

MARCH 8, 2011 TESTIMONY SUPPORTING SB 1141, AN ACT CONCERNING NET METERING, AND HB 6544, AN ACT CONCERNING ENERGY EFFICIENCY FROM SOLAR CONNECTICUT INC., EXECUTIVE DIRECTOR MICHAEL TRAHAN

As the solar industry matures across the United States, the more advanced and successful solar program elements are found in states with long-term solar strategies in place.

Issues such as renewable portfolio standards, solar installer licensing, solar renewable energy credits (SRECs), and net metering are working in as many as half, or more, of U.S. states.

With a few exceptions most all of these programs have limited but successful histories. Many of these programs will need to change slightly from year to year to adapt to changing markets and leverage mistakes and successes learned in other states. But for the most part the states who have committed to solar programs are making positive progress toward reducing and steadying electric rates, creating local jobs, cleaner air, improving energy security, reducing our reliance on other nations for our energy needs, and avoiding the construction of additional transmission infrastructure and the associated negative environmental impacts.

Net metering occurs when an electric customer's energy generation from an on-site solar system, fuel cell or wind turbine exceeds the customer's use, electricity from the customer flows back to the grid, offsetting electricity consumed by the customer at a different time during the same billing cycle. In effect, the customer uses excess generation to offset electricity that the customer otherwise would have to purchase at the utility's full retail rate.

Net metering is required by law in most U.S. states (see attached map) some of which authorized net metering twenty-five or more years ago. Solar Connecticut, Inc., and its more than 70 members ranging from solar installers, electricians and plumbers, to distributors, suppliers, and architects strongly support further development of Connecticut's existing net metering law to include virtual net metering (VNM).

Some states have already expanded net metering to allow meter aggregation for multiple systems at different facilities on the same piece of property owned by the same customer. California, the third largest solar market in the world allows virtual meter aggregation, where certain customers can net meter multiple systems at different facilities on different properties owned by the same customer. Massachusetts allows "community net metering" sometimes called "neighborhood net metering," which allows for the joint ownership of a solar energy system by different customers, such as condominium owners, or private association owners.

In 2008, this committee ordered the completion of a long-term solar strategy. The so-called "KEMA Report" was completed. A cross section of stakeholders helped shape that report including solar industry workers, Connecticut electric power companies, and the DPUC. That report endorsed virtual net-metering. It is a natural progression that's occurring across the nation in states that are serious about promoting clean energy generation as means of improving the environment, reducing electric rates and creating jobs.

One of the best, maybe the best, reasons for expanding net metering is that *not every property owner has appropriate rooftop space or flat ground space to locate a solar system* sufficient to meet the electric needs of that property. Although they may have a neighbor next door or around the corner or own another piece of property nearby that *does* have appropriate space. Why shouldn't good solar, or fuel cell, or wind sites in areas where there is no load go unused? Virtual net metering or a community solar project would allow property owners unable to host a clean energy project, to take advantage of good sites they own or share ownership with.

All this is designed to address one of Connecticut's most pressing needs. High electric rates.

Take municipalities for example. Allow operators of multiple municipal (or state owned) properties to install clean energy generation on their good host sites and virtually credit that power to other properties would have a significant price affect. And when you reduce the cost of municipal and state electric bills, you cut the local and state tax bill for taxpayers.

There will be challenges. Not the least of which the creation of system that fairly treats ratepayers to prevent inter-class or intra-class shifting of stranded costs. We encourage the legislature to do what it can to encourage the participation of all groups connected to this issue so that a fair resolution is determined. Part of that cost shifting discussion should focus on the benefits of VNM.

We also support the new streamlined loan program for renewable energy and energy efficiency found in sec 7 of HB 6544 and offer our industry assistance in developing this legislation further. We will also submit a soon to be released national report on PACE (Property Assessed Clean Energy) that is another renewable energy financing model some committee members have expressed an interest in.

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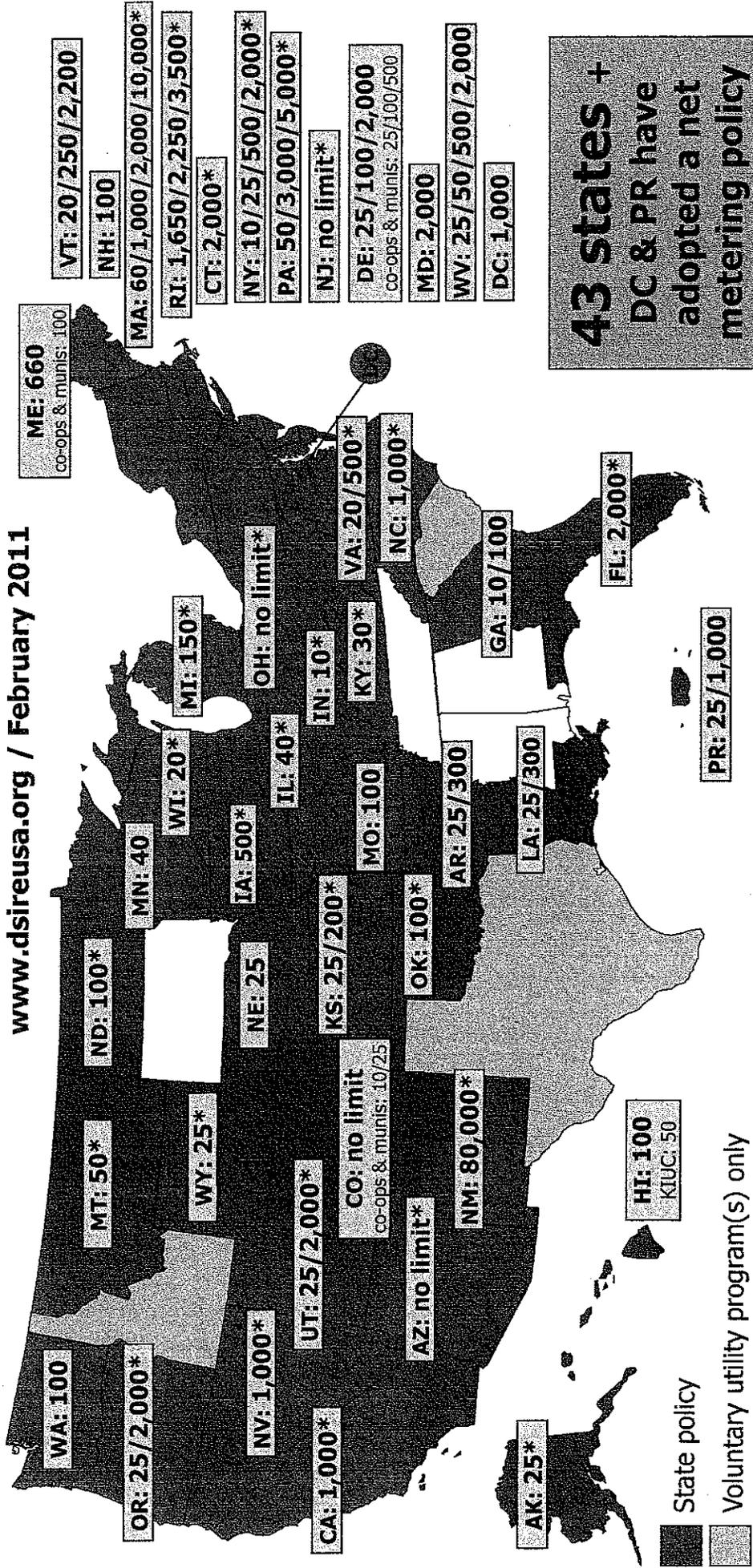
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* State policy applies to certain utility types only (e.g., investor-owned utilities)

Note: Numbers indicate individual system capacity limit in kW. Some limits vary by customer type, technology and/or application. Other limits might also apply. This map generally does not address statutory changes until administrative rules have been adopted to implement such changes.

Virtual Net Metering

By Andy Wickless Associate Director, Energy Practice, Navigant | February 24, 2011
In our financial trends column this month, we look at programs that allow apartment dwellers and other renters access to solar power.

California, USA -- Historically, if someone wanted to install a grid-tied solar system but lacked a suitable site, they were left with few, if any, options. Electric customers such as apartment building tenants or homeowners with shaded roofs were not eligible or apt for net metering tariffs, which otherwise would have allowed them to offset their normal electricity usage with the output of a solar system.

Net metering has served as an important incentive for consumer investment in solar. However, until recently, to capture net metering credits, there needed to be a one-to-one relationship between the solar generation system's meter and the meter associated with the offsetting electricity load. Moreover, the two needed to be co-located and tied to the same electric service account. These restrictions are beginning to subside with the advent of virtual net metering (VNM). VNM is an electric tariff that allows for the net-metering credits from a single solar generating system to be distributed among multiple electric service accounts.

Net metering has been around since the 1980s. Now, 43 states as well as the District of Columbia allow net metering. However, VNM is a relatively new concept. Massachusetts, for example, has implemented a "neighborhood net metering" program, which allows groups of at least 10 "neighbors" to spread the net metering credits from a single PV system across the electric accounts of the participating neighbors. Rhode Island offers VNM for certain customer classes such as local and state governments. Neither, however, has implemented VNM across all customer classes. California has taken a similar approach, piloting the concept with a select group of customers, namely the multifamily low-income segment.

California began its experiment with VNM as part of the California Solar Initiative (CSI). In 2005 and 2006, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) established the \$2.17 billion CSI program. As part of the program, the CPUC required that at least 10 percent of all CSI funds be reserved for low income residential housing. The CPUC decided to split the low income solar incentives budget equally between single family and multifamily homes.

The Multifamily Affordable Solar Housing (MASH) program provided the CPUC with the opportunity to pilot the concept of VNM. In Decision 08-10-036, the CPUC acknowledged the

economic and technical challenges to installing a solar energy system in a multifamily affordable housing complex and said VNM can overcome the challenge of allocating benefits from a single solar energy system to housing whose units are individually metered. The Commission said VNM allows bill credits for the output of a single solar installation to be shared with tenants in multifamily housing, without physical master metering or site-specific infrastructure upgrades.

In the same decision, the CPUC instructed the state's investor-owned utilities to file VNM tariff proposals. The primary difference between these tariffs and the typical single-meter net metering tariffs is the allocation of benefits across VNM participants. The utilities' VNM tariffs would need to allow the building owner or manager to divide the solar energy credits between the common area and the tenant area. This allocation percentage would remain fixed for at least five years. In addition, the VNM tariffs would need to allow for the allocation of net energy metering benefits from a single PV system to all meters on a multi-tenant property, based on the size of each tenant's unit.

If VNM sounds like a benefit for utility customers interested in solar and you wonder why all states have not adopted VNM policies, it would be helpful to identify its potential costs. In California, the CPUC noted that there likely would be costs "for each utility to modify its billing system to accommodate VNM." The CPUC added that additional work would be required by utilities particularly in allocating credits to individual tenant bills.

Other questions include, what happens when a tenant moves out? What happens if VNM were expanded to commercial rate classes and a shopping mall tenant expanded its space? For the low-income multifamily program, the CPUC allowed utilities to recover from the CSI general administrative budget "reasonable" costs associated with VNM implementation. If VNM were expanded in California, however, the costs needed to administer VNM and their recovery are not clear.

Besides the complexity of net-metering credit allocation, utilities have cited the issue of "free wheeling" on their distribution networks. California utilities expressed concern over customers paying nothing to use the distribution system to transport, or wheel, power from the location where the energy is produced to where the energy is consumed. "Free wheeling" is not an issue in the MASH program as a solar system must be located on the same property as the offsetting load to be eligible for VNM. Consequently, net metering credits received by MASH participants are valued at the full bundled retail rate.

In Massachusetts' "neighborhood net metering" program, however, participants could potentially be across town from the solar system and net metering credits do not include the distribution component of the applicable retail rate.

While VNM is currently limited in California to MASH participants, the CPUC is considering expanding it to multi-tenant properties beyond the MASH program. As the CPUC and other regulators evaluate VNM's relative benefits, as well as other forms of community renewables such as meter aggregation, joint billing and shared ownership, they will need to weigh the relative costs. As with the proliferation of non-utility solar PPAs, virtual net metering will likely evolve the roles customers and utilities play in procuring and managing energy. [END]