



Fighting the Myth of a Solar Cost Shift: Q&A and links

Q: Aren't you omitting that the Grocery store would be forced to buy back your extra Tomatoes?

A: Great question! It is often said that under net metering, the utility is forced to “buy” excess or injected energy from the utility. In fact, net metering requires the utility to give bill credit for injected energy. A net metering customer is not making a sale. So, is that credit reasonable? Well, the data from cases like the one in Michigan shows that the utility is really getting a bargain that they can share with other customers. They get energy worth twice (or more) the cost-of-service rate for each unit of electricity. Finally, it is important to notice that the injected energy actually flows directly to the nearest unserved load - probably a neighbor. That’s how electricity flows. And when it serves that load, it travels through a utility meter and generates a bill at full retail. So the utility GETS full retail for that electricity and less utility generation has to run and less fuel has to be burned and the energy doesn’t even have to use transmission or most of the distribution system.

Q: What is NSPM-DER?

A: The NSPM-DER is the National Standard Practice Manual for Distributed Energy Resources. It is a “cookbook” for doing cost effectiveness evaluation, also known as “benefit-cost analysis” for distributed generation, energy efficiency, storage, and other resources. It can be found at: <https://www.nationalenergyscreeningproject.org/wp-content/uploads/2019/06/NSPM-for-DEs.pdf>

Q: Is the DER section new? I don’t recall seeing it in previous versions of NSPM.

A: The NSPM-DER now subsumes the old NSPM-EE to cover all DER, including EE (energy efficiency).

Q: NEM is capped at a level where it never could harm Utility profits significantly, yes? There are regulatory tweaks that could make efficiency profitable (for utilities), true?

A: Net metering is capped in many if not most jurisdictions. Unfortunately, those caps are not based on cost-effectiveness analysis or quantitative impacts on the grid. So, in most cases they are holding solar markets back more than they are protecting the system. And yes, those systems serve to protect utility profits. Yes, there are regulatory tweaks that help deal with issues. Time-based rates, properly done, can increase the value of solar and efficiency for customers and the utility. Ideas like decoupling have benefits, too, but there are other issues.

Q: How will the value of solar to the grid change as the fraction of solar supply becomes more significant (10%, 25%, ...)?

A: It is generally argued that the value of each incremental unit of solar goes down as penetration increases. That doesn't mean the value of existing energy goes down, and I frankly don't really think it is the right way to look at it anymore. With our understanding of how the costs of conventional generation impact some customers but not others, we need to be thinking about getting all the solar value we can—all of it. Our focus should be, I think, not on “rationing” the benefits. Rather, we should figure out how to manage the costs—there will be technical challenges associated with running a 100% renewable grid.

Q: I'm in South Dakota as a customer of Black Hills Energy. We don't have net metering here & I only get \$.0248/kWh for the energy I return to the grid based on "avoided cost" that keep lowering. Any ideas on how to fight this?

A: That kind of rate is what we lawyers would call “confiscatory.” It is also dumb. Compensation rates like that encourage customers to use more electricity when their panels are generating. That INCREASES on peak consumption, and on peak consumption is the most expensive. In addition, that confiscatory rate encourages storage—meaning customers are even less connected to the grid. Ideas include: (1) honest and transparent cost effectiveness evaluation, (2) cost of service-based analysis like Kevin Lucas did in Michigan, and (3) a true “value of solar” analysis. Don't forget political solutions as well!

Q: Those temperatures remind us that central power plants get less efficient and produce less power at the environment gets hotter.

A: Excellent point. Power plants that burn things, and nuclear plants, too, have to be able to reject their heat. That is harder to do in a warming world. Ironically, gas plants also work less well in extreme cold, too.

Q: How can commercial and industrial rooftops be a larger part of the solution?

A: State-level renewable portfolio standards (RPS) can help. Customer pressure can help too.

Q: Speak to Rural Coops opposition to distributed solar.

A: The single most important factor in co-op attitude and performance is the board. And they are elected. There is no good reason for them to oppose distributed solar, but members have to tell them.

Q: Isn't the business of utilities changing from energy production to managing the energy grid for their geographic area?

A: Yes, and it could be immensely profitable for shareholders because it is a hard task getting harder. But they have to stop focusing on growing earnings on CAPEX and focus on delivering outstanding performance in a challenging environment.

Q: So there have been some experiments separating generation from distribution at a state wide level. What has been the outcome?

A: Mixed bag. If you separate them, it doesn't stop their technical interaction.

Q: What about the claim that utilities must keep power plants running in case solar power drops?

A: There are lots of things you can do against that potential.

Q: Is storage now cost competitive with Peaker Plants?

A: Yes - all the data I have seen says so.

Q: Status of federal tax credits going forward after November

A: <https://www.solarunitedneighbors.org/news/go-solar-in-2019-to-take-full-advantage-of-the-federal-solar-tax-credit/>

Q: I've seen older studies (ie. Brookings). Can you share some newer ones in the chat or afterward?

A: Some are available here <https://www.solarunitedneighbors.org/learn-the-issues/value-of-solar/> & here: <https://www.solarunitedneighbors.org/value-solar-additional-resources/>

Some Key Links/Resources shared:

- Tong and Wellinghoff: Why fixed charges are a false fix to the utility industry's solar challenges: <https://www.utilitydive.com/news/tong-and-wellinghoff-why-fixed-charges-are-a-false-fix-to-the-utility-indu/364428/#.VS7etaUjBZY.mailto>
- Another good piece on the topic: <https://www.utilitydive.com/news/wellinghoff-and-tong-a-common-confusion-over-net-metering-is-undermining-u/355388/>
- Brookings article including multiple studies of rooftop solar: <https://www.brookings.edu/research/rooftop-solar-net-metering-is-a-net-benefit/>
- Karl on Twitter: <https://twitter.com/RabagoEnergy>

- Nicole on Twitter: <https://twitter.com/NicoleSitaraman>
- Here's the link in Karl's slide for the NSPM-DER
<https://www.nationalenergyscreeningproject.org/national-standard-practice-manual/>
- Alabama Power vs TVA (public vs. private power)
<https://www.al.com/opinion/2020/09/public-service-commission-must-think-alabamians-fell-off-a-turnip-truck.html>
- From RAP (Regulatory Assistance Project) study which advocates for NEM until rooftop solar reaches 5% of generation (which nearly no state is, only CA and HI). Rooftop solar follows a long history of "infant industry subsidies" in driving market transition. We had land grants for railroads, air mail contracts for airlines, and semiconductor contracts in the space race, all of which were designed to stimulate market transformation. NEM for rooftop solar is no different. <https://www.raonline.org/knowledge-center/smart-rate-design-for-a-smart-future/>
- Some may be interested in this story of an electric cooperative raising fixed monthly charges to discourage solar: <https://powerforthepeopleva.com/2017/10/25/electric-co-op-seeks-to-double-fixed-access-charge-in-move-against-solar/>
- N.A.A.C.P. Tells Local Chapters: Don't Let Energy Industry Manipulate You...
<https://www.nytimes.com/2020/01/05/business/energy-environment/naacp-utility-donations.html>
- There is a good podcast episode on Why Is This Happening on monopoly utilities and lobbying:
<https://open.spotify.com/episode/OgOeRpZrZpHZhUADqce1ZI?si=8oo4U17aS9KSn-stLnyUNg>