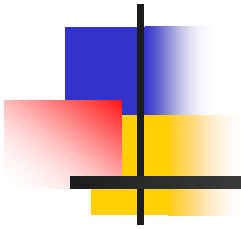


Global Warming: *Opportunities for Activists*



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Global Warming: *Opportunities for Activists*

- Global Warming Information Resources
- What the State is Doing
- What You Can Do



Global Warming Information Resources: *IPCC*

- Intergovernmental Panel on Climate Change (Co-winner of the 2007 Nobel Peace Prize (with Al Gore.))
 - <http://www.ipcc.ch/>
 - http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf
(Summary)
- IPCC developed 4 scenario families (A1, A2, B1 and B2) representing different development pathways of demographic, economic and technological development and resulting GHG emissions.
- Three scenarios are commonly referenced in California Models: a higher emissions scenario (A1Fi), a medium-high emission scenario (A2), and lower emission scenarios (B1).

Global Warming Information Resources: *IPCC Scenarios*

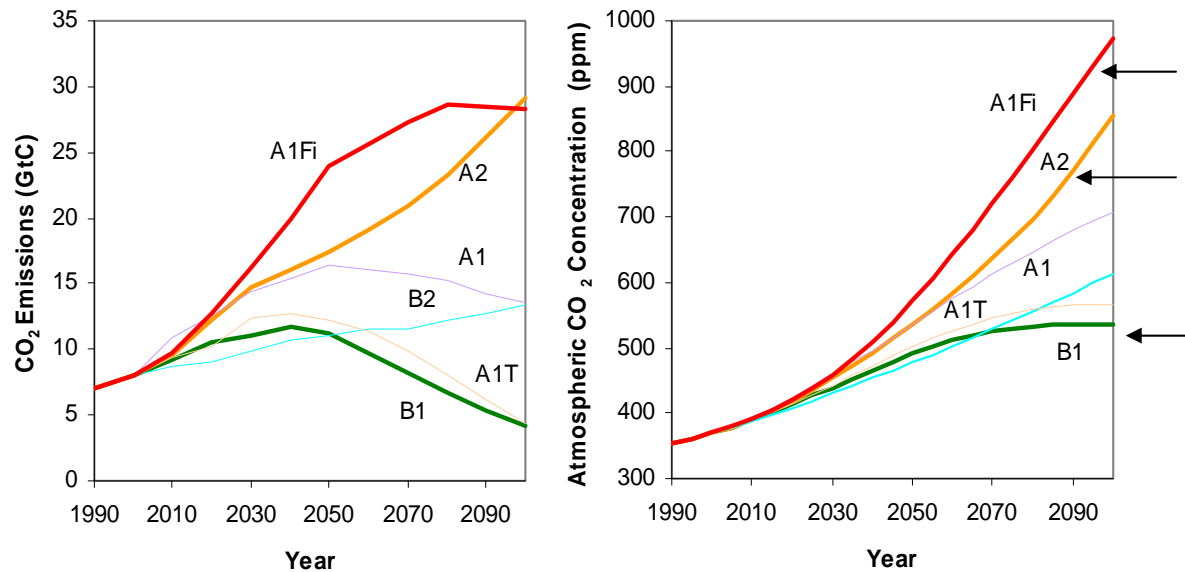
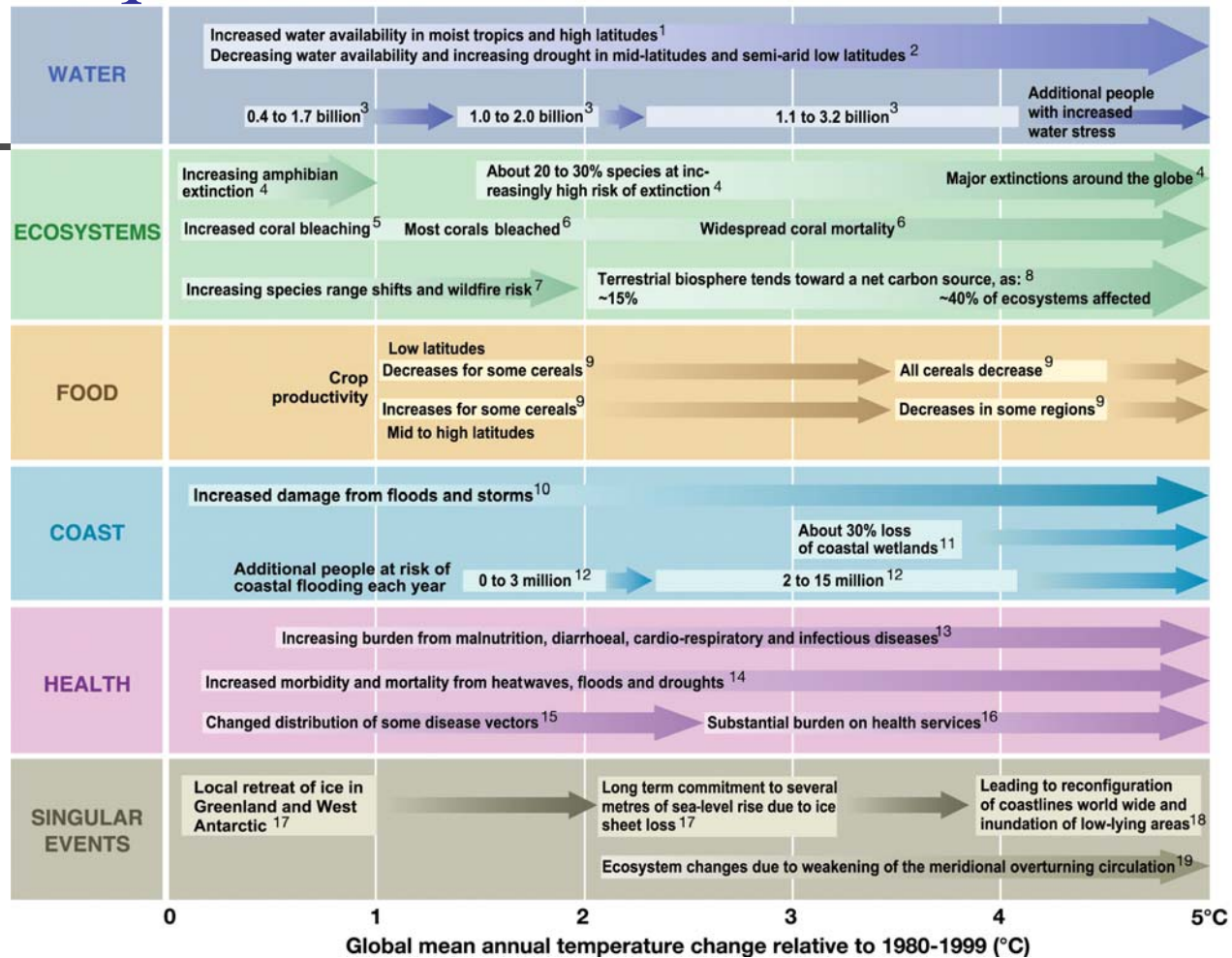
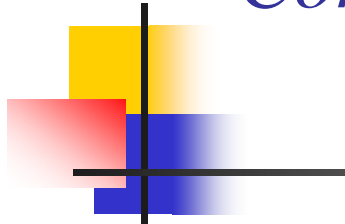


Figure 4-1-- Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.
http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF

Global Warming Information Resources: *Consequences*



Examples of global impacts projected for changes in climate -- Contribution of Working Group II to the Fourth Assessment Report of the IPCC.

<http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf>



Global Warming Information Resources: *More*

- Pew Climate Change Center
 - <http://www.pewclimate.org/>
 - http://www.pewclimate.org/global-warming-basics/climate_change_101
- Sierra Club
 - <http://www.sierraclub.org/globalwarming/>
- California's Climate Change Portal
 - <http://www.climatechange.ca.gov/index.html>
- Attorney General Jerry Brown
 - <http://ag.ca.gov/globalwarming/>



Global Warming Information Resources: *Public Health*

- “Climate change will affect the health of Californians The primary concern is not the change in average climate, but rather the projected increase in extreme conditions that are responsible for the most serious health consequences.”
 - Climate Action Team Report to Governor Schwarzenegger and the Legislature, Mar. 2006, p.24 .
http://www.climatechange.ca.gov/climate_action_team/reports/index.html
See also: Public Health-Related Impacts of Climate Change in California: A report” California Climate Change Center
<http://www.energy.ca.gov/2005publications/CEC-500-2005-197/CEC-500-2005-197-SF.PDF>



Global Warming Information Resources: *Public Health*

- Higher temperatures will increase air pollution formation.
- Air quality could be further harmed by increases in wildfires and particulate matter.
- Californians will face greater risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.
 - Our Changing Climate: Assessing the Risks to California
<http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF>

GLOBAL WARMING INFORMATION

Resources: *Agriculture and Forests*



- Weather changes will change pest and disease patterns.
- Increased ozone pollution will interfere with plant growth and make plants more susceptible to disease and pests.
- Higher temperatures and faster crop growth can result in lower quality and lower yields.
- Forest Productivity will diminish also.
 - Our Changing Climate: Assessing the Risks to California
<http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF>



Global Warming Resources:

Impacts -- Water Supply

- More precipitation will fall as rain instead of snow, and snow will melt earlier, reducing the Sierra Nevada spring snowpack.
- By the end of the century, late spring stream flow could decline by almost a third. California farmers could lose as much as a quarter of the water supply they need. (Medium Scenario.)
- There would also be adverse effects on hydropower and winter recreation



Global Warming Information Resources: *Economic Benefit*

- Overall, emissions reduction strategies will have positive economic benefit.
- By 2020, the strategies are project to lead to a gain of 83,000 jobs and additional income of about \$4 billion above what the economy would produce without the strategies.
 - California Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006
http://www.climatechange.ca.gov/climate_action_team/reports/2006-04-03_FINAL_CAT_REPORT.PDF



Global Warming Information Resources: *Market Approaches*

- Cap and Trade
- Offsets
- Auctions
 - http://www.climatechange.ca.gov/policies/market_advisory.html
 - “The Cap and Trade Success Story,” by the Environmental Defence Fund. <http://www.edf.org/page.cfm?tagID=1085>



Global Warming Information Resources: *Equity*

- “It is the poorest of the poor in the world, and this includes poor people even in prosperous societies, who are going to be the worst hit.”
 - Rajendra Pachauri, Chair of the IPCC



Global Warming Information Resources: *Equity Concerns*

- Poor and Minority Communities bear a disproportionate burden from pollution.
- Industrial sources of GHG often produce locally harmful conventional and toxic pollutants as well.
- *The Challenge:* How to reduce GHG emissions while maximizing the overall societal benefits, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment, and public health.
 - <http://www.arb.ca.gov/cc/ejac/ejac.htm>



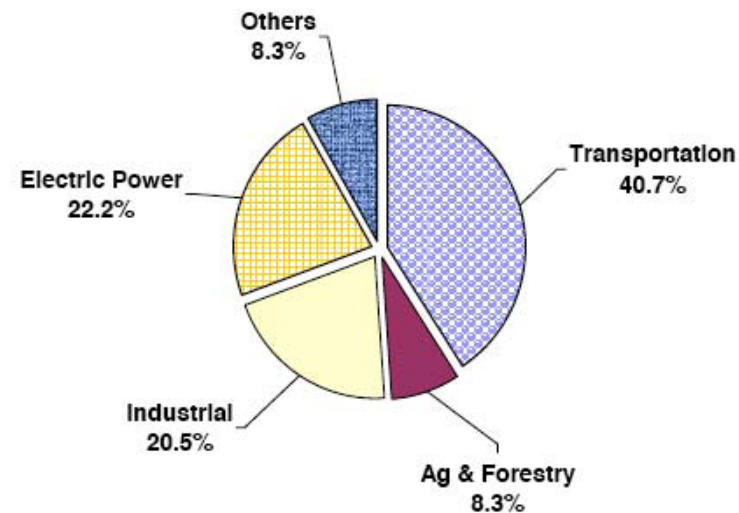
Global Warming Information Resources: *Equity Concerns*

- EJ communities want to share in the benefits of global warming prevention: cleaner air, jobs.
- Global warming prevention should not harm EJ communities: by further concentrating pollution sources in those communities.
- Communities want to be involved in decision making about industrial changes.

Global Warming Resources: *Sources of Greenhouse Gases*

Figure 3 -- Sources of California's 2004 GHG Emissions (By End-Use Sector)
(Includes electricity imports and excludes international bunker fuels)

- Transportation,
- Energy Use
- Water Use
- Agriculture



Source: California Energy Commission, Greenhouse Gas Inventory, Dec. 2006



Global Warming: *What the State is Doing*

Four approaches:

- Reducing California's Contributions to Global Warming and Defending those Actions
- Pushing the federal government to act
- Encouraging action and innovation at all levels in the State

WHAT THE STATE IS DOING.
*Reducing Its Greenhouse Gas
Emissions*



Three major State actions:

- Executive Order #S-03-05 (June 1, 2005)
- AB 32, Global Warming Solutions Act of 2006, H&S Code §§ 38500, et seq. (Sept. 27, 2006)
- AB 1493 (Pavley), H&S Code §§ 42823, 43018.5 (July 22, 2002)

WHAT THE STATE IS DOING.
*Reducing Its Greenhouse Gas
Emissions*



AB 32 and Ex. Order #S-3-05

- State must reduce total emissions to 1990 levels by 2020 (AB 32 & Ex. Order) and 80% below 1990 levels by 2050 (Ex. Order only).
- Very aggressive reduction targets in light of expected economic, population growth.

what the state is doing.

Reducing Its Greenhouse Gas Emissions



AB 32 Timeline

- By July 1, 2007, CARB forms advisory committees and adopts list of discrete early action measures.
- By January 1, 2010, early action measures take effect.
 - AB 32, Global Warming Solutions Act of 2006, H&S Code §§ 38500, et seq. (Sept. 27, 2006)

what the state is doing.

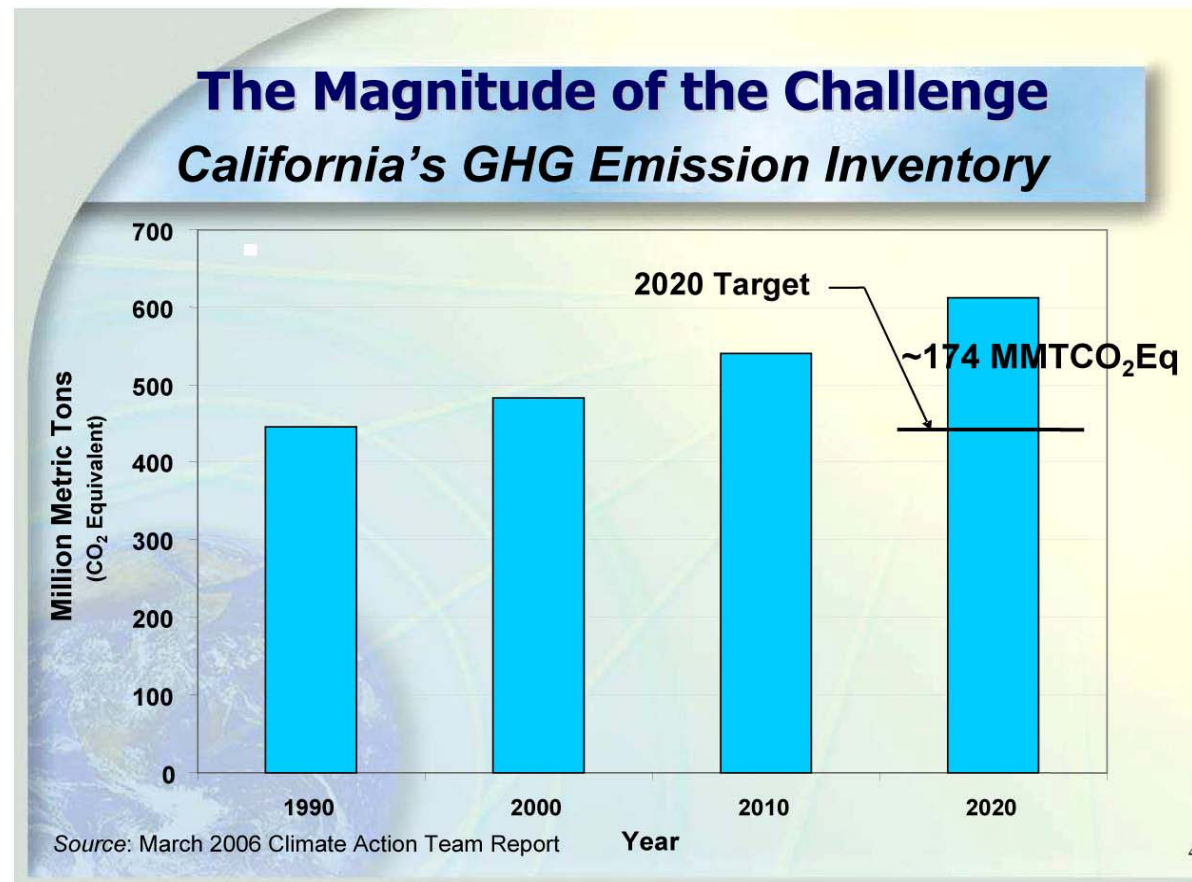
Reducing Its Greenhouse Gas Emissions



AB 32 Timeline

- 2009 CARB adopts emissions reduction plan and holds public workshops.
- 2010 ARB conducts series of rulemakings.
- By January 1, 2012, GHG rules and market mechanisms take effect and are legally enforceable.
- December 31, 2020, California achieves its GHG cap.

What the State is Doing: *Reducing Its Greenhouse Gas Emissions*





How much is 1 MMT CO₂Eq?

- 216,000 passenger cars not driven for one year or 114 million gallons of gasoline saved
 - Replacing 1.5 million less efficient refrigerators by Energy Star refrigerators
 - Replacing 13 million standard light bulbs with compact fluorescent lamps
 - Every adult under 65 in California walking up one floor instead of taking an elevator each workday
-
- California Air Resources Board, Conversion of 1 MMT to Familiar Equivalents, <http://www.arb.ca.gov/cc/factsheets/1mmtconversion.pdf>



How much is 1 MMT CO₂Eq?

- 26,000,000 tree seedlings grown for 10 years
- 833,000 acres of pine or fir forests absorbing CO₂ for one year
- 556,000 tons of waste being recycled instead of going to a landfill in California
- One year of electricity use by 193,000 average California households
- 1 MMT CO₂ has the same volume as the air in about 200,000 hot air balloons (under STP)
 - California Air Resources Board, Conversion of 1 MMT to Familiar Equivalents,
<http://www.arb.ca.gov/cc/factsheets/1mmtconversion.pdf>



What the State is Doing:
*Reducing Its Greenhouse Gas
Emissions*

AB 1493 of 2002 (Pavley)

- ARB approved GHG emission regulations for vehicles in Sept. 2004.
- CA filed Clean Air Act waiver petition w/EPA in Dec. 2005.
- Auto industry Sued to Stop Pavley regulations;
- And the waiver application?



What did EPA do with the waiver application?

- "There is no legal or technical justification for denying this."
- **"If you are asked to deny this waiver, I fear the credibility of the agency that we both love will be irreparably damaged."**
 - Memo from Christopher Grundler, Chief, Deputy Chief, EPA Office of Transportation and Air Quality



What the State is doing: *CEQA Changes*

CEQA and SB 97 (Pub. Res. Code §§ 21083.05 and 21097)

- Requires OPR to prepare mitigation guidelines by July 1, 2009.
- Requires Resources Agency to certify guidelines by January 1, 2010.
- No CEQA cause of action re GHGs re certain bond-funded infrastructure projects (sunsets January 1, 2010).



What the State is doing: *CEQA Changes*

- Attorney General's Actions
 - Filed 25+ comment letters under CEQA
 - Most major projects such as regional transportation projects, general plan amendments, large refinery expansions.
 - Two NEPA comment letters.
 - <http://ag.ca.gov/globalwarming/ceqa/comments.php>
 - One lawsuit to date (San Bernardino County)



What the State is Doing: *CEQA* *San Bernardino Settlement*

- County will amend General Plan & adopt Greenhouse Gas Emissions Reduction Plan.
- County will inventory GHG emissions
- County will develop target for reductions of projected emissions & feasible mitigation measures to meet target
 - http://ag.ca.gov/cms_pdfs/press/2007-08-21_San_Bernardino_settlement_agreement.pdf



What the State is Doing: *CEQA ConocoPhillips Settlement (Refinery Expansion)*

- Mitigation measures for estimated 500,000 metric tons per year of CO₂:
- Other offsets
 - http://ag.ca.gov/globalwarming/pdf/ConocoPhillips_Agreement.pdf



What the State is Doing: *Pushing for federal action*

Massachusetts v. EPA, ___ U.S. ___, 127 S.Ct. 1438 (2007)

- Under Clean Air Act (CAA), EPA “shall” regulate air pollutants from new motor vehicles that contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.



What the State is Doing: *Pushing for federal action*

Massachusetts v. EPA -- Merits

- GHGs are air pollutants under CAA.
- EPA can regulate vehicle emissions while DOT regulates mileage standards – agencies can avoid inconsistencies, conflict.
- EPA must adhere to statutory text – can't decide not to regulate on political grounds.



What the State is Doing: *Pushing for federal action*

Application of *Massachusetts v. EPA*

- Recent CA petitions to EPA to regulate other sources of greenhouse gas pollutants
 - Ocean-going vessels
 - Aircraft
 - Additional candidates?

What the State is Doing:

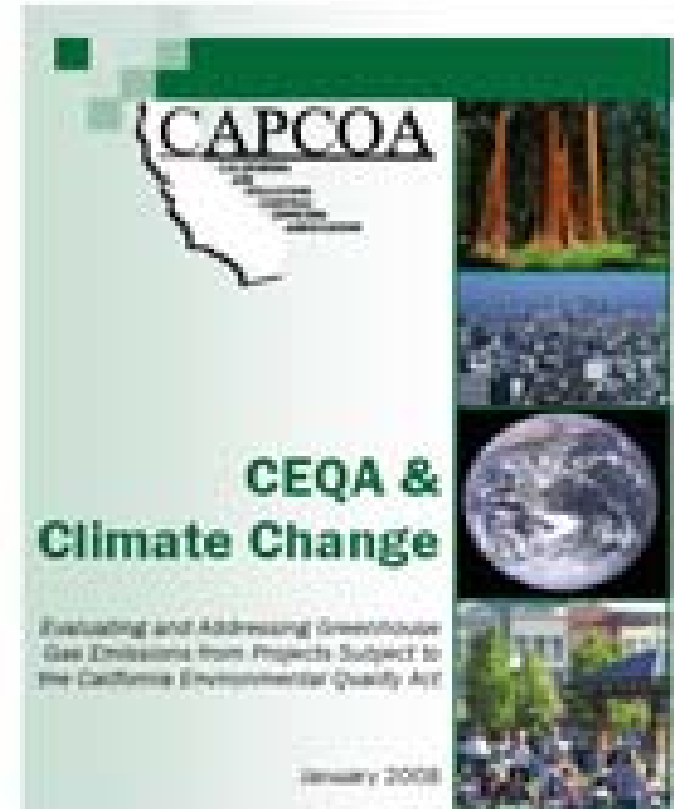
Pushing for federal action

Center for Biological Diversity v. NHTSA, 508 F.3d 508 (9th Cir. 2007)

- Challenge to CAFE standards under NEPA and EPCA.
- NHTSA's failure to put \$-figure on benefits of GHG emissions reductions held arbitrary and capricious.
- Implications for agencies that are required to conduct cost/benefit analyses?

What You Can Do: *Comment on CEQA Documents*

- General Plans
- Transportation Plans
- Developments
- Powerplants
 - <http://www.capcoa.org/>



What You Can Do :

Comment on CEQA Documents

- Governor's Office of Planning & Research
 - In 2006, 2 documents included GHG discussion; in 2007 almost 150 documents did
 - See OPR, CEQA Guidelines and Greenhouse Gases,
<http://opr.ca.gov/index.php?a=ceqa/index.html>
 - Cities and counties regularly update their general plans,
 - <http://ag.ca.gov/globalwarming/ceqa/comm>



WHAT YOU CAN DO: *Some Recurring Problems in CEQA Documents*

- No discussion of GHG emissions
- No determination one way or the other about significance
- Compare emissions of project to emissions of Business as Usual scenario, not to existing baseline emissions
- Argue that impacts of growth don't have to be analyzed because project just displacing growth that would happen anyway– “not

What You Can Do: *CEQA* *Mitigation Measures*

- Attorney General's Office has prepared a guidance document suggesting measures that may reduce the global warming related impacts of a project.
- http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf

EDMUND G. BROWN JR.
Attorney General

State of California
DEPARTMENT OF JUSTICE



The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level

Under the California Environmental Quality Act (CEQA), local agencies have a very important role to play in California's fight against global warming -- one of the most serious environmental effects facing the State today. Where local agencies undertake projects directly, they can and should design sustainable projects from the start, incorporating global warming related considerations into their projects at the earliest feasible time. Further, local agencies can encourage well-designed, sustainable private projects by analyzing and disclosing to the public the environmental benefits of such projects in any required environmental documents. And where projects as proposed will have significant global warming related effects, local agencies can require feasible changes or alternatives, and impose enforceable, verifiable, feasible mitigation measures to substantially lessen those effects. By the sum of their decisions, local agencies will help to move the State away from "business as usual" and toward a low-carbon future.

This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project. As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees). The measures set forth in this package are examples; the list is not intended to be exhaustive. Moreover, the measures cited may not be appropriate for every project. The decision of whether to approve a project -- as proposed or with required changes or mitigation -- is for the local agency, exercising its informed judgment in compliance with the law and balancing a variety of public objectives.

The first section of this document lists examples of measures that could be applied to a diverse range of projects where the lead agency determines that the project under consideration will have significant global warming related effects. In general, a given measure should not be considered in isolation, but as part of a larger set of measures that, working together, will reduce greenhouse gas emissions and the effects of global warming.

The second section of this document lists examples of potential greenhouse gas reduction measures in the general plan context. This section is included both to suggest how the measures set forth in the first section could be incorporated into a general plan, as well as to identify measures that are general plan specific. The measures in the second section may also be appropriate for inclusion in larger scale plans, including regional plans (e.g., blueprint plans) and in specific plans. Including these types of measures at the larger planning level, as appropriate, will help to ensure more sustainable project-specific development.

The third section provides links to sources of information on global warming impacts and emission reduction measures. The list is not complete, but may be a helpful start for local agencies seeking more information to carry out their CEQA obligations as they relate to global warming.

The endnotes set forth just some of the many examples of exemplary emission reduction measures already being implemented by local governments and agencies, utilities, private industry, and others. As these examples evidence, California at every level of government is taking up the challenge, devising new and innovative solutions, and leading the charge in the fight against global warming.

Opportunities for Activists: *CEQA*

Mitigation Measures

- Green Buildings (LEED)—
 - <http://www.usgbc.org/>
- California Air Resources Board Climate Change Project
 - <http://www.arb.ca.gov/cc/cc.htm>
- The CAPCOA White Paper
- The Attorney General's List of Mitigation Measures



What You Can Do: : *Promote local gov. engagement*

- cool cities --
 - <http://coolcities.us/>
- cool counties –
 - <http://www.kingcounty.gov/exec/coolcounties>
- Institute for Local Government
 - www.ca-ilg.org

Local Government – Innovative Actions



- Infill/higher density
- Green Building Requirements
- Solar Financing Districts
- School Congestion Plans
- Cool Roofs and Pavement
 - <http://www.consumerenergycenter.org/coolroof>



The Reality

- “It is business as usual that is utopian, and building a new world that is the pragmatic necessity.”
 - James Gustave Speth