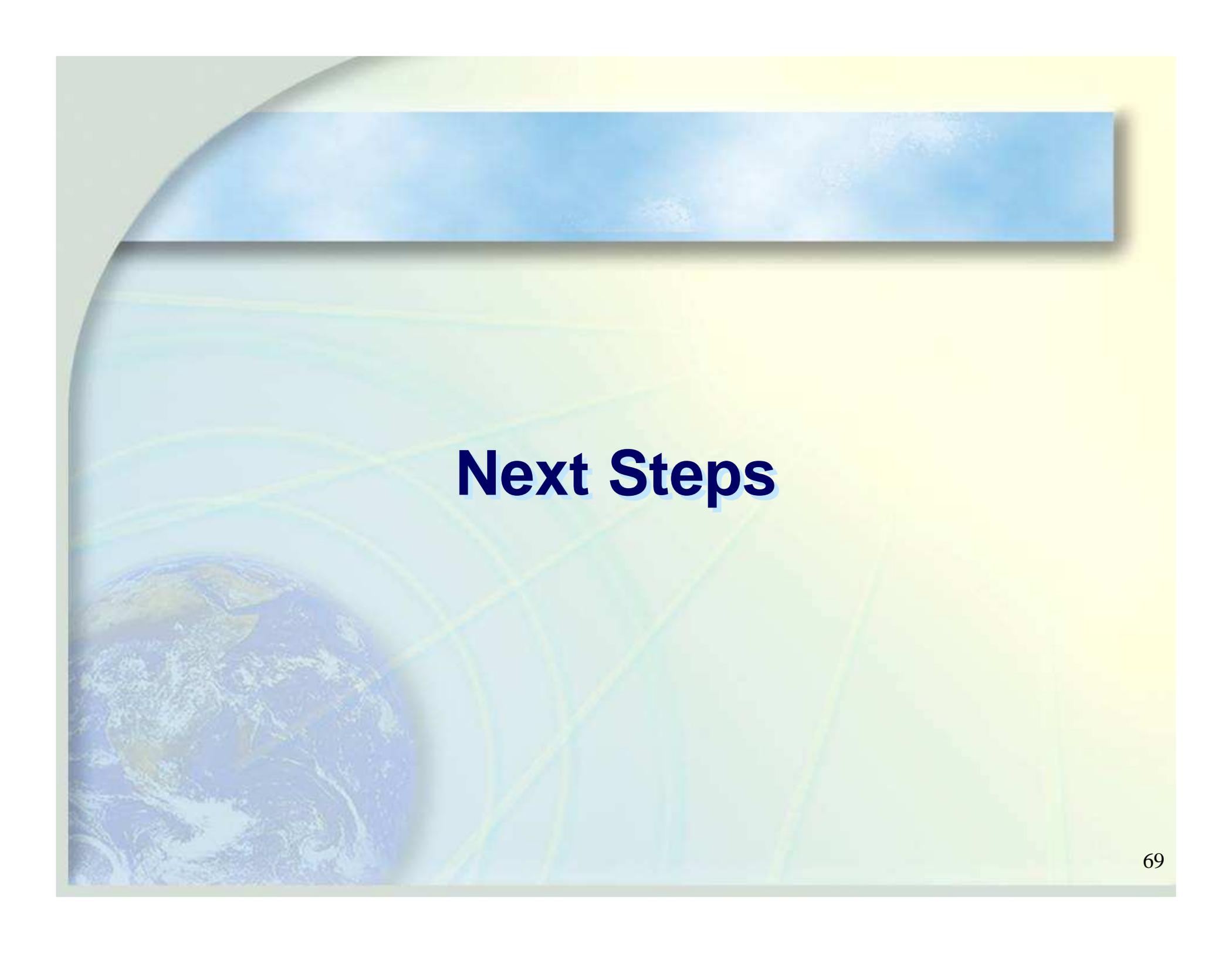
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Key Questions and Comments

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Local Government Toolkit

- What additional Toolkit components should be included?
- Are there other tools ARB can develop to assist local governments to reduce GHG emissions?
- What are the current barriers that prevent implementation of cost-saving actions to reduce GHG emissions?
- What can ARB do further to assist local governments?
- What strategies should be employed to promote Toolkit use?

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Next Steps

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- Contact ARB To Participate on the Advisory Group
- Review the Draft Local Government Toolkit
 - www.Beta.CoolCalifornia.org
- Submit Comments and Feedback
 - General Workshop and Local Government Toolkit Comments
 - www.arb.ca.gov/cc/localaction/comments.htm
 - SB 375 Implementation
 - www.arb.ca.gov/cc/sb375/comments.htm

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