NEWS RELEASE

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California Department of Justice
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Attorney General Brown Calls For Aircraft Greenhouse Gas Emission Limits

LOS ANGELES — Calling aviation a "large and rapidly growing source" of greenhouse gas emissions, California Attorney General Edmund G. Brown Jr. today petitioned the United States Environmental Protection Agency to adopt global warming regulations for aircraft. The request comes on the heels of a landmark petition filed last month that asked the EPA to set limits on greenhouse gas emissions from ocean-going vessels.

"Aviation is a large and rapidly growing source of greenhouse gases and the EPA should have taken action by now to curb these emissions. Not to do so, ignores the tremendous opportunity for technological innovations that can increase efficiency and reduce emissions," Attorney General Brown told a news conference at the Los Angeles International Airport. "Aircraft engines burn massive quantities of fossil fuels and inject greenhouse gas pollution at high altitudes—right where these emissions have a heightened negative impact."

According to estimates by the EPA, aircraft in 2005 contributed three percent of the United States' total carbon dioxide emissions and 12 percent of the transportation sector emissions. The Federal Aviation Administration estimates that emissions from domestic aircraft will rise 60 percent by 2025, primarily due to expected increases in air transportation.

Because aircraft release emissions at high altitudes, the impact of aviation on global warming is greater than other major greenhouse gas emission sources. When nitrous oxide, for example, is emitted at high altitudes it generates much greater concentrations of ozone than when it is emitted at ground-level.

Because aircraft contribute large quantities of global greenhouse gas emissions and the volume of air traffic is expected to increase substantially in the future, California is asking the EPA to:

- Make an explicit finding that greenhouse gas emissions from aircraft contribute to air pollution that may endanger public health and welfare
- Adopt regulations to control greenhouse gas emissions from aircraft

Under the Clean Air Act, the EPA must first make such findings before establishing emissions standards. The petition filed today asks the EPA to respond within 180 days and initiate a formal process to ultimately limit emissions from all aircraft arriving or departing from U.S. airports. These emissions controls would reach the majority of aircraft operations in the United States—domestic aircraft accounted for 97% of the air operations in 1999.

There are currently no greenhouse gas emissions controls on aircraft and only limited controls for some conventional pollutants such as carbon monoxide. Last year, the International Civil Aviation

Organization—a United Nations agency—passed a resolution to set international emissions reduction agreements but the organization has taken no additional action to further this goal.

In response to the persistent lack of aircraft emissions rules, the European Parliament gave preliminary approval last month to a global warming control plan that limits carbon dioxide emissions from airlines flying to and from Europe beginning in 2011.

In today's petition, California asserts that the Environmental Protection Agency has the authority and the duty to adopt greenhouse gas emissions standards for aircraft. In *Massachusetts v. EPA*, the Supreme Court held that greenhouse gases are pollutants and therefore within EPA's regulatory authority under the Clean Air Act. Section 231 of the Act reads:

> The Administrator shall, from time to time, issue proposed emission standards applicable to the emissions of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.

On Monday, a team of three dozen scientists called upon Congress to make a $30 billion public investment in energy technologies—across all sectors of the economy—to reduce climate risk, increase energy security, and enhance competitiveness. The team of scientists, which includes Nobel Prize winners in chemistry, economics and medicine, said such an expenditure would be less than half of what America already invests in military research and development.

There are currently few controls on aircraft emissions and therefore the opportunity for technological innovation is substantial. The Massachusetts Institute for Technology, in a recent report to Congress, identified several strategies to increase fuel efficiency and reduce aircraft greenhouse gas emissions including:

- Increase the capacity of airports to handle more landings and thereby reduce unnecessary fuel expenditures on the ground and in the air
- Reduce auxiliary power usage by plugging aircraft into ground-side power supplied by the airport
- Use single engine taxiing
- Select more fuel-efficient routes and speeds
- Reduce excess fuel carried by aircraft
- Increase maintenance and cleaning of engines and airframes.

A recent study in the American Institute of Aeronautics and Astronautics Journal found that engine technology improvements, combined with design improvements and operational changes, could result in a 10% reduction over 2005 levels in carbon dioxide and other emissions.

The need for action to combat climate disruption is urgent. Last month, Rajendra K. Pachauri, the chief of the Noble-prize-winning Intergovernmental Panel on Climate Change stated that, "if there's no action before 2012, that's too late. What we do in the next two to three years will determine our future. This is the defining moment." Impacts that will continue to occur include: increasing temperatures, heat waves, melting of glaciers, changes in precipitation, increased hurricane intensity, coastal flooding, and increased heat-related illnesses.

California acknowledged the impact of greenhouse gas emissions on climate change and adopted the ground-breaking Global Warming Solutions Act, commonly known as AB 32. AB 32 requires California to reduce greenhouse gas emissions to 1990 levels by 2020—approximately a 25% reduction.

Other states, local governments, and national environmental organizations that joined California in petitioning the EPA today include: the South Coast Air Quality Management District, City of New York, District of Columbia, Connecticut, New Jersey, New Mexico, Pennsylvania Department of Environmental

Protection, Oceana, Earth Justice, Friends of the Earth, and the Center for Biological Diversity.

Today, Brown also launched a significant expansion of the Attorney General's Website to provide valuable and up-to-date information about how public officials, industry leaders, and private citizens can join the fight against global warming. For more information visit: http://ag.ca.gov/globalwarming

California's petition is attached.

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For Additional Information:

Aviation and the Environment: A National Vision Statement, Framework for Goals and Recommended Actions, Report to the United States Congress (Dec. 2004)
http://web.mit.edu/aeroastro/partner/reports/congrept_aviation_envirn.pdf

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IPCC, Special Report – Aviation and the Global Atmosphere, Summary for Policymakers (1999).
http://www.grida.no/climate/ipcc/aviation/index.htm

Next Generation Air Transportation System/Joint Planning and Development Office (NGATS/JPDO) Environmental Integrated Product Team (EIPT) and the Partnership for Air Transportation Noise and Emissions Reduction (PARTNER), Report of Findings and Recommendations, Executive Summary, Workshop on the Impacts of Aviation on Climate Change (Aug. 31, 2006)
http://web.mit.edu/aeroastro/partner/reports/congrept_aviation_envirn.pdf

Royal Aeronautical Society, Air Travel – Greener by Design, Report of the Greener Design Science and Technology Sub-Group (July 2005)
http://www.greenerbydesign.org.uk/_FILES/publications/GbD%20-%202005%20Science%20and%20Technology%20Report.pdf

Royal Commission on Environmental Protection (RCEP), The Environmental Effects of Civil Aircraft in Flight, London, UK (Nov. 29, 2002)
http://www.rcep.org.uk/avreport.htm.

Stern Report, Stern Review on the Economics of Climate Change, Cambridge University Press (Oct. 30, 2006) www.sternreview.org.uk