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ENVIRONMENTAL DEFENSE

finding the ways that work

GLOBAL WARMING SOLUTIONS IMPROVE AIR QUALITY AND HEALTH

The solutions to global warming, such as energy efficiency and renewable energy, can also help reduce air pollution and protect public health. And since scientists say global warming will increase the risks of certain negative health effects, California can further protect its residents by taking action to curb global warming. Poor air quality currently causes thousands of premature deaths and hospital admissions in California every year. Children, seniors, low-income communities, and communities of color are especially vulnerable. Meeting Assembly Bill 32's global warming pollution limit will not only help avoid the health risks associated with global warming, but reducing global warming pollution will also provide immediate health and air quality benefits for Californians.

Fossil Fuel Combustion: Bad for Global Warming, Bad for Health

Fossil fuel combustion contributes to both global warming and poor air quality. Three-quarters of California's global warming pollution is from burning fossil fuels – oil used in cars and trucks, coal and natural gas burned to produce electricity, and natural gas used in homes and businesses. Burning fossil fuels also produces unhealthy air pollutants including smog, particulate matter, and air toxics that can cause serious health problems including cancer, heart disease, asthma, and early death. The federal and state governments have set health-based air quality standards, but over 90% of Californians live in areas that do not meet these standards.

The Governor's Climate Action Team found that cutting California's global warming pollution 25% below forecasted levels by 2020 will require pursuing strategies that include more efficient and cleaner energy alternatives. While the vast majority of strategies to reduce global warming pollution simultaneously reduce unhealthy air pollutants, a few strategies, such as low blend ethanol fuels, do not. AB 32 includes specific provisions to ensure that the strategies California pursues to curb global warming also protect and improve air quality.

Solution: Energy Efficiency

California has made great strides in energy efficiency over the past 30 years, reducing electricity consumption by over 15%. Every year, these energy savings reduce emissions of nitrogen oxides (NO_x) – a primary contributor to smog – by approximately 5,400 tons, equivalent to taking nearly 575,000 passenger vehicles off the road. The California Energy Commission has set a goal of further reducing electricity consumption to avoid the need for 12 giant power plants over ten years through energy efficiency. Conservatively estimating that these energy savings avoid only the cleanest natural gas-fired power plants, these savings will further reduce NO_x emissions by more than 800 tons per year, providing air quality benefits equivalent to removing 86,000 more cars from the road. Even more opportunities to cost-effectively save energy through efficiency improvements remain, which will cut global warming pollution, save money, and reduce air pollution.

Solution: Renewable Energy

Renewable energy resources, such as wind and solar, offer abundant opportunities to generate clean electricity. Currently, renewable energy supplies about 11% of the state's electricity needs. Each year, renewable power reduces statewide NO_x emissions by almost 3,400 tons, avoiding emissions equal to more than 350,000 cars. California now requires electric utilities to increase

use of renewable energy to provide 20% of the state's power, and the Governor has set a goal of further increasing renewables to 33% of the state's power mix. Conservatively estimating that the renewable energy to meet the 33% goal by 2020 avoids only the cleanest natural gas-fired power plants, it will reduce NO_x emissions by an additional 1,900 tons annually, providing air quality benefits equivalent to removing almost 200,000 more cars from the road. Continuing to increase renewable energy is key to meeting the global warming pollution limit, while at the same time providing healthier air for Californians.

Solution: Cleaner Cars

Cars and trucks are the largest source of global warming pollution in California, and also offer the greatest opportunities to cut the state's pollution. California's passenger vehicles are already subject to tailpipe emission standards, which provide significant air pollution reductions. Even so, strategies to cut global warming pollution from vehicles will further reduce air pollution. For example, according to California Air Resources Board projections, the global warming standards for vehicles established pursuant to Assembly Bill 1493 (Pavley, 2002) will reduce smog-forming pollutants from the fuel production and distribution system by approximately 2,000 tons per year by 2020, likely benefiting low income and minority communities. In addition, the California Energy Commission projects that the state's tire efficiency program will reduce California's gasoline consumption by 77 to 107 million gallons annually, thereby reducing NO_x emissions by over 530 tons. Additional strategies to reduce gasoline consumption will both curb global warming pollution and unhealthy air pollution.

Solution: Alternative Fuels

Alternative fuel vehicles can also provide reductions in air pollution. In particular, electric and hydrogen powered vehicles do not have any tailpipe emissions, and if their fuel is produced from clean energy sources, then they can be powered without producing global warming pollution or air pollution. Renewable fuels such as ethanol and biodiesel can also reduce global warming pollution. High blend ethanol (E-85) can avoid the air quality problems associated with low blends and maximize global warming pollution reductions.

Solution: Diesel Emission Reduction Strategies

Reducing diesel emissions can provide multiple benefits – reducing global warming pollution, air toxics, and smog-forming pollutants. In particular, reducing emissions of diesel particulate matter (PM) can provide significant health benefits, because diesel PM is responsible for 70% of the cancer risk associated with air toxics in California. California is pursuing strategies to reduce diesel emissions at ports and truck stops by providing electric power to reduce ship and truck idling. According to California Air Resources Board projections, electrifying ports would reduce diesel PM emissions by 55% at the ports, and reducing idling at truck stops would reduce diesel PM emissions by over 40% at the stops. And these strategies will simultaneously curb global warming pollution.

Solution: Transit and Smart Growth

Transit systems reduce pollution while providing a convenient alternative for commuters. Public transit generally requires only half the energy of cars and SUVs for every passenger mile traveled. For example, commuters using the Los Angeles Metro's transit services reduce air pollution in Los Angeles by 2,500 tons of NO_x annually. Smart growth can further reduce global warming pollution from vehicles by increasing public transit opportunities and creating pedestrian and bicycle friendly communities. This provides health benefits both by reducing vehicle pollution and by enabling people to incorporate physical activity into their daily lives.

For more information visit: www.SolutionsForGlobalWarming.org

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