

**President Robert C. Dynes**  
**Opening Remarks at California Public Utilities Commission Public Workshop on**  
**California Institute for Climate Solutions Proposal**  
**December 12, 2007**

I'd like to first thank President Peevey and the Commission for their pioneering spirit. This is really timely. The driving force behind this proposal, I believe, is the PUC's mission to serve California ratepayers. But the over-arching vision of this Institute is really global, as today's presentations, I hope, will demonstrate. I hope they will also demonstrate that what we're proposing is really a collection of the finest minds in California and the finest institutions of higher education in California, both public and private.

Climate change, as President Peevey has said, is the pre-eminent environmental challenge of our time. It is one of the most compelling issues we face as a society. Energy use is at the heart of this and must be addressed upfront. As the PUC has recognized, the problem is global in scope, but it has serious local impacts. Deteriorating air quality, rising sea-levels, shrinking snowpacks, and other impacts of climate change pose serious threats to the health and economic well-being of Californians. California has emerged as a world leader, probably THE world leader, in addressing this issue by working across all sectors: academia, industry, government, and non-profits. For that, I would recognize the leadership of Governor Schwarzenegger. I've seen him in action, and I applaud his vision on this subject.

California is also uniquely equipped to tackle this challenge because the state has a long history of innovation and entrepreneurship. The best and brightest people in the world come to California. Our goal is to bring those best and brightest people together to address this issue. Quite simply, the proposed California Institute for Climate Solutions will bring those minds to work on protecting our air quality, our health, our economy, and ultimately, our planet. The Institute brings together experts to identify specific areas of research and education that can generate practical solutions to climate change problems. Institute partners will carry out the needed research and education and training and disseminate the results so that they can be effectively deployed by industry and by public sector practitioners.

This bold venture has the potential to catapult California to a new level of global leadership in environmental stewardship. It will harness the awesome power of our world-class universities and colleges, our National Labs, and our pioneering industries. Imagine putting all that together and bringing it together in a cooperative way. That's the proposal.

Let me spend a few minutes walking through this with you. Of course, we'll hear much more detail as the day evolves. I will touch on the points at a high level that will introduce the various panels that will speak later.

At the request of President Peevey, the University of California developed an initial proposal for a California Institute for Climate Solutions and submitted it in August. Almost immediately when it was submitted, there were lots of comments and lots of suggestions, and we've been modifying and honing that proposal ever since. We've broadened it, and we've broadened our partnerships, ever since. We are proposing an Institute funded at a level of \$600 million over 10 years. We hope to leverage additional funding from other sources. I do not believe that that will be the only source of funding that will come. This will seed various other sources of private, philanthropic, public and federal funds that I believe this will generate. I don't know what the ratio will be, but it will be really substantial, in my view. This proposal sets forth specific steps to undertake strategic planning, research, education, outreach and dissemination. In all these areas, the Institute would build on the effective work of others. So we will not be stepping on other agencies or other workgroups.

What we hope to do is to help them do their job better as well as lead research and education.

This is a cooperative effort. California has a strong track record of innovation through cooperation, particularly among its public and private universities and colleges. We do collaborate with all other colleagues inside California. Our academic institutions partner with one another, with the National Labs, and with industry to deliver world-class research and education. We do this better than anyone else in the world. While we see our own warts, the rest of the world envies us as to how we interact and collaborate with industry and other institutions. UC, Caltech, Stanford, USC, CSU, and the Community Colleges have joined in this effort and have prepared a statement of support for this Institute. So you can wear whatever colors you want today; it's allowed. (I have blue and gold on today.)

Institute partnerships will work in two important ways. First, partner institutions will participate in the Institute's governing board and in the work of its committees and work groups. You will hear more about our proposed model for governance and organization from UCLA Vice Chancellor for Research Roberto Peccei later today. Second, the vast bulk of the Institute's work will be carried out by partner institutions throughout the State, selected largely through an open competitive peer review process.

At the hub of this will be an organization that we propose to host, not at the University of California but at some arm's length on or near a UC campus. Reliance on UC's existing infrastructure will allow the Institute to hit the ground running. But again, most of the Institute's programmatic work will take place at partner institutions throughout the State. This model has some similarities, in my mind, to a combination of the National Academy of Sciences and the National Science Foundation, both an agency which addresses important issues, brings together study groups to address questions, we will do it sometimes quickly when the answers are needed quickly, and we will do it very carefully when the answers require a lot of vision, as the National Academy does. But, as the NSF does, it's a funding agency as well, and the thoughts and profound thinking of the Institute will educate where we put our funding and how we lead funding.

The statewide infrastructure will feature an open competitive peer review process for selecting research and education projects. As urgent climate-related issues arise, the Institute can marshal California's phenomenal resources and expertise to generate solutions. In some cases, the Institute might issue RFPs for single investigator research. In other cases, I could imagine issuing RFPs for a center on a campus or joint campuses, perhaps one in Southern California in relationship with UCLA, USC, and Caltech, I don't know, but I envision both individual research projects and centers that would address more broad issues that require strong collaborative interaction and interdisciplinary work. This is what would be determined by the Governing Board and by the Director of the Institute.

The Institute's hub would be the home of the Director and the administrative staff. The Institute's staff will run the grants program and support the work of the Institute's committees. The hub will promote coordination and dissemination by hosting conferences, conducting workshops for industry practitioners and policymakers, publishing newsletters and reports, and organizing a visitors program to boost cross-fertilization and professional development, so that not only do we create the new knowledge, we deliver it.

"Timely responses to critical needs" will be an Institute mantra. While most projects will be chosen through peer review, the Institute will be nimble enough that if an agency requests an answer to something quickly, we will have the wherewithal, we will be able to bring the experts in on a very quick timescale to answer those questions.

I envision four functions for this Institute. Let me walk you through each one of those. The first is to bring together real expertise to develop a "road map" for strategic planning, and

that will be discussed in a panel this morning. This will identify those areas of research, technological innovation, policy, and education likely to have the greatest impact on mitigating climate change. The road map will serve a dual purpose, and I imagine that this road map will be a dynamic road map; we will continue to refresh it all the time as technological and policy changes occur.

First, it will be a resource for policymakers and industry leaders seeking information on gaps in current efforts and areas meriting greater investment. Second, it will serve as the basis for the Institute's research and education agenda. Let me emphasize here that many strategic planning efforts are already underway, so I don't expect that we will reinvent the wheel. What we intend to do is to use best practices and bring road maps together that have already been thought through, bring them together in this umbrella model that we hope will educate us as to what direction we should be going in, will educate industry, will educate academia, and will educate agencies as to what are the most important issues that California is facing. UC Berkeley's Dean of Engineering, Shankar Sastry, and Director Carl Blumstein from the California Institute for Energy Efficiency will go into more detail on the road mapping in a little while.

Using the product of the road map, we will fund mission-oriented research. Special attention will be given to serving real needs of the state, complementing current efforts, and promoting coordination and collaboration. And that's really one of the keys: to promote coordination and collaboration. I think of this Institute really as an umbrella that can help interactions and coordinations of the various industries, of the various agencies, and of the higher education institutions in California.

The mission-oriented research and the potential areas of focus will be defined by the road map process. So the road map will educate us as to where we go. That said, our initial proposal has set out potential areas of focus that seem worthy of serious consideration. There's both supply and demand when it comes to energy and energy usage. For example, demand is in buildings and homes, how we most efficiently use energy that is supplied, and we know that we are far from being efficient in California. We're better than the rest of the nation, but we're far from being efficient. On the supply side, energy supply, sources of energy and the technologies associated with the sources of energy. In addition, measurements, informatics and analytical infrastructure is a theme that cuts through several areas. Professor John Weyent from Stanford's Precourt Institute for Energy Efficiency will speak later on the Institute's research mission.

Next is education and workforce training. An integral part of this Institute will be to force ourselves to prepare the next generation of workforce that will be necessary to help California lead the world. These initiatives will focus on things like educating the next generation of researchers, enhancing graduate and undergraduate training in critical fields, improving training for technical professionals, and, looking way out to the future, developing teacher training and K-through-12 curriculum. Beth Ambos, California State University's Assistant Vice Chancellor for Research Initiatives and Partnerships, and Ron Selge, Dean of Career and Technical Education from the Community College system, will elaborate on this later.

The fourth main function is the dissemination and transfer of knowledge. It's our ability to actually educate both the practitioners and the ratepayers of California. This is the most exciting part of the Institute, in my own mind; the other things, I believe we can do. Since I joined the University of California, I've been almost obsessed by the 21<sup>st</sup>-century mission of the University, which, in my mind, is R, D, & D: research, development, and delivery. The delivery is an integral part of this Institute. If we do not deliver our new creations and people to the benefit of the public, we will not have done our job. So the second D of R, D, and D is a very, very important part of this Institute. Randy Hall, the Vice Provost for Research Advancement at USC, will tell you more about this part of it.

So let me finish by looking ahead to the future. Any of you who teach and deal with young people know that young people, our children and our children's children, are demanding of us to take steps to address global warming, the environment, and energy usage. Twenty-five percent of all oil used in the world is used in the United States at this time. That's a lot. If you talk to any young student, they will say, "Please, I want to see blue skies as I get older. I want my children to see blue skies, and I want my grandchildren to see blue skies." I believe we have to heed Al Gore's charge. I believe we have to act now. Thank you.

*Link to CPUC Webcast of workshop:*

*[http://www.californiaadmin.com/cgi-bin/agenda.cgi?location=cpuc&savefile=CPUC\\_WS121207](http://www.californiaadmin.com/cgi-bin/agenda.cgi?location=cpuc&savefile=CPUC_WS121207)*