

Mitigation Measures and Global Warming Resources
California Attorney General's Office

(1) Global Warming Mitigation Measures

The following are some examples of the types mitigation that local agencies may consider under the California Environmental Quality Act (CEQA) to offset or reduce global warming impacts. The list, which is by no means exhaustive or obligatory, includes measures and policies that could be undertaken directly by the local agency, incorporated into the agency's own "Climate Action Plan,"¹ or funded by "fair share" mitigation fees; measures that could be incorporated as a condition of approval of an individual project; and measures that may be outside the jurisdiction of the local agency to impose or require but still appropriate for consideration in an agency's environmental document.

While the lead agency must determine which particular mitigation measures, or suite of measures, is appropriate and feasible for a particular project, proponents of individual private projects are encouraged to take an active role in developing and presenting to lead agencies new and innovative ways to address the impacts of global warming.

Transportation

- Coordinate controlled intersections so that traffic passes more efficiently through congested areas.
- Set specific limits on idling time for commercial vehicles, including delivery and construction vehicles.
- Promote ride sharing programs *e.g.*, by designating a certain percentage of parking spaces for high-occupancy vehicles, providing larger parking spaces to accommodate vans used for ride-sharing, designating adequate passenger loading and unloading and waiting areas, and providing electronic message board space for coordinating rides.
- Create car-sharing programs. Accommodations for such programs include providing parking spaces for the car-share vehicles at convenient locations accessible by public transportation.²
- Create and/or expand existing vehicle buy-back programs to include vehicles with high greenhouse gas emissions.
- Require clean alternative fuels and electric vehicles.
- Develop the necessary infrastructure to encourage the use of alternative fuel vehicles (*e.g.*, electric vehicle charging facilities and conveniently located alternative fueling stations).³
- Increase the cost of driving and parking private vehicles by imposing tolls, parking fees, and residential parking permit limits.

- Develop transportation policies that give funding preference to public transit.⁴
- Design transportation centers where various public transportation modes intersect.
- Encourage the use of public transit systems by enhancing safety and cleanliness on vehicles and in and around stations.
- Assess transportation impact fees on new development in order to facilitate and increase public transit service.⁵
- Provide shuttle service to public transit.
- Offer public transit incentives.
- Incorporate bicycle lanes into street systems in regional transportation plans, new subdivisions, and large developments.
- Create bicycle lanes and walking paths directed to the location of schools and other logical points of destination and provide adequate bicycle parking.⁶ Ensure that non-motorized transportation systems are connected and not interrupted by impassable barriers, such as freeways.⁷
- Restore and/or expand school bus services. Where possible, use an alternative fuel school bus fleet.
- Require commercial projects to include facilities on-site to encourage employees to bicycle or walk to work.
- Provide public education and publicity about public transportation services.⁸
- Conduct a public information campaign on all options for individuals to reduce transportation emissions.
- Organize and lead a formal telecommute work program involving public agencies and private businesses. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences

Energy Efficiency and Renewable Energy

- Require energy efficient design for buildings.⁹ This may include strengthening local building codes for new construction and renovation to require a higher level of energy efficiency.¹⁰
- Adopt a “Green Building Program” to promote green building standards.¹¹
- Provide permitting incentives for energy efficient building projects, *e.g.*, by giving green projects priority in plan review, processing and field inspection services.¹²
- Fund and schedule energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, hot

water equipment, insulation and weatherization. (Facilitating or funding the improvement of energy efficiency in existing buildings could offset in part the global warming impacts of new development.) Offer financial incentives for adoption of identified efficiency measures.¹³

- Provide individualized energy management services for large energy users.
- Require the use of energy efficient heating and cooling systems, appliances and office equipment.¹⁴
- Fund incentives and technical assistance for lighting efficiency.¹⁵
- Require that projects use efficient lighting. (Fluorescent lighting uses approximately 75% less energy than incandescent lighting to deliver the same amount of light.)
- Require the use of Light Emitting Diode (LED) for traffic and street lighting.¹⁶
- Incorporate on-site renewable energy production (through, *e.g.*, participation in the California Energy Commission's New Solar Homes Partnership). Require project proponents to install solar panels, water reuse systems, and/or other systems to capture energy sources that would otherwise be wasted.¹⁷
- Streamline permitting and provide public information to facilitate accelerated construction of solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating, ventilation and air conditioning systems in existing buildings.¹⁸
- Provide innovative financing for energy efficiency and alternative energy projects. For example, allow property owners to pay for energy efficiency improvements and solar system installation through long-term assessments on individual property tax bills.¹⁹
- Fund incentives to encourage the use of energy efficient equipment and vehicles.
- Provide public education and publicity about energy efficiency and available programs and incentives.²⁰

Land Use Measures

- Encourage mixed-use, infill, and higher density development to reduce vehicle trips, promote alternatives to individual vehicle travel and promote efficient delivery of services and goods. Infill development generates fewer vehicle miles traveled (VMT) per capita and reduced emissions of greenhouse gases, and denser development is associated with increased public transit use.²¹ For example, a city or county could promote "smart" development by reducing developer fees or granting property tax credits for qualifying projects.²²
- Discourage development that will increase passenger vehicle VMT. Enact ordinances and programs to limit or prohibit sprawl – development that requires additional or longer passenger vehicle commutes between workplaces and residences.²³
- Incorporate public transit into project design.²⁴

- Require measures that take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.
- Preserve and create open space and parks. Preserve existing trees and require the planting of replacement trees for those removed in construction.
- Impose measures to address this “urban heat island” effect by, *e.g.*, requiring light-colored and reflective roofing materials and paint; light-colored roads and parking lots; shade trees in parking lots; and shade trees on the south and west sides of new or renovated buildings.²⁵ Darker colored roofs, pavement, and lack of trees may cause temperatures in urban environments to increase by as much as 6-8 degrees Fahrenheit as compared to surrounding areas.²⁶
- Facilitate “brownfield” development located near existing public transportation and jobs.
- Require pedestrian-only streets and plazas within developments, and destinations that may be reached conveniently by public transportation, walking, or bicycling.²⁷

Water Conservation and Efficiency²⁸

- Design and implement a comprehensive water conservation strategy. The strategy may include many of the specific items that follow, plus other innovative measures that are appropriate for the location.
- Require water efficient landscapes.²⁹ Adopt a strong landscape ordinance with water budgets to assure efficient landscape design, installation, and maintenance in new construction.
- Encourage the use of reclaimed water for landscape irrigation in new developments and on public property. Provide necessary infrastructure to deliver and use reclaimed water.
- Require water efficient design for buildings. This may include strengthening local building codes for new construction and implementing a program to renovate existing buildings to require a higher level of water efficiency.
- Adopt a retrofit ordinance that will require installation of water-efficient fixtures upon the sale of homes.³⁰
- Adopt and enforce restrictions on watering methods (*e.g.*, prohibiting systems that apply water to non-vegetated surfaces) and controls on runoff.
- Require water efficiency training and certification for irrigation designers, installers and managers.
- Provide individualized water audits for large water users to identify conservation opportunities. Offer financial incentives for adoption of identified efficiency measures.
- Provide water audits for large landscape accounts. Offer financial incentives for efficient irrigation controls and other efficiency measures.
- Fund incentives and technical assistance for water efficiency.
- Adopt standards that prescribe the maximum allowable effective impervious area

for all new development and redevelopment projects. Require preservation of the existing hydrologic character of developed sites to manage storm water and protect the environment. (Retaining storm water runoff onsite can drastically reduce the need for energy-intensive imported water at the site.)

- Adopt conservation pricing to encourage efficient water use.³¹

Solid Waste Measures

- Require projects to reuse and recycle construction and demolition waste.
- Implement or expand city or county-wide recycling and composting programs for residents and businesses.
- Increase areas served by recycling programs
- Extend the types of recycling services offered (*e.g.*, to include food and green waste recycling).
- Establish methane recovery in local landfills, wastewater treatment and animal operations plants to generate electricity.³²
- Provide public education and publicity about recycling services.

Carbon Offsets

- In some instances, a lead agency may find that measures that will directly reduce a project's emissions are insufficient. A lead agency may consider whether carbon offsets would be appropriate. The project proponent could, for example, fund off-site projects (*e.g.*, alternative energy projects) that will reduce carbon emissions, or could purchase "credits" from another entity that will fund such projects. The lead agency should ensure that any mitigation taking the form of carbon offsets is specifically identified and that such mitigation will in fact occur.

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