

# California's Climate Change Tsunami



Presented by  
Steven L. Hoch  
RMLUI  
March 6, 2009

Always There™

## Global Warming Solutions Act of 2006



September 27, 2006

"Some have challenged whether AB 32 is good for businesses. I say unquestionably it is good for businesses. Not only large, well-established businesses, but small businesses that will harness their entrepreneurial spirit to help us achieve our climate goals."

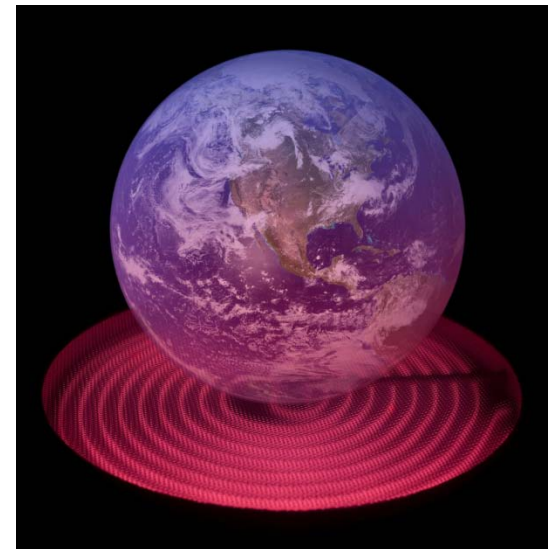
## Why did “we” do this?

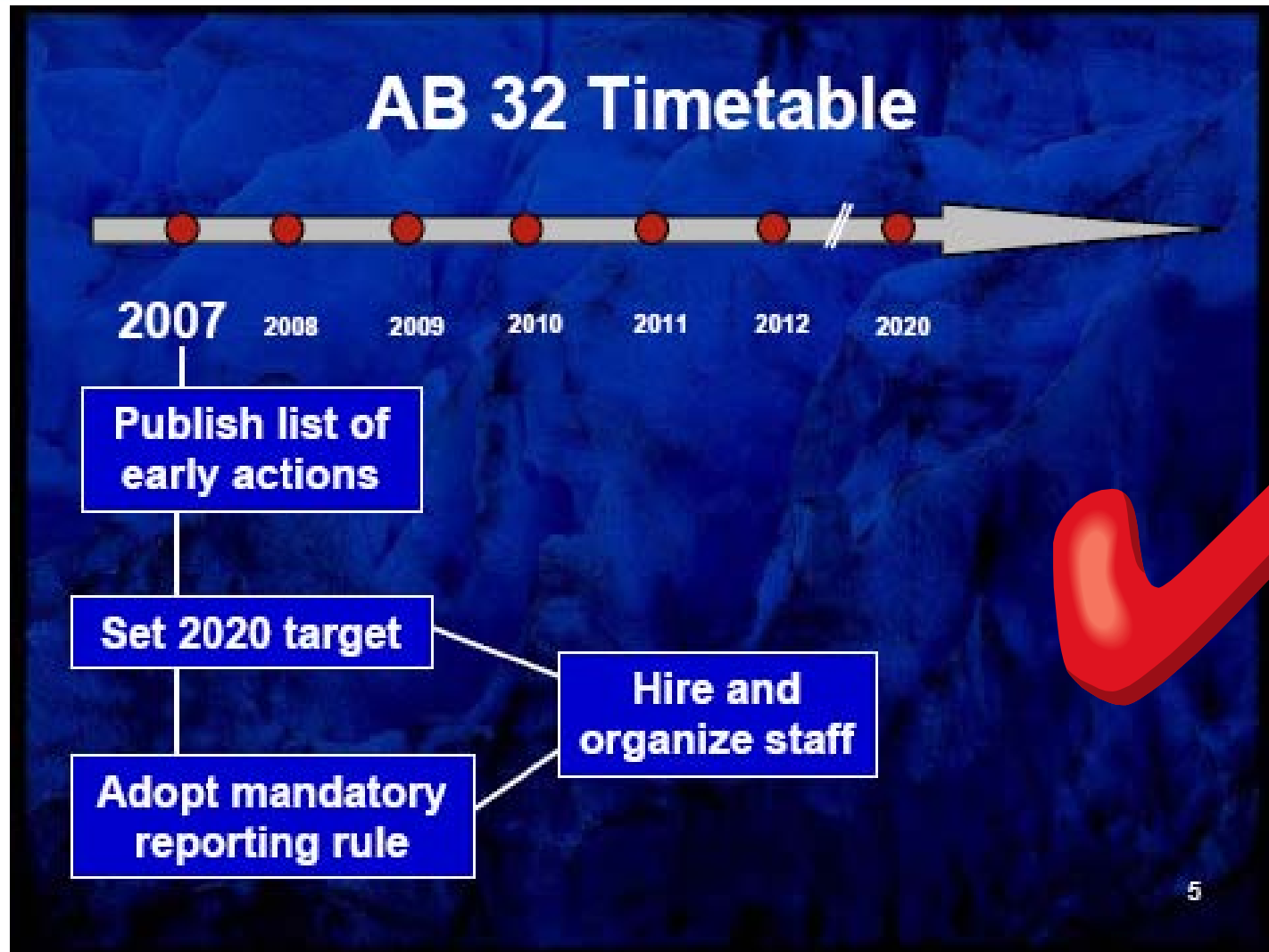
The Legislature finds and declares all of the following:

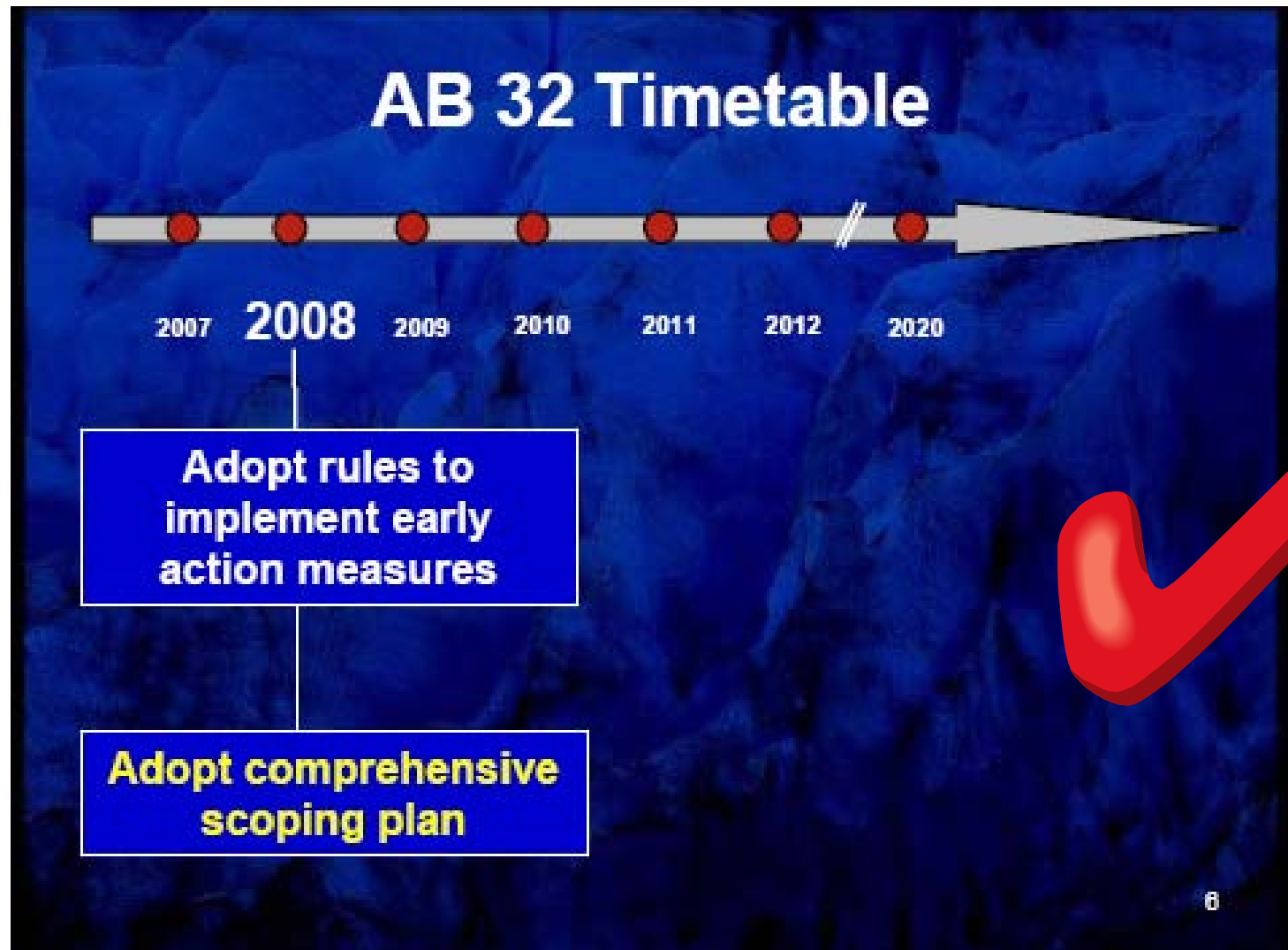
- (a) Global warming poses a serious threat to the economic well being, public health, natural resources, and the environment of California....
- (b) Global warming will have detrimental effects on some of California’s largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry. It will also increase the strain on electricity supplies...
- (c) California has long been a national and international leader on energy conservation and environmental stewardship efforts....

## And so

(e) By exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases.







## AB 32 Timetable



**Start implementing  
scoping plan (rules  
& market measures)**

## AB 32 Timetable



**Enforce early  
action measures**

**Continue rulemaking  
on other measures**

## AB 32 Timetable



**Complete adoption  
of GHG limits  
and measures**

## AB 32 Timetable



## AB 32 Timetable

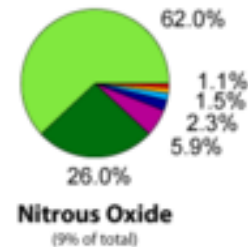
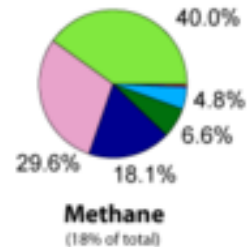
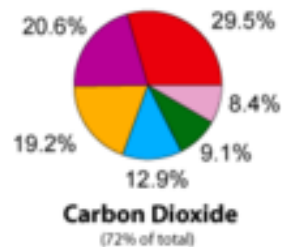
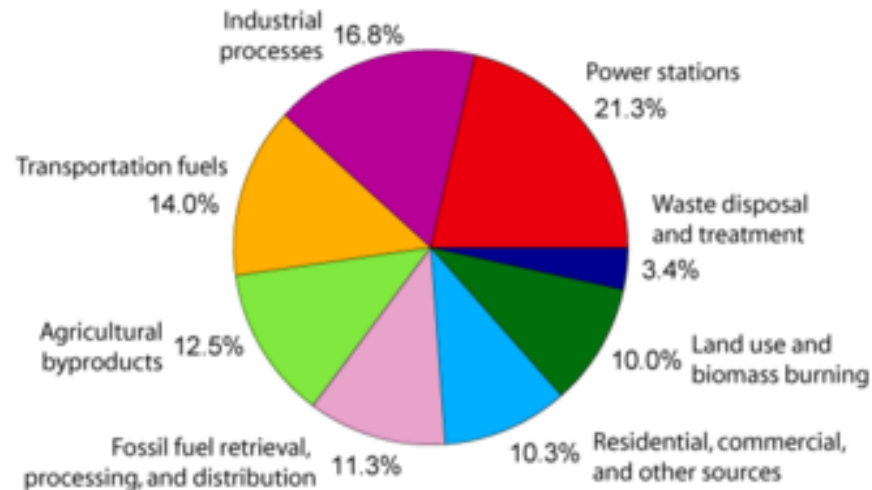


**Reduce GHG  
emissions to  
1990 levels**

**Post 2020 – identify and implement additional  
strategies to achieve Governor's 2050 target**

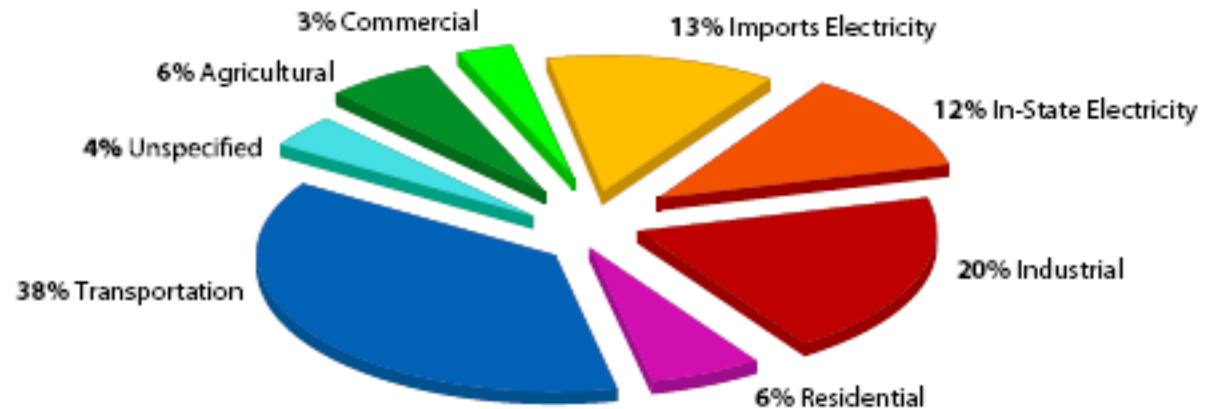
## Production by Sector – National

**Annual Greenhouse Gas Emissions by Sector**



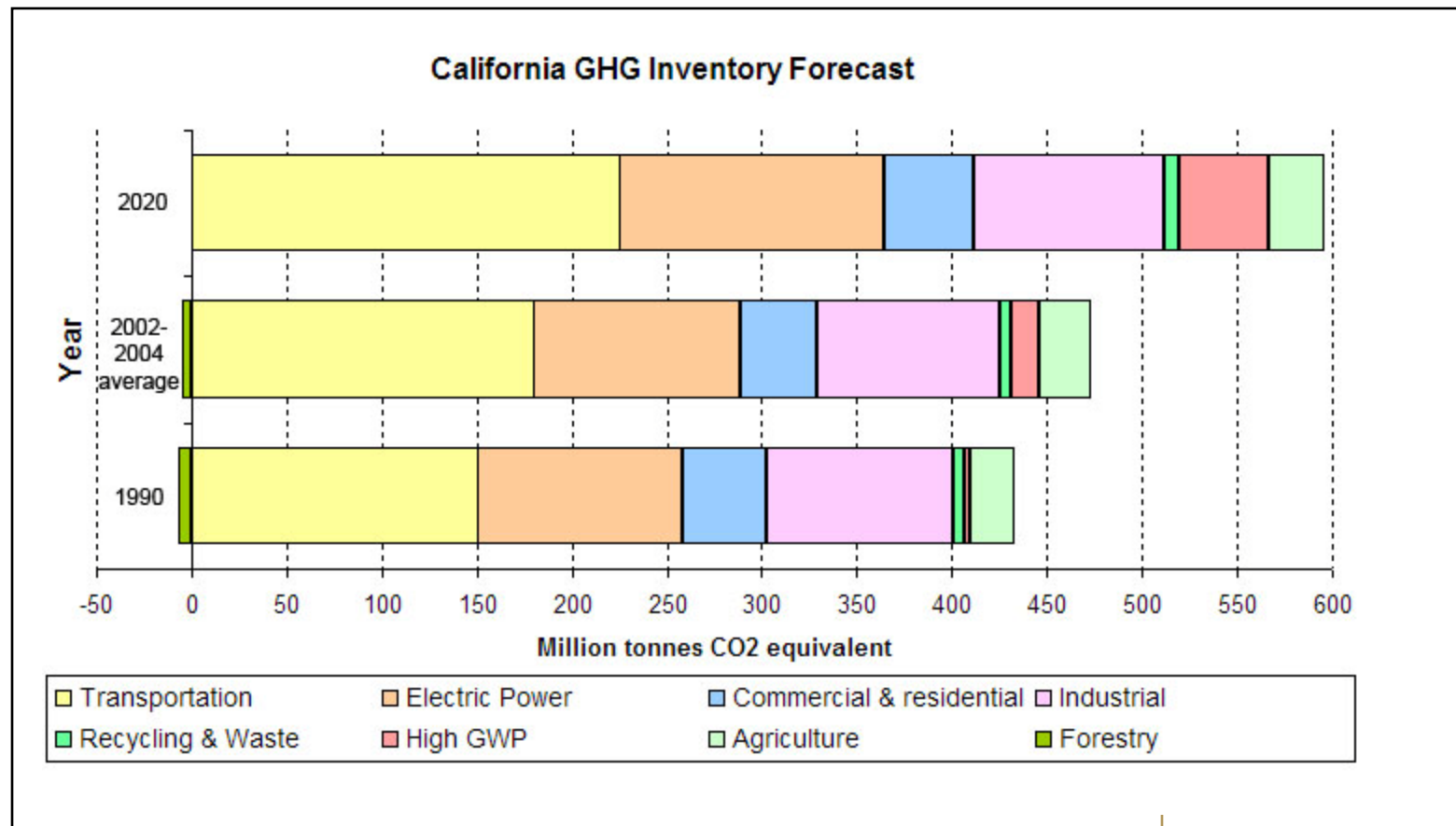
## Production by Sector – California

### CALIFORNIA GREENHOUSE GAS EMISSIONS IN 2004



SOURCE: 2007 INTEGRATED ENERGY POLICY REPORT

## For perspective



## What is the scoping plan?

The AB 32 Scoping Plan contains the main strategies California will use to reduce the greenhouse gases (GHG) that cause climate change. The Scoping Plan has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.



## What are the appendices

CARB: the appendices provide “estimated emission reductions and the associated estimated net cost of the measure, the lead agencies associated with each measure, and the timeframe for adoption and implementation of the measure”.

They do much more –

- They add detail and texture to the Scoping Plan and reveal more of the thinking of how CARB intends to meet the requirements of AB 32.
- The appendices clearly indicate the establishment of what the military might call “command and control” requirements to also force change of the public's usage of vehicles, homes and products that currently may be classified as larger sources (individually or in total) of GHG emissions.

## **CARB Proposed Action: Expand and strengthen existing energy efficiency programs, building and appliance standards**

Statement: Buildings are the second largest contributor to California's greenhouse gas emissions.

- Green buildings reduce GHG cross-cut multiple sectors including energy, water, waste, and transportation.
- Will require a combination of green building measures for new construction and existing buildings.

*How can  
you help  
your client  
meet these  
goals?*



Note : The State of California will set an example by requiring all new State buildings to exceed existing energy standards and meet nationally-recognized sustainable standards.

## CARB Proposed Action: Expand the Renewables Portfolio Standard to 20 percent

Statement: The California Energy Commission (CEC) estimates that about 12 percent of California's retail electric load is currently met with renewable resources.

- Increase the share of renewables in investor owned utilities electricity portfolios to ~~20~~ 33 percent by 2010.
- Publicly-owned utilities are encouraged but not required to meet the same goal.



*How do we do this and keep generation in CA?*



## Cap and Trade

Statement: Cap and trade is a market-based approach that caps the total amount of GHG emissions and allows certain covered sources to find the least expensive way to comply.

- The State will issue allowances based upon the total emissions allowed under the cap during any specific compliance period.
- Allowances could be freely distributed to capped firms or auctioned in the trading market.
- California working closely with other states and provinces in the WCI to design a regional cap-and-trade program
- Regulations to implement the cap-and-trade system must be developed by January 1, 2011, with the program beginning in 2012.



***How do we  
maximize  
this for our  
clients?***

## **CARB Proposed Action: Implement State laws and policies, including clean car standards, goods movement measures, and the Low Carbon Fuel Standard**

- California Light-Duty Vehicle GHG Standards
- Develop and adopt the Low Carbon Fuel Standard
- Vehicle Efficiency Measures
- Heavy/Medium-Duty Vehicles
- Support implementation of a high speed rail system

***Fleet  
changes?  
Who can  
you hire?***



CARB is considering a Feebate Program that would combine a rebate program for low emitting vehicles with a fee program for high emitting vehicles

more

## Goods Movement

- A significant portion of the transportation activities are associated with the movement of freight or goods throughout the state. CARB has already adopted a regulation to require ship electrification at ports.

*Does it mean more?*



## Preserve forest sequestration

- The State has set 2020 as the target for California's forest lands to achieve a specified reduction through sustainable management practices.
- The 2020 target would provide a mechanism to help ensure that this carbon stock is not diminished over time.



*More green!*



more

## Adopt measures to reduce high global warming potential gases from both mobile and stationary sources

- Chemicals with high global warming potential (GWP) are used in many different applications. High GWP gases are released in two primary ways: (1) through leaking refrigeration systems and (2) during the disposal process.
- Measures to address this problem will take the form of regulations and/or fees.

## Continue efficiency programs and use cleaner energy sources to move water

- More efficient use of water could reduce demand and reduce greenhouse gas emissions.

***How do we help  
water utilities do  
this?***



more

## Million Solar Roofs Program

- California has set a goal to install 3,000 megawatts (MW) of new, solar-electric systems by 2017.
- The Million Solar Roofs Initiative is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time.
- Obtaining the incentives requires the building owners or developers to meet certain efficiency requirements specifically, new construction projects meet energy efficiency levels that exceed the State's Title 24 Building Energy Efficiency Standards, and that existing commercial buildings undergo an energy audit.



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## Local Government Actions and Regional Targets

- Create a system of cooperative measures with local government that accomplish the following:

Use integrated scenario modeling to align regional transportation plans and local general plans

Takes into consideration other State policy goals

Incorporates performance indicators to monitor progress

Coordinates local and regional planning efforts to achieve maximum reductions

Establishes priorities for and direct State resources to help local and regional governments meet the regional greenhouse gas targets

**SB 375**



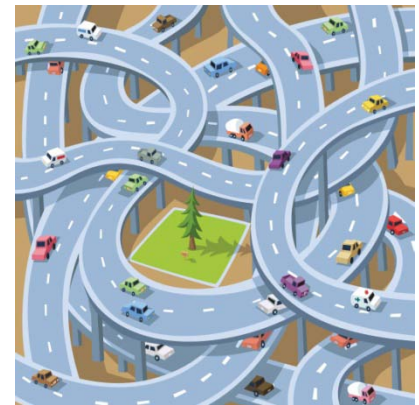
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## CARB expects local government to effectuate change as follows to reduce VMT through the following programs

- Congestion Pricing
- Pay-As-You-Drive Insurance Premiums
- Indirect Source Rules for New Development
- Programs to Reduce Vehicle Trips/Public outreach and Education



*How do you  
help your  
clients with this  
issue?*



## Increase waste diversion, composting, and commercial recycling, and move toward zero-waste

*A lot  
already  
being  
done*



- Capture methane emissions from landfills and use as a fuel. In addition, capturing this methane can result in air quality benefits as other landfill gases, such as volatile organic compounds, are also captured and removed.
- Increase waste diversion from landfills beyond the current rate to provide additional recovery of recyclable materials.

### **Agriculture**

- Encouraging investments in manure digesters and future determination if the program should be made mandatory by 2020.
- Reduction of use of nitrogen fertilizers which produce N<sub>2</sub>O emissions.

more

## Energy Efficiency and Co-Benefits Audits for Large Industrial Sources

- Require each facility to conduct an audit of the energy efficiency of individual sources within the facility to determine the potential to reduce greenhouse gases, criteria air pollutants, and toxic air contaminants.
- The audit includes assessment of the impacts of replacing or upgrading, older, less efficient itmes or replacing same

[Applies to major industrial facilities with more than 25,000 metric tons of CO<sub>2</sub> per year of greenhouse gas emissions - encompasses 94% of major statewide stationary source greenhouse gas emissions, and approximately 40% of total statewide emissions.]

***But what about local rules??***



***Which of your clients are ready for this?***

## **CARB Proposed Action: Targeting fees to fund the State's long-term commitment to AB 32 administration**

Statement: Carbon fees are viewed as having two distinct roles in implementing AB 32: (1) Fees can be used as a tool to incentivize emission reductions by affecting the relative prices within the economy and (2) Fees would also provide a source of revenue to pay for reductions or achieve other goals related to the program.

Carbon fees: Control of GHGs by making carbon-intensive products relatively more expensive compared to lower-carbon products, carbon fees are designed to drive consumption and investment toward more efficient and less GHG-intensive products.

*Can you help your clients avoid these fees?*

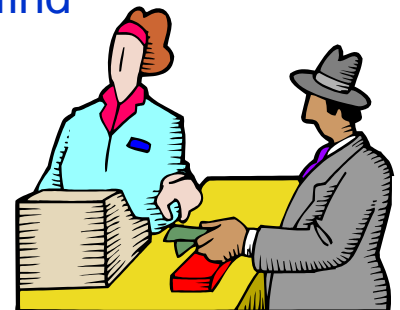


## CARB Proposed Action: Offsets

These are verifiable emission reductions whose ownership can be transferred to others. Two types:

- Compliance offsets - reductions must be “real, additional, verifiable, enforceable and permanent.”
- Voluntary offsets - largely completed by offset retail providers who either transfer the money to a fund that generates emission reduction credits by financing projects and then retiring them, or sends the credits for retirement to organizations that find solutions for climate change.

*Can you help your  
client maximize  
these?*



## Economic

If we don't, we'll  
lose money and if  
we do we'll have  
a net increase in the  
economy



What are you  
NUTZ?

## Our Attorney General



Targeting projects up and down the state for their “failure” to take into account climate change.

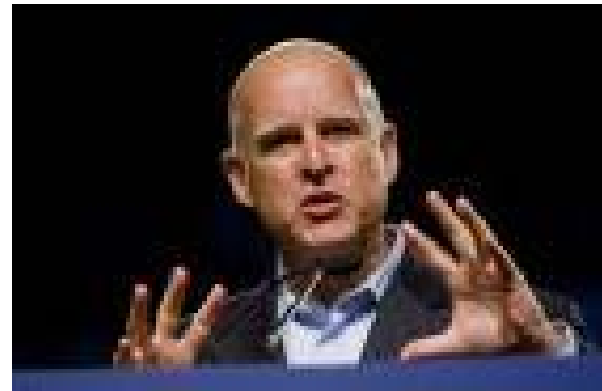
Using CEQA as a hammer!!! Has filed suit, threatened to file etc.

Has raised: Energy efficiency, water supply, renewable energy, solid waste, land use (density/public transportation) and VMT

## Attorney General

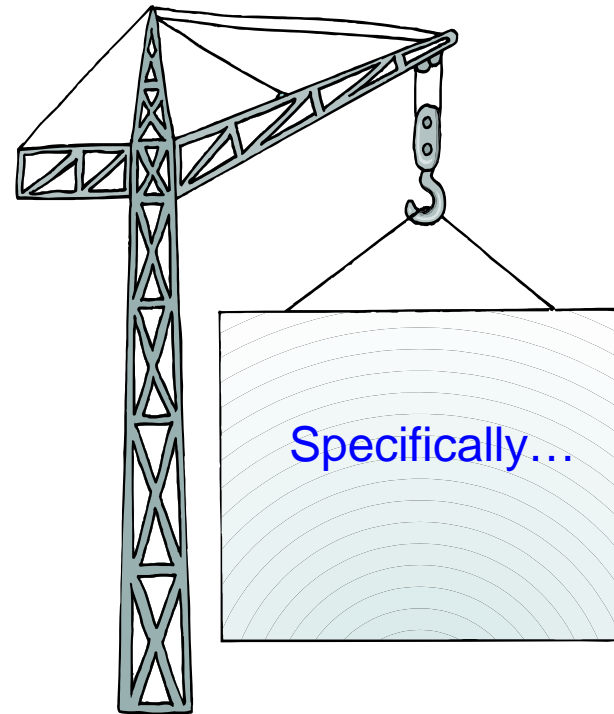
Comment, Litigation and Settlements re GHGs:

<http://www.ag.ca.gov/globalwarming/ceqa.php>



## SB 97

Requires the Office of Planning and Research (OPR) to develop guidelines that relate to GHG emissions mitigation and makes changes to statute to restrict the application of the California Environmental Quality Act (CEQA) for the effects of GHG emissions from transportation projects funded by Proposition 1B



## SB 97

Requires OPR to prepare and develop guidelines for the mitigation or effects of GHG emissions as they relate to meeting the requirements of CEQA, including the effects associated with transportation and energy. Upon completion by OPR, the Resources Agency would be required to certify and adopt the guidelines by January 1, 2010. Periodically thereafter, OPR would be required to update guidelines and incorporate them into the criteria established by the CARB pursuant to AB32

**Now in progress!!!**



## SB 375 – More fun from Arnold

CARB press release:

### Governor Schwarzenegger Signs Sweeping Legislation to Reduce Greenhouse Gas Emissions through Land-Use

Continuing California's environmental leadership in fighting global warming, Governor Arnold Schwarzenegger announced that he has signed [SB 375](#) by Senator Darrell Steinberg (D-Sacramento), which builds on AB 32, California's first-in-the-nation law to reduce greenhouse gas emissions, by adding the nation's first law to control greenhouse gas emissions by curbing sprawl.



And now, here's Peter

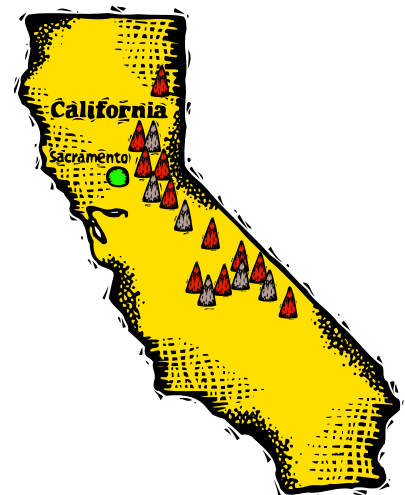
# The Emerging Role of Climate Change in California Land Use Regulation

Presented by  
Peter N. Brown  
RMLUI  
March 6, 2009

Always There™

## Background Facts regarding California

- 6<sup>th</sup> largest economy in world
- Population is currently 37 million – 46 million by 2030 and 60 million by 2050
- State Legislature is beyond dysfunctional
- State/Local agency finances are precarious
- Local issues affected by statewide lobbying
- Growth/No-Growth battles are unending, and conflicts are dynamic and deeply rooted



# Overview of California Land Use Law: Foundational Principles

- **Police Power Vested in Local Agencies**
  - **Plenary power, not a grant from State**
  - **Broad Reach of Police Power**
  - **Courts defer to exercise of Police Power**
  - **Actions implementing General Plan are classic PP exercise**





## Overview of California Land Use Law: Foundational Principles

- **State Preemption**
  - Requires complete occupation of field by State
  - Federal Preemption can apply
  - Complex and politically-charged issue, especially regarding land use regulation

## Principles of California Land Use Law: General Plan

- **Constitution for all development**
- **Contains 7 mandatory elements:**
  - **Land Use**
  - **Circulation**
  - **Housing**
  - **Conservation**
  - **Open Space**
  - **Noise**
  - **Safety**



## General Plan

**All development must be consistent with General Plan**

- **With exception of Housing Element, local agencies have broad discretion regarding contents of General Plan**



# Principles of California Land Use Law: Regional Planning

- **Councils of Governments (consortium of local agencies). Role:**
  - **Provision of Information: Growth Forecasts**
  - **Regional Housing Needs Assessment (RHNA)**
    - **Distribution of housing allocations to local governments**
  - **Transportation Planning**



- **Regional Transportation Plan: Federal req'mnt**
- **Based on "most recent planning assumptions"**
- **Annual assessment of regional transportation needs**
- **Distribution of Federal, State and Local transportation monies**
- **Feds can withhold transport. funding if growth patterns not realistic**

## **Principles of California Land Use Law: Environmental Review California Environmental Quality Act (CEQA)**

- **Local agencies must consider environmental implications prior to making land use decisions**
- **Agency must consider direct and indirect impacts of proposed project or action – including cumulative and growth-inducing effects**
- **Purpose is to provide both decision-makers and the public with information as to potential environmental impacts of decision**

## California Environmental Quality Act (CEQA)

- CEQA is like NEPA, only different
- CEQA is much more substantive
- A claim of CEQA violation is the easiest legal route to challenge a land use project approval



## Opportunities for Litigation to Challenge Land Use Decisions (Partial List)

- Failure to Comply with CEQA
- Inconsistency with General Plan
- Inconsistency with Zoning Ordinance or other Regulations
- Inconsistency with State Planning & Zoning Law
- Failure to Meet Due Process Standards
- Inadequacy of Findings
- Insufficiency of Evidence



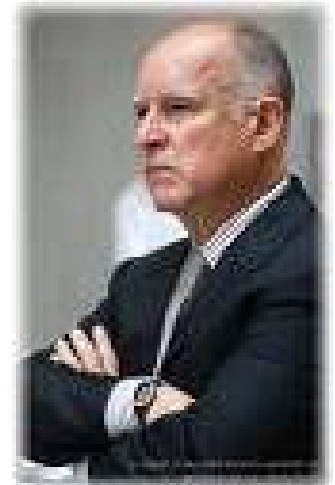
## Summary of California Climate Change Initiatives: Assembly Bill 32 (Health & Safety Code section 38500 et seq.) (2006)

- Regulations govern all sectors of economy, including construction, transportation, oil and gas, power generation, industrial processes, and agriculture
- C.A.R.B. (granted broad power over AQ) will develop Scoping Plan
- “Local Government Actions and Regional Targets” mentioned in Draft Scoping Plan



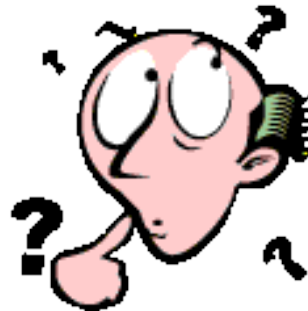
## **Actions of California Attorney General's Office**

- **Litigation against San Bernardino County's General Plan**
- **Comment Letters on EIRs for Major Projects**
- **Publication of Guidance Documents for General Plans, CEQA review of GHG Impacts**
- **Road Show Presentations**
- **Message: Climate Change must be Considered in Decisions**



## Evaluation of GHG Impacts in Environmental Review of California Land Use Projects

- No formal amendment to State CEQA Guidelines will be made until January 1, 2010
- Environmental advocates' position: "one gram of CO<sub>2</sub> is too much"
- Limited guidance from State
- Dilemmas for local agencies
- Result for agency: Do best you can and hope you don't get sued



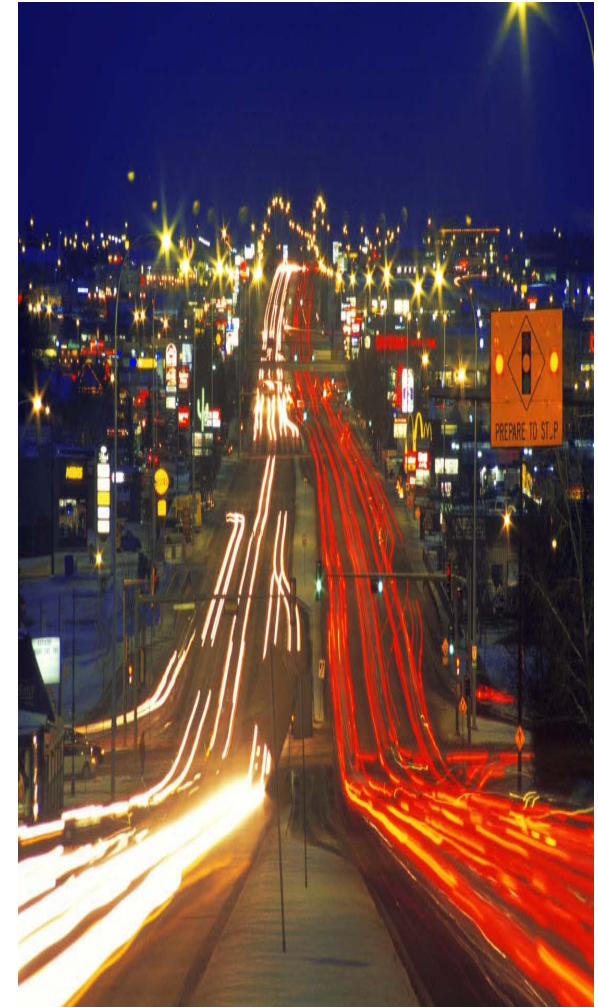
## The Evolving Land Use/Climate Change Intersection: Senate Bill 375 -- Overview

- Technological fixes under AB 32 can't reach GHG reduction goals
- Requires reduction of VMTs
- SB 375 is product of 2 years of intensive negotiations conducted by environmental organizations, building industry, and local government: “Coalition of the Impossible”



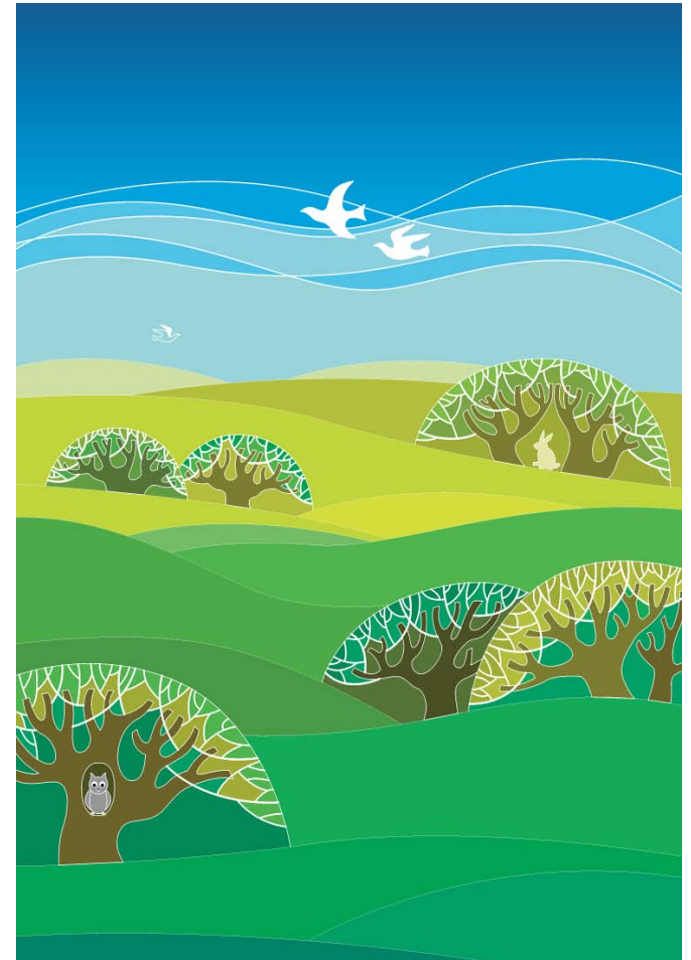
## SB 375 Overview

- Basic premise is that air quality, traffic and carbon generation know no political boundaries
- Extension of historic debate on role of regional vs. local planning
- SB 375 is “program” under AB 32 for auto/light truck emissions
- Stated approach is to provide incentives (carrots) rather than top-down regulation (sticks) to “encourage” regional planning



## SB 375 Overview

- **SB 375 consists of 3 critical areas:**
  - **GHG Planning Process**
  - **CEQA Processing Benefits**
  - **Adjustment of Housing Policies**

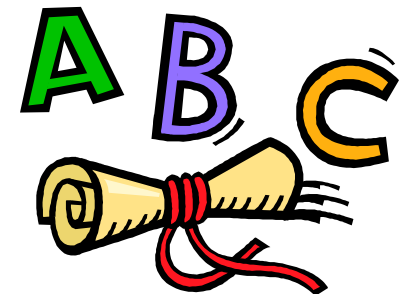


## SB 375 Overview: GHG Planning Process

- **Associations of Governments (“Metropolitan Planning Organizations” (MPO)) become regional GHG planning bodies**
- **By 9/30/10, CARB develops GHG emission reduction target for each MPO**
- **Each MPO develops land use forecast within its Regional Transportation Plan – the “Sustainable Communities Strategy” (SCS).**
  - **Local general plans must be “considered”**
  - **SCS must “gather and consider” info re farmland, bio areas, etc.**
  - **SCS must identify areas sufficient to house regional needs**
  - **MPO must determine if SCS will feasibly achieve GHG reduction goal**
  - **SCS must quantify GHG reduction and show shortfall if any**

## SB 375 Overview: GHG Planning Process

- If SCS does not reach the GHG reduction target set by CARB, MPO must submit an “Alternative Planning Strategy” (APS) to reach goal.
  - APS not part of RTP, and does not affect transport. funding
  - No connection to local general plans
  - APS cannot be CEQA factor to determine if project creates impact
- Workshops/Hearings held at ALL levels of plan development
- CARB must certify SCS or APS within 60 days of submittal
- Development of SCS/APS is a project subject to CEQA



## SB 375 Overview: GHG Planning Process

- Under SB 375, funding to local agencies for regional transportation monies distributed by State is only allocated to projects that are consistent with SCS/APS
  - MPO's first SCS will reflect current agencies' general plans
  - MPOs are composed entirely of local officials
- Local agencies are not required to amend their general plans to conform to APS – but developers will seek amendments



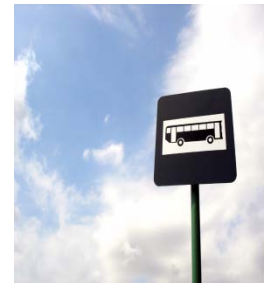
## SB 375 Overview: CEQA Streamlining Benefits

- **Residential/Mixed Use Projects**
  - Residential MU projects that are consistent with SCS/APS get some CEQA streamlining benefits



## SB 375 Overview: CEQA Streamlining Benefits

- **“Transit Priority Projects,”**
  - **Transit Priority Projects, as defined, gain a CEQA exemption or streamlined CEQA analysis. Definition of TPP:**
    - **50% residential**
    - **Density of at least 20 du/acre**
    - **Within ½ mile of transit corridor with minimum 15 min. peak hour service**



## **SB 375 Overview: CEQA Streamlining Benefits**

- **CEQA Statutory Exemption provided for Certain TPPs**
  - **Criteria for Exemption (Partial List):**
    - **NTE 8 acres or 200 residential units**
    - **Served by existing utilities**
    - **No sig. effect on historic resources**
    - **Bldgs. Designed to have 15% energy efficiency and 25% less water use**
    - **Project provides either 5 acres/1000 open space or affordable housing benefits (20% mod, 10% low, 5% very low, or equivalent in-lieu fees)**

## SB 375 Overview: CEQA Streamlining Benefits

- For all other TPPs, “Sustainable Communities Environmental Assessment” can be prepared
- SCEA provides significant CEQA processing benefits



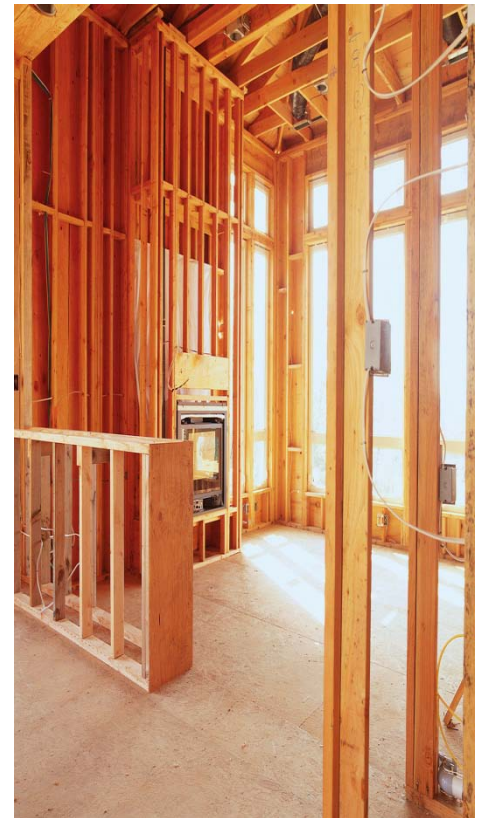
## SB 375 Overview: CEQA Streamlining Benefits

- In addition, local agency may develop standard set of traffic mitigation measures for Transit Priority Projects.
- Once adopted, the project need not comply with any other traffic mitigation measures



## SB 375 Overview: Housing Policy Adjustments

- Historically, approval of major housing projects is often a source of conflict in California
- Under SB 375, RHNA Allocations by Metropolitan Planning Organizations and SCS/APS must be mutually consistent
- MPO must align Regional Housing Needs Assessment, Regional Transportation Plan, and SCS/APS planning cycles to a single 8-year planning period
  - “Result: “Fair Share” housing allocation under RHNA becomes tied to the development pattern contained in SCS/APS



## SB 375 Overview: Housing Policy Adjustments

- **Miscellaneous changes made to General Plan Housing Element law**
  - **Timetable established for local agency to adopt HE and submit to State Department of Housing and Community Development.**
  - **Defaulting local agencies lose SB 375's consolidated 8-year review cycle and are held to a 4-year review cycle with HCD**
  - **Longer timetable is established for local agencies to bring zoning into conformity with Housing Element**



## SB 375 Overview: Housing Policy Adjustments

- **Miscellaneous changes made to General Plan Housing Element law**
  - **Sanctions (court orders) may be imposed for failure to comply with timelines**
  - **Anti-NIMBY re-zone protections for projects >49% affordable that require zoning change**

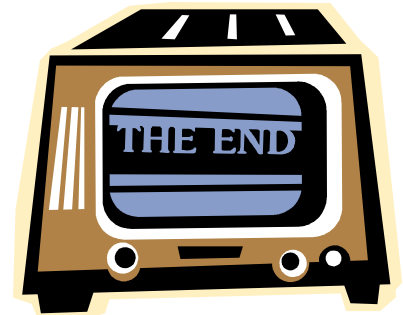


## Conclusion: Near-Term Issues

- **Despite hype, SB 375 provides no easy fixes: it is largely procedural**
- **Kumbaya, this ain't**
- **Growth battles will be played out in SB 375 implementation**
- **No sector is completely happy with SB 375**
- **Litigation/CEQA will play crucial role**

## Conclusion: Long-Term

- Kumbaya will never happen
- Carrots, not Sticks – For now
- What will be impact of dysfunctional Legislature/state budget crisis?
- Is true top-down regulation in the offing? Impact on local police power?
- Will Climate Change become a genuine policy consolidator?



And now, here's Carolynnne's

# How Colorado Municipalities are Addressing Climate Change through Development Regulations

Presented by  
Carolynne White  
Rocky Mountain Land Use  
Institute  
March 6, 2009

Always There™

## Why change the status quo?

- Brookings Institute report
  - Colorado Front Range population increase 70% by 2040
  - 6.3 million residents
- Regardless of personal position/beliefs, regulation is coming
- Colorado environmental culture



## Press

- Home buyers are increasingly asking about green building practices and options for green technologies installed in homes. (“On the color spectrum, Denver looks green to potential residents,” *Denver Business Journal*, Friday, September 7, 2007.)
- “Vail Resorts plans \$1B 'green' project.” *Denver Business Journal*, Monday, March 5, 2007.
- Savvy consumers are enjoying a growing selection of green options. (“Going green in Colorado,” *Denver Business Journal*, Friday, October 27, 2006.)
- “Real estate brokers turning green concerns into specialty.” *Denver Business Journal*, February 1, 2008.
- “MDC Holdings tied for No. 11 for green practices.” *Denver Business Journal*, May 6, 2008.
- “Getting the green light from real estate lenders.” *Denver Business Journal*, January 25, 2008.





## Press Contin.

- Sales brisk at green-leaning Lawrence St. condo project. *Denver Business Journal*, October 19, 2007.
- New J.C. Penney store to set green example. *Denver Business Journal*, September 26, 2007.
- On the color spectrum, Denver looks green to potential residents. *Denver Business Journal*, September 7, 2007.
- Local buildings get green international nod from BOMA. *Denver Business Journal*, June 20, 2008.
- Colorado not ready to crack down on carbon. *Colorado Biz Magazine*.
- Garfield County ponies up for energy efficiency. *Aspen Times*.
- Greenwood Village blocks solar plans. *Denver Business Journal*, May 30, 2008.
- Municipal sustainability programs: Complicated, but hold big potential. *Denver Business Journal*, June 20, 2008.
- Getting “greenwashed”? *Denver Business Journal*, June 20, 2008.
- Condo project planned near Platte River. *Denver Business Journal*, August 1, 2008.
- ProLogis is in the LEED for green-building effort. *Denver Business Journal*, October 13, 2006.

## Why Colorado's response to global warming is, and will be, primarily at the local government level

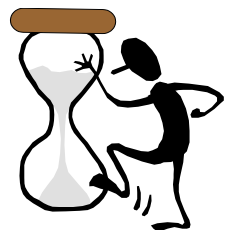
- Land use is local, by statute and tradition, in Colorado
  - Colorado statutes vest land use and development authority in local governments
  - Local governments resist statewide “top-down” regulation in this area
    - Remember the Growth Wars of 1999 – 2001?
  - Supreme Court has upheld this scheme

- Contrast statewide measures (CA)



## Why Colorado's response to global warming is, and will be, primarily at the local government level - continued

- Federal efforts recognize local control
  - Energy Efficiency and Conservation Block Grant Program (EECBG)
    - Originally H.R. 3221 introduced in 2007
    - Folded into omnibus energy legislation, H.R. 6, which became Public Law 110-140 on 12/19/2007
    - U.S. Department of Energy
    - Would provide grants for communities to develop energy efficiency strategies to help reduce greenhouse gas emissions.
    - Modeled on successful CDBG program
    - \$\$ may be used, among other things, for development and implementation of building codes
    - \$3.2 B appropriated in American Recovery and Reinvestment Act (a.k.a. "Stimulus"), Feb. 20, 2009
- Local governments not waiting for state or federal direction





## Old wine in new bottles?

Are land use measures to reduce global warming/GHG simply another way of looking at the growth management/anti-sprawl issues of ten years ago?

Not exactly

- broader audience – specialized interest groups v. public consciousness
- wider array of solutions
- reduction of GHG = corollary benefit of compact, walkable development, but is primary goal of current debate
- Thus general trend for last 10 years has been towards reduction of GHG, but indirectly

## Role of Built Environment in Global Warming

- In the United States, buildings account for:
  - 36% of total energy use/65% of electricity consumption
  - 30% of greenhouse gas emissions
  - 30% of raw materials use
  - 30% of waste output/136 million tons annually
  - 12% of potable water consumption (Source: Greenprint Denver)
- Buildings are responsible for almost half (48%) of all GHG emissions annually. (Source: U.S. Energy Information Administration)
- Colorado: 20% (Source: Governor's Energy Office)
- Compare: the entire fleet of SUVs, minivans and light-duty trucks in this country accounts for only 6.5% of the total U.S. energy consumed each year, according to the U.S. Energy Information Administration. (Source: Los Angeles Times)

## What are Colorado cities and counties doing?

- Disclaimer – This presentation focuses solely on land use and development regulatory issues. Excludes cap and trade, recycling, utility efficiency, and numerous other sustainability initiatives equally worthy of study.
- Majority of local government efforts = “Clean our own house first”
  - Adoption of plans to change governmental behavior
- Few cities currently addressing private sector behavior – but this is changing
  - More complex
  - Legal challenges
  - Political challenges
  - Cultural challenges



## “Clean Our Own House First” - continued

- U.S. Conference of Mayors Climate Protection Agreement
  - Colorado Signatories as of March 1, 2009

- |               |                           |
|---------------|---------------------------|
| 1. Aspen      | 9. Glenwood Springs       |
| 2. Basalt     | 10. Gunnison              |
| 3. Boulder    | 11. Ignacio               |
| 4. Carbondale | 12. Nederland             |
| 5. Denver     | 13. New Castle            |
| 6. Dillon     | 14. Pagosa Springs        |
| 7. Durango    | 15. Telluride             |
| 8. Frisco     | 16. Town of Crested Butte |
|               | 17. Westminster           |

- Total signatories – 916 mayors as of March 1, 2009
- Endorsements: La Plata County



## “Clean Our Own House First” - continued

- Three actions:
  - Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns;
  - Urge their state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol – 7% reduction from 1990 levels by 2012;
  - Urge the U.S. Congress to pass the bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system.

## “Clean Our Own House First” - continued

- Cities for Climate Protection Program (CCP) – ICLEI Local Governments for Sustainability
- Five Milestones:
  - Milestone 1. *Conduct a baseline emissions inventory and forecast.*
  - Milestone 2. *Adopt an emissions reduction target for the forecast year.*
  - Milestone 3. *Develop a Local Action Plan.*
  - Milestone 4. *Implement policies and measures.*
  - Milestone 5. *Monitor and verify results.*
- Publications, case studies, toolkits, resources

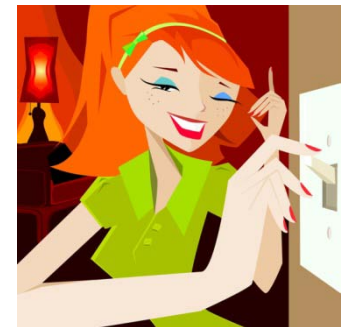
## “Clean Our Own House First” - continued

- Adoption of Climate Change Plan / Sustainability Plan
  - Colorado Municipalities
    - Aspen
    - Boulder
    - Carbondale
    - Denver
    - Fort Collins
    - Glenwood Springs
    - Snowmass Village
    - Telluride
  - Counties
    - Boulder



## “Clean Our Own House First” - continued

- Climate Change Plan typically includes
  - Fleets
  - Buildings
  - Lighting – CFL’s (light fixtures) or LED’s (signs)
  - Increasing Utility Efficiency
  - Waste reduction and Recycling
  - Traffic Flow Management



## Affecting Private Sector Behavior

- Common actions include
  - Education
  - Elimination of barriers for private sector
  - Incentives
  - Public financing
  - Review/amend/revise existing zoning, building, or development codes
  - Mandates



## Affecting Private Sector Behavior - Education

- Energy Audits
  - CSU – Colorado Springs commercial and industrial businesses
  - REAP – Residential Energy Audit Program: Louisville, Lafayette, Nederland annual cost savings \$4.5 M (2007)
- Telluride Unplugged, 6-week education campaign for public
- Fort Collins, Climate Wise program – 120 companies
- Fort Collins, Builder's Guide to Energy Efficient Construction
- Lakewood, Sustainability Awards (2008)
- Steamboat Springs, Sustainable Business Program – 50 companies



## Affecting Private Sector Behavior – Elimination of Barriers

- SB 08-117
  - Prohibits municipalities and counties from charging a fee to install a solar panel that is more than actual costs for reviewing the application, or \$500 residential/\$1,000 commercial, whichever is less
  - Littleton – repealed solar panel fees, effective May 2008



## Affecting Private Sector Behavior - Incentives

- Rebates
  - Colorado Springs utilities – commercial customers – demand side management
  - CORE – Aspen, CO grid-tied PV power buyback \$2/watt
  - Boulder – sales and use tax rebate for PV and solar water heating



## Affecting Private Sector Behavior – Public Financing

- HB 08-1350
  - Allows counties to use Local Improvement Districts (LIDs) and cities to use special improvement districts (SIDs) to provide for energy efficiency retrofits and installation of renewable energy fixtures in new construction
- CORE – Aspen, CO, zero-interest loan financing for PV installation
- Denver – Green Building Fund - \$75K in 2001 – current?
- Denver – Green Building for affordable housing
- GURA – goal: LEED certification if receive TIF financing



## Affecting Private Sector Behavior – Review/Amend Existing Codes

- Complete Overhaul
  - Denver – Blueprint Denver – Zoning Code Task Force -- “Sustainability Review”
  - Lakewood – currently revising zoning code; includes sustainability review
  - Wheat Ridge – currently revising zoning code; includes some sustainability measures
  - Greenwood Village – amend code to allow xeriscape (but not solar panels!)
- Goals
  - Golden – Sustainability Goals, Advisory Board
- Sustainability Review
  - Sustainable Code Project, Clarion & Associates
  - Other modifications:
    - Eagle County ECObuild (2006) – points based code
    - Aspen/Pitkin County Efficient Building Program
    - Carbondale Efficient Building Code Program



## Affecting Private Sector Behavior – Review/Amend Existing Codes - continued

- 2006 International Energy Conservation Code - IECC
  - Required Minimum Level of Energy Efficiency In New Residential and Commercial Construction
- HB07-1146 requires that any county or municipality that adopts a building code must also adopt an energy code. The energy code adopted by the municipality or county must be at least as stringent as the most recent version of the International Energy Conservation Code (IECC).
- Colorado is a home rule state; no statewide energy code
- Colorado Jurisdictions adopting 2006 IECC
  - Counties
    - Adams, Arapahoe, Larimer
  - Cities
    - Arvada, Aurora, Basalt, Castle Rock, Centennial, Collbran, Colorado State Buildings, Cortez, Craig, DeBeque, Denver, Durango, Edgewater, Englewood, Fort Lupton, Frisco, Fruita, Golden, Grand Junction, Greeley, Greenwood Village, Hotchkiss, Lakewood, Longmont, Louisville, Mesa County Regional, Palisade, Parker, Salida, Thornton, Westminster

## Affecting Private Sector Behavior – Review/Amend Existing Codes - continued

- Targeted Actions
  - Sustainability Review
  - Solar access
    - Boulder, 2001
  - Allow renewable energy (wind turbines, solar panels) as use by right
    - Contrast Nevada, Wisconsin – state preemption of zoning – allowed use by right in all zone districts
    - HB 08-1270 – covenants prohibiting renewable energy facilities void as a matter of public policy



## Affecting Private Sector Behavior -- Mandates

- Aspen and Pitkin County -- Renewable Energy Mitigation Program (REMP)
- Boulder – Green Points Program (New Ordinance effective March 2, 2009)
- GURA – require LEED certification if receive TIF financing
- Restricting home size
  - Pitkin County – Max home size 5,750 SF urban; 15,000 SF rural
  - Boulder County – June 2008 – requires purchase of development credits for homes > 6,000 SF
- Contrast: Dubai – Sheikh Mohammad bin Rashid Al Maktoum decree: all new buildings must be LEED certified as of January 2008



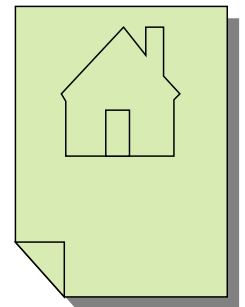
## What about the market?

- LEED Certification
  - Colorado in top 10 states for LEED Certification, according to USGBC
- Other certifications
  - Energy Star
    - Colorado 5<sup>th</sup> in nation for Energy Star Buildings
  - Building Owners and Managers Association (BOMA) Earth Award
  - Homebuilders Association (HBA) Built Green Colorado



## Leadership in Energy and Environmental Design (LEED)

- Nationally accepted benchmark for design, construction and operation of high performance green buildings
- Developed by the U.S. Green Building Council (USGBC), nonprofit coalition of more than 6,400 organizations
  - LEED-NC: New commercial construction and major renovation projects
  - LEED-EB: Existing building operations
  - LEED-CI: Commercial interiors projects
  - LEED-CS: Core and shell projects
  - LEED-H: Homes
  - LEED-ND: Neighborhood development



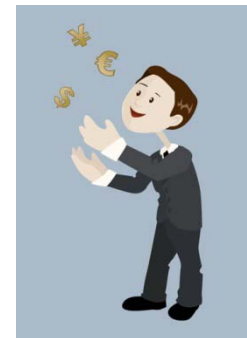
- LEED Certification
  - Residential - LEED for Neighborhood Development Rating System
    - pilot projects located in Colorado include:
      - Aspen Club Redevelopment (Aspen)
      - Ever Vail (Vail)
      - Horizon City (Aurora)
      - Metropolitan Gardens (Denver)
      - Park Avenue Redevelopment-Block 3 (Denver)
      - Westpac (Snowmass Village)
      - Stapleton (Denver)
      - Washington Village (Boulder)





## What about the market? -- continued

- Built Green Colorado – HBA voluntary program
  - Built Green checklist, random inspections by E-Star Colorado
  - 11% of Denver metro area builders participation after only four years in the market
  - Part of Denver's Climate Change plan to promote, particularly in Stapleton (5,400 acres) and Gateway (4,000 acres)



## What about the market? -- continued

- LEED Certification – commercial
  - Golden Hill Office Centre (Lakewood)
  - CH2MHill South Building (DTC)
  - Denver Place (Denver)
  - ProLogis (Denver)
  - Belmar Development Block 5 (Lakewood)
  - DTJ Design (Wheat Ridge)
  - Greenwood Corporate Plaza Building (Greenwood Village)
  
- BOMA international Earth Award
  - Republic Plaza, 370 17<sup>th</sup> St.



## Panel Discussion: Future Predictions?



**Questions?**

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