

Generation

Wholesale Distributed Generation 'Set To Crank' In California



By Felicity Carus



Photo by Maury Phillips/Getty Images For Mercury LLC

Growth in California's solar market will be driven by demand for wholesale distributed generation, as utilities shift away from central power stations to rooftop installations of one megawatt or less, said the executive director of a leading clean power consultancy.

Craig Lewis from the Clean Coalition told the PHOTON Solar Electric Utility Conference in San Francisco that he had been advising the California governor on his 20 GW of additional renewables by 2020. Lewis compared installation rates between California and Germany: in 2011 Germans installed an additional 7.5 GW and while California added around 40 0MW. Last year, the US had an installed solar capacity of 3 GW, versus 18 GW in Germany.

See here for AOL Energy's earlier coverage from the PHOTON conference.

"Wholesale Distributed Generation is cranking around the world. The Germans are knocking it out of the ballpark," he said. "They are absolutely running laps around California, even though California's solar resource is 70% better. It's a ridiculous situation."

"One of the reasons is that they are focused on wholesale DG. Almost all of it is rooftop and below 1MW. Governor Jerry Brown is a big fan of DG. He has been pressed hard by the folks who want to do the central station power plants so he said we need some data to show that WDG can be cost effective relative to these big transmission projects."

Lewis said that the costs of transmission to connect stranded resources to the grid would be \$80 billion over 20 years - in the

same range as California's controversial High Speed Rail.

Price Tag or Pot Of Gold?

He said: "HSR in Cal is a contentious issue because it's about a \$100 billion investment over the next 20 years and people are screaming bloody murder about it because of its price tag. As policy makers become aware of this hidden secret they're getting very aware that they need to be looking at DG solutions. There's a big pot of gold here that we can invest in DG and intelligent grid solutions so you don't have to go buying all that transmission.

"What's the actual cost to the ratepayer? What's the impact on the transmission distribution cost? And that is the big hidden secret here in California. Every kilowatt hour that is coming from transmission in California today is charged 1.1 cents per kwh. That transmission access charge is expected to go up to around 3 cents range over the next 20 years."

The California Public Utilities Commission is currently seeking comment on its cost containment mechanism, as no one yet knows what the cost will be to the taxpayer.

His research showed that the best value for the California ratepayer comes from the larger size WDG 1 MW rooftop.

Away From Central Station

Utilities had already started to shift their focus from the central station model, said [in](#) Julia Hamm, president and CEO of the [in](#) Solar Electric Power Association: "My sense is that with the very large multi-MW solar projects there are some in the works now that may not be the way of the future. We probably aren't going to see a much larger focus on projects that are 5 MW-30 MW and in most cases those will be wholesale DG. Because of transmission costs and the siting issues, permitting it's much simpler to do the smaller projects.

"People thought of economies of scale, the bigger we make it, the cheaper it will be. But that's not necessarily turning out to be the case."

California's Renewable Portfolio Standard of 33% by 2020 had been the major driver for solar installations, with an estimated \$20.8 billion in solicited contracts.

The amount of solar bid into the RPS in 2011 was four times the required amount with only 6% of proposals winning CPUC approval, said Sara Birmingham, director of western policy at the [in](#) Solar Energy Industries Association.

Competition had driven bid prices as low as 7 cents/kwh. "I have some concerns about that," she said. "I hope that these are real bids not speculative. I don't think it does the industry any good to put in speculative bids in the hope of getting that contract, it can do a lot of harm. If they can be built at that price that's fantastic news, but it remains to be seen what will happen with some of these contracts.

"Some of these speculative projects maybe putting in these bids and hoping and praying that all the stars align, the costs go down and by the time they install in 2-3 years that it will become a realistic price.

Good News, Bad News

"The good news is that there is a lot of interest in the program. The

bad news is it's highly competitive and I'm not sure how much additional procurement opportunities there will be. If I were then I would be looking at the numbers and perhaps holding off for a while. It's going to be tough. The failure rate at this time and historically has been abysmal."

But California's solar market was now moving so fast that the 33% target was now seen as a floor price, not a target by most people in the industry, she said.

However, sudden accelerated penetration of DG and electric vehicles could cause problems for utilities, said Jim Avery, the senior vice president of power supply at [in](#) SDG&E.

"The idea of people driving an electric car five years ago was a rather foreign thought," he said. "We've had well over 1,000 cars in just the last several months in San Diego and we're projecting we're going to have plug in EVs in the neighborhood of 250,000 in the next eight years in San Diego alone.

"We could handle 500,000 if people charged during off peak, but between 5pm and 8pm we'd be screwed."