

## CLIMATE CHANGE

## California Sets Goals for Cutting Greenhouse Gases

With the Bush Administration still looking for additional scientific evidence on climate change, states have led the way in proposing ways to reduce further warming. Last week, the high-profile Republican governor of the most populous state in the country weighed in, offering ambitious targets for curbing the state's emissions of greenhouse gases. "I say the debate is over," Arnold Schwarzenegger announced at an annual world environmental festival. "We know the science. We see the threat. And we know the time for action is now."

California exerts a huge impact on the global environment. Its economy is the sixth largest in the world, and the state is the 10th largest emitter of greenhouse gases on the planet. "This is a potentially major political step," says climatologist Stephen Schneider of Stanford University. He and others say the move could spur further action by other states—several in the Northeast are hammering out cap-and-trade systems, for example—and rekindle hopes abroad that the United States might eventually fall in line with the rest of the world on its policies to combat global warming.

Speaking on 2 June in San Francisco at

United Nations World Environment Day, Schwarzenegger argued for reductions of greenhouse gases on economic grounds. He cited threats such as the likelihood of reduced water supplies, rising sea level, and more agricultural pests. He also pointed to opportunities for state businesses to develop



**Flexing muscle.** California Governor Arnold Schwarzenegger announces an executive order setting targets to cut the state's greenhouse gas emissions.

more environment-friendly technology. "It sends a real signal that ... action on climate change is essential to maintaining a strong economy," says Alden Meyer of the Union of Concerned Scientists. California companies might be able to trade emission credits with countries of the European Union, which has

begun a cap-and-trade system.

Although short on details, the executive order lays out three ambitious targets. It calls for lowering emissions to 2000 levels by 2010 and to 1990 levels by 2020. By 2050, the state's emissions would be 80% below the 1990 levels. The short-term targets are not as aggressive as those of the Kyoto treaty but are equivalent to a bill reintroduced last month by U.S. Senators John McCain (R-AZ) and Joseph Lieberman (D-CT). Although Schwarzenegger's executive order didn't mention how to achieve those reductions, he cited 2004 state regulations that require lower emissions from vehicles (which may become stalled in a court battle) and advancing the timetable to 2010 for generating 20% of the state's power from solar, wind, and other renewable sources.

Michael Oppenheimer, an atmospheric scientist at Princeton University in New Jersey, says it would be feasible to achieve the 2010 target (which represents an 11% cut of emissions from today's levels) and the 2020 target (a 25% cut) by quickly adopting such green efforts. The deeper reductions by 2050 may require a cap-and-trade system for greenhouse gases similar to the one implemented by the European Union, he notes. Schwarzenegger has asked the state Environmental Protection Agency to examine options for such a system and report back in January.

—ERIK STOKSTAD

## EUROPEAN UNION

## Researchers Lobby to Head Off Threatened Cuts

**BERLIN**—High hopes among European researchers are turning to worry as political battles threaten to scuttle a planned budget boost and mar the launch of the long-sought European Research Council (ERC).

In April, the European Commission proposed a doubling of the E.U.'s research budget, to €70 billion (\$86 billion) between 2007 and 2013 (*Science*, 15 April, p. 342). The plan included €12 billion for a new ERC, which would fund basic research across Europe.

But political tussles over member countries' contributions are threatening to shrink the whole of the commission's proposed €1.03 trillion budget by at least €150 billion. In a proposal put forward on 28 May, Luxembourg's Prime Minister Jean-Claude Juncker, whose country currently holds the E.U. presidency, said the main cuts would come from research programs as well as "structural funds," which build roads and other infrastructure.

"It's very serious," says Helga Nowotny of

the Science Center Vienna, who is head of the European Research Advisory Board. Although ERC would still go forward even without the doubling, Nowotny says, a severely reduced budget will diminish its impact. Nowotny and her colleagues sent a letter on 6 June to more than 100 scientific and industrial leaders to lobby their governments to fund the full research proposal. The letter urges recipients to point out "the contradiction between what governments say in favor of research and how they act."

E.U. Commissioner for Research Janez Potočnik says the financial decisions will be a "moment of truth for the E.U." Potočnik was in Berlin on 2 June to try to persuade German leaders—some of the main holdouts in the budget battles—of the importance of research in the E.U. He told *Science* that European politicians say repeatedly that research and innovation should be the highest priority. But protecting subsidies and capping national contributions "turn out to have slightly higher priority."

Some researchers are also concerned about an initial plan for the ERC circulated among the heads of European research councils at a meeting last month in Reykjavik, Iceland, says Ernst-Ludwig Winnacker, head of the German Research Foundation, the DFG. The plan seems to shift power away from a council of independent scientists to the staff of an "executive agency" who answer to the European Commission. Potočnik, however, says the worries are misplaced. All issues of substance, he says "will be decided by the scientific council. The commission will sign off" on the council's decisions.

"It's a matter of trust," Nowotny adds. "Legally it is not possible to give €1 billion to a group of people who have not been elected or even appointed. It must be the commission who takes the ultimate responsibility. But the commissioner has always said he will be the guarantor for the autonomy of the ERC." European scientists will be sure to remind him to keep his word.

—GRETCHEN VOGEL