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Solar PV in Los Angeles

The Emperor has no clothes, says UCLA.

The Los Angeles Business Council released a hard-hitting report on the future of solar photovoltaics in southern California at its annual sustainability summit April 6, 2010.

The blockbuster report could have profound repercussions on renewable energy policy not only in Los Angeles, but also in California. In unusually clear and concise language, the report, written by the University of California at Los Angeles (UCLA), cuts through the myths and misrepresentations about feed-in tariffs and squarely concludes that if Los Angeles, and by extension California, wants to meet its renewable energy targets, there's no choice but to move to a system of multi-tiered feed-in tariffs.

In true Southern California fashion, the report was introduced to a glittering, high-powered gathering at the hilltop Getty Museum overlooking the Los Angeles basin and the gleaming towers of downtown. The L.A. Business council's event was a "who's who" of influential business, community, and political leaders from across the region, including Los Angeles mayor Antonio Villaraigosa, gubernatorial candidate Edmund G. (Jerry) Brown Jr., and Mary Nichols, chair of the California Air Resources Board.

The report, Designing an Effective Feed-in Tariff for Greater Los Angeles, gores several sacred cows, such as the California Solar Initiative, the federal investment tax credit, and a so-called feed-in tariff proposed by Los Angeles' Department of Water and Power (LADWP).

Authors J.R. DeShazo and Ryan Matulka at the Luskin Center for Innovation in UCLA's School of Public Affairs and the L.A. Business Council now find themselves in the maelstrom of volatile state and local politics in an election year.

In an ironic twist that was not lost on observers, California has not had an effective renewable energy policy since Jerry Brown left the Governor's office more than two decades ago.

Some of the report's key findings:

- California's share of worldwide solar PV is continuing to decline.
- Driven by aggressive feed-in tariff policies, other jurisdictions around the world are increasing their use of solar energy, developing their local economies, and capturing the world's solar market at a faster rate than California.
- 45 countries now have feed-in tariff policies.
- In California at the end of 2009 the installed cost of solar PV varied widely from \$4,630/kW_{AC} for large industrial systems to \$8,440/kW_{AC} for residential systems.
- Tax-based subsidies are a barrier to solar ownership for public and non-profit agencies.
- Without federal and state subsidies, solar PV cannot pay for itself even in sunny Southern California with current tariffs.

But that was just a warm-up for insightful critiques of several state and national policies that purport to support development of solar PV.

UCLA on recent California Feed-in Tariff Policy

The tariffs in AB 1969, the first of many so-called "feed-in tariff" bills that have passed in California, are based

on the value of the electricity, not on the cost of generation, and, thus, are not high enough to be effective. Solar developers have not used the "feed-in tariff" as a result.

Similarly, AB 920, another of the "feed-in tariff" bills "will not fundamentally change the nature of net-metering incentives" in the state.

SB 32, the most recent of the state's "feed-in tariff" bills, amended the determination of "value" by including environmental and transmission benefits. However, the UCLA report suggests that SB 32 will add only $0.02 to $0.04 per kilowatt-hour to the price.

UCLA is quick to dismiss the California Public Utility Commission's proposed Renewable Auction Mechanism by noting that "in-basin solar is not likely to win contracts under the RAM mechanism."

UCLA on Federal Tax Credits

The disadvantage of federal tax credits is that owners "must owe taxes in order to realize the benefits. Public agencies and non-profit entities cannot directly receive this benefit. With the onset of the financial crisis, fewer commercial entities owed enough income taxes to monetize this credit."

UCLA on California's RPS

"California's state RPS program has helped create opportunities for professional developers to sell solar power to the utilities, but it has not significantly expanded the opportunities for in-basin solar."

Probably the report's most far-reaching and certainly most controversial conclusion is that "California's current policies . . . do not maximize the opportunities for solar energy generation within the state and the Los Angeles basin."

UCLA on SMUD

UCLA's report summarizes the much ballyhooed Sacramento Municipal Utility District's so-called feed-in tariff by noting simply that SMUD's "program is not intended to support an industry, incentivize widespread adoption of solar, or create access to the electricity supply markets."

UCLA on LADWP

LADWP's proposed feed-in tariff program is intended to procure no more than 25 MW, an embarrassingly paltry amount for a city the size of Los Angeles that bills itself a leader in renewable energy. Worse, says UCLA, the LADWP's tariffs will not even pay back a solar system's initial cost. The tariffs must be increased by a factor of two to four before they become attractive. In short, "this proposal will not induce any additional in-basin solar for Los Angeles."

UCLA Concludes

"There is a disconnection between Los Angeles' aggressive solar goals and its policies. Although the region maintains some of North America's most ambitious renewable energy and economic development goals, the current solar policy framework does not facilitate any significant in-basin solar contribution to these goals. . .

"California's existing and proposed FIT programs are not effective for inducing extensive in-basin solar for Los Angeles. These programs lack a cost-based tariff structure that facilitates participation from non-professional solar owners and owners of small projects. . . Under the near-term market conditions, neither California nor Los Angeles will experience widespread solar participation with value-based tariffs."

". . . Other FIT programs have proven that tariffs must be cost-based and differentiated for solar participation."

". . . cost-based tariffs are the only proven tariff structure to incentivize solar energy. However, the increased costs of the solar technology will impact ratepayers more profoundly than other, less costly technologies. Conversely, the cost-based tariff structure may incentivize many small solar projects and create greater opportunities for local employment."

The Test

The test now for UCLA and the L.A. Business Council is to design a solar PV feed-in tariff program that not only will work in practice but also will survive California's contentious political environment. It will be a measure of the Business Council's political acumen as well as its muscle if it can move a program successfully through the fractious city council and get it implemented by a recalcitrant LADWP.

If the Business Council fails, Los Angeles, and California too, will continue to fall further behind other jurisdictions in renewable energy development and the job creation it entails.