Guest Post: Why Tradable SRECs Are Ruining Distributed Solar

Okay, that might be a little strong, but we had to get your attention.

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The following is a guest post from the North Carolina Solar Center, which includes the Database of State Incentives for Renewables & Efficiency (DSIRE).

I write this article as someone (1) who could not be more interested in how the different state solar renewable energy credit (SREC) trading markets are structured and how they operate, and (2) who as recently as a couple of years ago felt SREC trading markets represented a real breakthrough for incentivizing solar. Notwithstanding the title of this guest post, hopefully that little introduction establishes my credentials as a student (figuratively) and an analyst of public policy rather than a zealot. In any case, perhaps a better way to put it is to say that while in most cases, distributed solar needs some form of supplemental incentive beyond federal tax credits and net metering, it doesn't need tradable SRECs.

Why not? The arguments below may not be new to anyone who operates in the eastern U.S. solar landscape, but sometimes part of persuasion is presenting ideas in a new way. I've certainly persuaded myself of the merits of my arguments, so let's just see if I can persuade anyone else. Tradable SRECs are ruining distributed solar because:

1) They Enhance Risk. There are plenty of people who remain skeptical of even the basic concept of solar electricity (i.e., the technology is too new, inefficient, and unreliable). This is not surprising, but what *is* surprising is

how we could arrive at a system that takes what many see as a risky investment in the first place and introduces additional risk. Of course, every investment carries a certain amount of risk, and there will always be elements that are beyond control and predictive capabilities of even the most sophisticated operator. The chosen policy path cannot and need not eliminate all risks, but it seems reasonable to ask that it not exacerbate them by subjecting adopters to the whims of markets that few would describe as well-functioning, transparent, or predictable beyond the near term.

And yet, for a while it seemed like this didn't matter. We've seen huge investments in some state markets, resulting in supply that far outstrips the mandated demand. How did that happen? Certainly, exogenous influences like the 1603 grants played a role, but the potential upside also attracted investments by those with an apparent tolerance for risk, as well as by those who did not fully understand the risk. I think that the shoe is on the other foot now. In New Jersey, for instance, we now have a demonstrated rather than theoretical risk, in the market that many of us, myself included, thought was less vulnerable than the rest due to its size. The question is: Is there anyone out there who is willing to bet that it won't happen again? To quote a prolific figure in U.S. history, "Fool me once, shame on you. Fool me twice, won't get fooled again." If we're not fools, then un-contracted SRECs now have zero value in stimulating investment even among risk-tolerant parties. If they have zero value, what's the point of using them as a financial incentive?

2) SREC Markets Don't Balance Themselves. To follow on my prior point, it seems that the sole truly accurate prediction that we can make about SREC markets is that they exhibit a very tenuous balance between supply and demand. The empirical data we have indicates that maintaining anything resembling a balance between supply and demand for an extended period of time may well be impossible. What we're left with then are two undesirable outcomes: (1) undersupply, where we live at or near the alternative compliance payment (ACP) and end up over-subsidizing projects, or (2) oversupply, where prices plummet far below the levels needed to stimulate new investment. Nothing I've seen suggests this is anything less than a certainty. As currently designed, SREC markets simply cannot balance themselves.

One could argue that oversupply is proof that the system works. After all, what we want is more solar, and we want it cheap, right? That's an interesting argument, but a poor one. My response is yes, it worked… to create a market bubble. Seeing this as a good thing is akin to seeing the housing bubble as a good thing because it increased home ownership. In the long run, bubbles are damaging, and the lessons they teach us can be

exceedingly harsh.

Are there solutions to this? Absolutely! All we need to do is readjust and revise the standard every couple of years. The historical record is well populated with solar carve-out "fix" examples. During 2012 it was New Jersey (S.B. 1925) and Maryland (S.B. 791). During 2011, the District of Columbia effectively took its carve-out from perpetual oversupply to perpetual undersupply (D.C. Law 19-36). Delaware went the market fix route in 2009 (S.B. 173) and 2010 (S.S. 1 for S.B. 119), while New Jersey (A.B. 3520) and Maryland (S.B. 277) both show up again in 2010. Legislative fixes are probably better than the alternative (e.g., Pennsylvania's dismal solar market), but I question whether the continuance of this pattern is the most efficient path to a sustainable industry.

Well, perhaps we could set up the adjustment system in advance, right? We'll know soon how well the Massachusetts annual adjustment system works. The recent Massachusetts Department of Energy Resources (DOER) announcement of potential revisions to the annual solar compliance calculation suggests that it sees an oversupply problem on the horizon. Whatever the chosen path, in order to maintain SREC price stability, market participants have to believe that the system will work. I'm not sure the industry as a whole currently has the requisite level of confidence. In the long run, maybe policymakers will design a system that functions well and inspires confidence. The problem with banking on such a solution is that it leaves the industry stranded indefinitely, and if costs continue to spiral downward at recent rates, it could well end up solving a problem that no longer exists.

3) SRECs Are Too Complicated. There are hundreds of articles and blog posts out there about selling solar to potential customers. It is pretty clear that even without adding SRECs to the picture, understanding the mix of federal and state incentives is daunting. This applies both to providers and their customers, since on the behind-the-meter side, the provider must understand all of the ins and outs and be able to convey them to customers in a coherent, understandable, and presumably persuasive manner. Some readers may recall a 2011 guest post by Travis Bradford positing that customer acquisition costs can add up to 20 percent to the cost of a residential system in California. Yes, California, a state without SRECs.

I've spoken with many businesses and consumers about SRECs during the past five years. While most of them understand the concept easily enough (i.e., "The utility is going to pay me for these, right?"), I've rarely been left with the impression that they grasp all of the important details, rules, and risks involved. This leads me to believe that the use of SRECs as an

incentive may well play a role in increasing customer acquisition costs, or result in unwise consumer decisions due to lack of understanding. Neither is a good thing. Yes, third-party owners take a lot of this on their shoulders and simplify the decision-making process, but one has to question the logic of a system that makes an already complicated decision more complicated.

4) Some Parties Bear Disproportionate Amounts of Risk. Hopefully, I've established that the average residential system owner, small business system owner, or otherwise unsophisticated solar investor shouldn't be forced into the SREC market. Unfortunately, under the current systems this is often unavoidable and these investors are consequently subject to market fluctuations they have no hope of anticipating. Call me crazy, but I really don't think the completion of a solar farm 150 miles away should influence the financial incentive for the 5-kW system on my roof, or the 200-kW system on the local school. This isn't to say that projects like the Dover Sun Park in Delaware (10 MW, and incidentally the focus of Delaware's 2009 solar carve-out fix legislation), the Turning Point Solar Project in Ohio (50 MW), the Mt. Saint Mary's Solar Project in Maryland (16 MW), or the hundreds of other large-scale solar projects in the PJM Interconnection Queue are bad for solar, but they are potentially bad news for a lot of small system owners. Certainly, the solar farm owner understands (or should be expected to understand) SREC price risk and is equipped to counter it in some way. The same is not true and should not be expected to be true for the small-scale owner.

Risk is distributed unevenly in other ways as well. In New Jersey, for instance, PSE&G has made significant investments in various types of solar projects under its Solar 4 All program, and it has indicated an intention to continue doing so. Great! I like to see utilities embracing solar. My complaint is that under the terms of the program, PSE&G can make this investment with no SREC price risk whatsoever. The utility makes the investment and earns a guaranteed rate of return on that investment. It has no SREC obligation itself, so it auctions off the SRECs generated by the project to suppliers that do have obligations. The revenue from SREC sales offsets the overall cost of the program, as does the sale of energy into the PJM wholesale market. No SREC upside to be sure, but no downside either.

A similar (but not identical) argument can be made for any investment by a utility or supplier that has an RPS obligation. Under standard ratemaking, the utility earns a return on its investment and recovers costs associated with RPS compliance. A competitive supplier is in theory subject to price risk in that if it builds beyond its RPS obligations, it could have unused SRECs in a low-priced market. But I'll hazard a guess that suppliers know

more about their long-term plans than you or I, and they make decisions based on that knowledge. It's not unlike a card game, where utilities elect not to play but get a cut from house rake. Suppliers can opt-in if they like, with the added bonus of having a few extra cards that no one else can see. None of this is to say that utilities and suppliers shouldn't have every opportunity to share in the market, but the playing field is most certainly not level.

5) SRECs Guarantee a Certain Amount of Added Cost. Pure and simple, SREC markets cannot function without the services of aggregators, brokers, traders, or other middlemen, and these services carry a cost. I'm not criticizing the occupation, and I've met some very smart (and nice) folks who happen to be of the SREC middleman ilk. To be fair, the costs are typically pretty modest and are probably worth it for the service. For instance, for small transactions, SRECTrade charges a seller's fee of 2% of the clearing price and a buyer's fee of $5 per SREC. The Massachusetts Solar Credit Clearinghouse charges the seller a 5% administrative fee, which amounts to $15 per SREC at the fixed $300 per SREC auction price. Not huge numbers, but costs that nevertheless represent one more aspect of the "death by a thousand cuts" series of soft costs that plague the distributed solar industry.

With all this in mind, what should we do with current suite of solar carve-outs? Transition them to feed-in tariffs? Not necessarily, but many would argue for such a path. One of the most fundamental errors people make when pondering solar carve-outs is assuming that a solar carve-out must result in an SREC trading market. A solar carve-out is simply a target; it is not a path toward meeting that target. The target has value in that it creates a long-term signal to the market, but it need not compel SREC trading. The California Solar Initiative (CSI) accomplishes the same long-term signal without establishing a solar carve-out. Perhaps the CSI is not as simple as some would like, but it is much easier to understand than an SREC market -- and much more predictable. States already have the targets; all that is needed is a more predictable system for meeting those goals.

The chief arguments against a more formulaic approach is that such programs are inherently more costly and self-limiting (i.e., capped in some way to limit costs). With respect to the first, the principal of net present value (NPV) should be considered. The NPV of a three-year strip of SRECs at $400/MWh (i.e., close to a hypothetical ACP), plus seven additional years at $65/MWh is equivalent to a 10-year strip of SRECs at $200 using a 10% discount rate. One can certainly play with those numbers, but the fact remains that in an NPV calculation, we would rather pay less now and more later. With respect to program limits, I expect that

the industry and customers would prefer a program that sunsets periodically for a short period to one that could be sidelined for multiple years at a time if exuberance exceeds wise judgment. As a potential solar customer, I'd certainly rather miss one boat and have the chance to be on the next one than make an investment that does not meet my expectations for reasons that are generally beyond my ability to control or anticipate.

Distributed solar doesn't need a huge upside to prosper; it needs a reduction in the downside risk. Distributed solar needs an incentive, but it doesn't need SREC markets.

Want to learn more about the North Carolina Solar Center and DSIRE? Click here.

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