As part of an ongoing series of white papers on business and climate change, UC Berkeley and UCLA Schools of Law, together with the California Attorney General's Office, is pleased to release our second white paper, on the topic of increasing renewable energy production from large public and commercial buildings, highway land, aqueducts, and other facilities located close to electricity consumers. The report is called "In Our Backyard: How to Increase Renewable Energy Production on Big Buildings and Other Local Spaces." You can download a copy from either Berkeley or UCLA's website (wherever your web loyalties may lie).

The white paper was based on a June workshop we held with representatives from large businesses and real estate companies, renewable energy producers, academics, and public agency leaders. Our goal was to determine what policies and industry actions are necessary to generate more renewable energy production (such as from solar and wind) from the largely untapped "middle ground" of renewable energy sites — those that are bigger than the individual homeowner's roof but not at the massive scale of the enormous and remote solar installations in the desert.

Industry insiders refer to this type of renewable energy production as "distributed generation," because the energy generated is distributed close to where the consumers are. Large rooftops and highway land, among other prime sites all around us, represent huge opportunities to generate potentially enough energy to obviate the short-term need for the big, central-station solar plants out in the hinterlands. These remote stations are likely to take *at least* ten years to build, considering the attendant land use and endangered species issues, not to mention the need for expensive new transmission lines.

Meanwhile, California law requires utilities to provide 20 percent of their energy from renewable sources by 2010, and Governor Schwarzenegger has issued an executive order directing the Air Resources Board to issue regulations that would boost this requirement to 33 percent by 2020. Unfortunately, California's investor-owned utilities are not on pace to meet this target, having hovered around 13 percent for years. Without a dramatic and immediate deployment of renewable energy technology, California will languish in its ability to meet these targets and become an economic leader in this crucial business sector.

But state and utility leaders have overlooked the tremendous opportunities closer to home. So why don't we have more renewables on the roofs of our warehouses, floating on the aqueduct, and along our highways? The main problem is a lack of financial incentives. To address this barrier, the white paper recommends expanding and improving two state incentive programs:

1. "Net metering," which allows a consumer to offset his or her annual electricity charges with renewable energy generated on the property. No cash is paid out in this program — only retail credit. The program has been successful but is bumping up against two legislative limits: 1) a cap on the amount of electricity that utilities can provide from participants in this program and 2) a ceiling on the size of the renewable energy facilities that are allowed to participate. These restrictions need to be eased significantly.
2. The horribly-named "feed-in tariff" program, which provides cash payments to renewable energy generators for the energy they supply to the grid. California's feed-in tariff program is ineffective — it unduly limits the size of the facilities that can participate and contains a payment rate that has failed to stimulate widespread production. This is unfortunate, because the feed-in tariff has been remarkably successful at stimulating immediate and widespread deployment of renewables in countries like Spain and Germany. If done properly in California, we could see a similar result with tremendous long-term opportunities to build a large domestic renewable energy market.

Another barrier is institutional, particularly for some public agencies that lack the resources and will to capitalize on renewable energy opportunities on their properties. The white paper recommends that the state require public agencies, where feasible, to consider the renewable energy potential of state land under their control. Without a legislative mandate, many of these agencies will not devote the resources required to capitalize on their assets. In addition, the paper recommends that the state's Renewable Energy Transmission Initiative or "RETI," which is an inter-agency process that facilitates the construction of, and transmission lines for, large and remote renewable plants, also consider distributed or decentralized renewable energy generation as a preferred alternative to the big and remote renewable plants.

With the right policies in place, California could once again become a leader in the field of renewable energy production. Not only would our economy benefit (a 2004 UC Berkeley study showed that renewable energy creates more economic growth and at least twice as many jobs as the equivalent fossil-fuel based energy production), but we would see a substantial reduction in greenhouse gas emissions. And focusing on the opportunities that are often in our own backyard will save us time and bureaucratic grief over controversial proposals for large and remote renewable plants.

Finally, for those of your interested in starting a collection of the entire set of white papers, our first paper, called "Removing the Roadblocks: How to Make Sustainable Development Happen Now," can be downloaded from UCLA and Berkeley's websites (again, choose the

school of your choice). It details the policies needed to promote more compact, connected, and sustainable real estate development. And stay tuned for forthcoming papers on agriculture and retrofitting existing residences to make them more energy efficient — collect the entire set!