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Germany Shares Some Lessons After Kicking Past U.S. in Solar PV—Again

The U.S. soccer team may have advanced past Germany in the Women's World Cup taking place in Germany, but Germany continues to wallop America in solar-photovoltaic installations.

At a July 11 discussion on German solar policies, CPUC moderator Curtis Seymour noted the ongoing soccer games and used a soccer ball to represent the amount of solar PV installed in Germany in 2010—about 7,400 MW. A baseball represented America's solar PV installations in 2010 and a golf ball represented California's about 878 MW and 260 MW, respectively.

At the CPUC "Thought Leaders" session, German renewables-company leaders discussed the different approaches the countries take and the different programs that they use.

Martin Heming, CEO of Schott Solar, noted that political will—not need—has driven Germany to change its energy mix.

"We don't need to change it. We want to change it," Heming said.

Germany aims to get 35 percent of its electricity from renewables by 2020 and 80 percent by 2050. The panelists noted the country's plan to phase out nuclear plants, shutting down seven this year and nine more by 2022. They pointed to plans for more onshore and offshore wind energy, and a likely need for new loans and legislation to help develop and connect those new projects.

Heming noted that more than 80 percent of solar PV in Germany is decentralized and about 20 percent comes from larger utility-scale projects.

"It's pretty much the reverse" in the U.S., added Marc van Gerven, CEO of Q-Cells.

Van Gerven stressed grid access and priority—and simple interconnection procedures—as key to connecting more renewables. Heming noted that independent grid operators pay for network upgrades, with those costs spread among power consumers.

Audience member Craig Lewis, executive director of Clean Coalition, wondered whether California could follow Germany's model of spreading interconnection costs among customers, rather than making renewable-energy generators pay those costs without ratepayer reimbursement.

After the meeting, Lewis complained of a lack of transparency in California on identifying good interconnection sites on the distribution system for projects. For instance, projects can lease space and get power-purchase agreements to sell that renewable energy to utilities. But the interconnection process to study and upgrade connection sites can take years and cost a lot of money that renewables developers must fund. Meanwhile, ratepayers wind up paying for transmission upgrades.

"Grid transparency is absolutely critical," Lewis said. He also noted a need to make projects and deals with utilities easy to do—some firms have the roof space for 1 MW to 5 MW projects, for instance, but don't want the hassle of bidding into solicitations. Lewis also pointed to California's stronger sunshine compared to Germany's.

"It's ridiculous," he said of Germany's lead on solar PV.

Some audience participants renewed calls for California to implement a German-style feed-in tariff to boost smaller-sized projects and use more of the state's strong solar resource.

To longtime renewables and feed-in-tariff proponent Paul Gipe, the soccer ball, baseball and golf ball analogy clarified the lack of American progress.

"That was brilliant," Gipe said of the displays. "We're way, woefully behind."

A feed-in-tariff policy could help boost decentralized projects in California, Gipe argued. "It's easier to do all distributed [generation] than it is to do all centralization," he added, pointing to Germany.

Audience member and Germany native Chris Mentzel of Clean Energy Maui LLC, who worked to develop a feed-in tariff in Hawaii, agreed.

"If you want to save the world, then pay somebody to do it," Mentzel said. "The feed-in tariff inspires the middle class . . . to take part in this energy change."

Longtime solar advocate, engineer and industry watcher Bill Powers also sees a feed-in tariff as the most effective path, and called for it to apply to projects sized up to 20 MW, with no cap. Such projects can cover rooftops and avoid environmental impacts, he added.

"The feed-in tariff's definitely the way to go," Powers said. "The German program is awesome, it's just awesome."

He noted that it provides an example to learn lessons from and questioned why California has not discussed its details more often. Instead, California invests in new natural-gas power plants that it does not need when it has a huge reserve margin, Powers complained.

He pointed to the way Germany has focused its efforts on forecasting hour- and day-ahead solar and wind production in order to eliminate the need to add gas peakers. Such precise forecasting can help to more efficiently dispatch renewable resources, instead of “flying blind,” he said.

“We put no effort into forecasting,” Powers added. And utilities take advantage of the public desire to move toward renewables by front-loading—and ratebasing—infrastructure such as transmission and gas plants despite a lack of need for it, he said.

Meanwhile, interconnection problems hold up small renewables projects. But ratepayers could fund those interconnection costs as they do in Germany, since those costs are offset anyway by the impact that additional DG projects have on reducing wholesale power prices, Powers argued.

“The feed-in tariff is the best model,” Powers said, adding that it has the “potential to change the landscape, almost overnight” [Hilary Corrigan].