

Keynote Address at the Desert Lyceum
April 25, 2008

- ❖ At the state level, California has implemented an array of policies to promote energy sustainability, which is increasingly defined in terms of the role these policies play in reducing the state's carbon footprint.
 - My agency, the California Public Utilities Commission, is responsible for implementing a significant number of these policies, including the California Solar Initiative, and the Renewables Portfolio Standard, as well as the utility-administered energy efficiency and demand response programs, to name a few.
 - Furthermore, with the passage of AB32, the CPUC is charged with providing recommendations to the ARB regarding how to implement a carbon regime on the electricity and gas sectors.
- ❖ Through these programs, and our authority over the rates and procurement activities of the investor-owned utilities, the CPUC has extensive influence over the resources the state relies upon to meet its energy needs.

- However, despite this, there are limits to what we, as a state agency charged with overseeing the activities of the investor-owned utilities, can do to address climate change.
- ❖ There is an important and critical role that only local government can play.
- ❖ I'd like to begin with a discussion of one of the key areas where local governments have substantial influence, namely, land use.
- ❖ There is little question that land use, in terms of housing densities and where development is allowed to occur, has huge implications on the amount of energy we consume, both in our vehicles and in our homes.
- ❖ In California, as elsewhere, the key driver of both economic and environmental costs in the electricity sector is the system peak, which is defined as the amount of capacity required to meet the maximum electrical demand at any one time.
 - From an environmental and global warming standpoint, our state currently relies on relatively dirtier generating facilities to meet peak loads.

- ❖ California's system peak is seasonal, and typically hits its highest point in the summer as temperatures rise and air-conditioners turn on.
 - While this relationship has long been the case in California, we are finding that our energy demand is getting increasingly peaky.
 - This may be a function of more volatile weather conditions, however, another, more important factor is likely at play here, namely the increasing amount of development occurring in the interior of the state, where summer temperatures are substantially higher than on the coast.
 - This in turn translates into increased air conditioning loads and higher system peaks.
 - To the extent that dirtier facilities are generally relied upon to meet these system peaks this means that as the system gets peakier the carbon footprint of the state increases.

- ❖ According to the California Energy Commission, today about 70% of the state's population lives on the coast, while approximately 30% live inland.

- Over the next several decades the share of the state's population living inland will increase to around 40%, fueled largely by the rapid development in the San Joaquin Valley, the Inland Empire, and the Sacramento Valley.
- If we are going to continue to experience this rapid growth in the state's interior, local governments need to consider and take action to address the impacts of this growth on peak energy demand and GHG emissions.
- ❖ Increasing residential development in the state's interior, particularly low-density development, has troubling implications for the environmental impacts of the transportation sector, as households become increasingly reliant on cars.
- ❖ Between 1975 and 2004, VMT in California increased at an annual rate of about 3%. Importantly, this rate is significantly higher than the pace of population growth over the same period, suggesting that much of this is due to urban growth patterns.

- The CEC estimates that VMT will continue to grow at about 2% per year for the foreseeable future absent significant shifts in land use policies.
- ❖ Clearly, if we are to address land use issues, local governments will be involved.
- ❖ Furthermore, they can be effective advocates for the type of investments in transportation, building and energy infrastructure necessary to make development more consistent with our overarching state goals.
 - Local governments are in the front-lines, particularly with respect to encouraging more environmentally sustainable development.
 - Indeed, in the context of energy efficiency and our existing building codes and standards, enforcement of these rules falls to local government.
- ❖ The importance of local land use decisions was reflected last year when Attorney General Brown settled a lawsuit with San Bernardino County to resolve issues surrounding the county's 25- year plan.

- In the Attorney General's view, the plan as originally developed failed to adequately address its implications on global warming and how it would advance or hinder the GHG emission reduction targets adopted in AB 32.
- ❖ The terms of the settlement showcase the kinds of proactive steps that local governments can take to address climate change, including developing emission inventories and targeting emission reductions that can be achieved through discretionary land use decisions and reducing the carbon footprint of government operations and buildings.
- ❖ Over the long-term, as the environmental costs of development are more fully internalized into the price of gas and electricity, it is reasonable to think that the market will drive a greater level of compatibility between local land use and the state's overarching environmental objectives.
 - At present, notwithstanding current high gas prices, greenhouse gases remain largely unaccounted for in the costs faced by homeowners and drivers.

- Until those costs are truly internalized it remains the role of regulators to ensure that these impacts are appropriately considered.
- ❖ I'd now like to turn to some other areas where I believe local government can help the state achieve its GHG emission reduction goals.
- ❖ First, with respect to energy efficiency, as I've already suggested, local governments have and continue to play a key role.
 - Largely under the auspices of the state's energy efficiency programs, local governments have partnered with our utilities to perform a mix of direct energy saving work, as well as indirect work in the form of outreach, audits, training, codes and standards, and development seminars to exceed Title 24 requirements.
- ❖ In the current 2006 thru 2008 energy efficiency program cycle our utilities have budgeted over \$190 million to support local government partnerships.
- ❖ There are also valuable steps that local government can take to facilitate broader adoption of distributed solar.

- ❖ In 2007, Berkeley unveiled an innovative plan to facilitate solar installations by offering Berkeley residents and business what are essentially low interest loans to cover the upfront costs of a solar system.
 - Rather than assigning the loan to the homeowner, the loan will instead be assigned to the property, with repayment being made through property taxes via the creation of “Sustainable Energy Financing Districts”.
 - Because municipalities can typically borrow money at a lower rate than residents or businesses, this approach has significant advantages relative to the status quo, under which a system owner either has to pay the upfront costs of solar out-of-pocket, or borrow money at the prevailing lending rate.
- ❖ Despite the various incentives currently offered to support solar, the up-front costs remain a significant hurdle to many customers.
 - By providing what amounts to a low interest loan financed through property taxes, local governments can provide a critical form of

support and help facilitate the installation of distributed solar, an important resource in the fight against global warming.

➤ Importantly, because the facility is financed via property taxes, should the property transfer ownership, the municipality won't find itself with stranded costs.

❖ Such an approach could also be pursued as a complement to existing energy efficiency and other distributed generation programs, in particular those where up-front costs may still be a challenge for many homeowners and businesses.

➤ To that end there is now movement in the state legislature via AB 811 to expand this innovative approach statewide to cover both energy efficiency and distributed generation investments. In this regard I truly applaud the leadership efforts of Palm Desert.

❖ There are other ways in which local governments can enable broader deployment of distributed solar technologies.

❖ In 1978, the state passed the California Solar Rights Act, which largely eliminated restrictive zoning and other rules that were intended to preserve community aesthetics.

- ❖ Despite this invaluable step, and subsequent amendments to the Act, local ordinances and permitting requirements can remain problematic.
- ❖ In September of 2006, the Sierra Club issued a study that illustrated the wide variation in the cost cities charge installers for solar permits in the San Francisco Bay Area.
 - The fees for a typical residential system ranged from \$0 to as much as \$1,074.
 - Earlier studies in San Mateo and Santa Clara counties produced similar results.
- ❖ Reducing permitting costs both in terms of fees and paperwork that installers face can help create a more receptive environment for solar adoption.
- ❖ I would also point out that local governments have the opportunity to lead by example by investing in clean energy technologies to meet their own specific energy needs and reducing the energy and carbon footprint of their buildings and operations.

- ❖ To facilitate this, to name one example, in the context of the CSI, we offer incentives tailored to the financial realities of government and non-profit entities.
 - These incentives are higher than those offered to residential and commercial customers, recognizing the inability of government and non-profit entities to take advantage of renewable energy tax credits offered by the federal government.
- ❖ While distributed solar offers great promise, MW for MW, the current reality is that it is substantially more costly when compared to large scale, central station renewable technologies.
 - Where distributed solar delivers energy at a cost on the order of \$.25 per kWh, large scale projects deliver energy at approximately half that price.
- ❖ We hope that as the distributed solar industry gains experience, these costs will come down and distributed generation will become cost competitive with other forms of renewable and, indeed conventional, forms of generation.

- However, for the time being, the overwhelming majority of the renewable contracts that have been signed by our utilities are for large scale projects in excess of 20 MW in capacity.
- ❖ Accessing these resources will require significant investments in transmission infrastructure because economically viable renewable resources are geographically concentrated.
 - Providence, not policy, dictates where these resources are located.
- ❖ Earlier this year I attended the groundbreaking ceremony for the first three segments of the Tehachapi Renewable Transmission plan.
 - These lines represent the initial phase of a much larger transmission plan that, if approved by the CPUC, will eventually allow the state to access an estimated 4,500 MW of high quality wind capacity in the Tehachapi area.
- ❖ Similarly the CPUC is currently considering SDG&E's proposal to build the Sunrise Powerlink, a line that would, among other things, facilitate development of significant amounts of renewables in the Imperial Valley.

- ❖ For those of you unfamiliar with the Sunrise project, it would be an understatement to say that it has been the subject of some controversy.
 - The controversy, primarily having to do whether the line should be allowed to run through the Anza-Borrego State Park, highlights the tension we face as we seek to balance our statewide renewable energy objectives with more local concerns.
- ❖ Let me make clear that we have not yet made any determination as to what, if any, line should be built.
- ❖ Nor do I mean to suggest that this is a “*Sophie’s Choice*” of either supporting renewable development or supporting state parks.
 - There are alternatives that we must consider before rendering a decision.
- ❖ My point is that a line, if built, will end up in someone’s back yard and will more than likely be heavily contested by the affected parties.
- ❖ More generally, any transmission line to access far flung renewable resources will have adverse impacts of some kind.

- ❖ While I acknowledge that the political realities are that local governments and organizations will always advocate for their interests, I would encourage those entities to temper their opposition, mindful of the statewide objectives we collectively share to greatly expand our reliance on renewable energy and reduce our GHG footprint.
 - Achievement of these objectives is in the long-term interests of all Californians.
- ❖ Time is not on our side in the fight against global warming.
- ❖ Ultimately we are all in the same leaking boat, and every moment spent arguing over who should pay to fix those leaks, is another moment that more water comes rushing in.
- ❖ Thus far I have focused largely on the actions that local governments might take to help the state achieve its various sustainable energy and climate change objectives.
- ❖ However, I think it is equally important that local governments not only see themselves as enablers of existing state policies, but also

exemplars that can help expand our perspective for what lies within the realm of the possible.

- ❖ State policy, in my view should set the floor, not the ceiling, for what can be done to mitigate the environmental impacts of our energy needs.
- ❖ In 1997 the Danish government challenged the residents of Samsø, an island community of approximately 4000 residents to completely eliminate their GHG emissions.
 - Today this community gets 100% of its energy from renewable sources.
 - My understanding is that this is done without procuring renewable energy certificates or offsets off-island, rather every kWh and therm produced and consumed on the island is directly generated from a renewable technology that yields zero net CO₂ emissions.
- ❖ I think this kind of thought leadership and demonstration can have a powerful influence on policy by raising the bar.

- ❖ In California, the City of Palm Desert, in partnership with SCE, SoCalGas and the Energy Coalition is seeking to reduce its energy consumption by 30% by 2011.
- While it remains to be seen if this effort will ultimately achieve its goals, the audacity of the goal is itself worthy of praise and I believe represents the kind of aggressive forward thinking that will need to become the rule, not the exception, as we, at all levels of government, address climate change.
- Thank you.