

Something New Under the Sun: Competition and Consumer Protection Issues in Solar  
Power

## Contacts

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For additional information, visit the workshop website at <https://www.ftc.gov/news-events/events/2016/06/something-new-under-sun-competition-consumer-protection-issues>. Prior to the workshop, the Commission will publish a detailed agenda and other relevant information on this website.

## Supplementary Information

The electric power industry is a critical sector of the American economy and affords virtually every person in the country. Unlike most other industries, the electric power industry is regulated to varying extents at the local, state, and federal level. Retail electric utilities remain statutory monopolies to some degree in every state because elements of their operations have been viewed as natural monopolies. In general, retail electricity rates are not set by the marketplace. Rather, in most states, they are the product of ratemaking proceedings overseen by state regulators (state public utility commissions (PUCs)) or local authorities.

In many jurisdictions, laws or regulations require electric power distribution utilities that sell retail electric power to residential and commercial customers to compensate customers for the power they generate from solar PV panels they have installed. Compensation can take the form of a reduction in a customer's bill if the customer consumes more electricity than he or she generates, or a payment from the utility if the customer generates more than he or she consumes. This practice is broadly known as "net metering."

Determining the correct rate for net metering is a complex issue. Most states that have adopted net metering have chosen to compensate solar DG customers at the retail rate the utility charges most customers for the electric power they consume from the grid. Using the retail rate is simple for residential customers to understand: the power they generate with solar PV panels receives the same price as what they pay to consume power from the grid. There is a robust debate about whether the retail rate is the appropriate rate to use in compensating customers for solar DG; some believe the correct price for solar DG is below the retail rate, whereas others believe the correct price is at (or even above) the retail rate. Determining the correct price depends upon a number of factors, including issues that are less specific to solar DG and relate more generally to the goals and function of regulated retail rate design.

Some view regulated retail rates as designed primarily to allow the utility to recover both fixed and variable costs, which helps to ensure the continuing viability of the utility. In this view, compensating solar DG customers at the retail rate allows these customers to avoid paying an appropriate share of the fixed costs of a system that was built to serve them, shifting these costs to customers who have not installed solar panels. Proponents of this view argue that the price utilities pay for solar DG should be closer to the (typically lower) price utilities pay for most other types of generation on the wholesale market.

Others argue that the utility should pay customer-installed solar DG at the retail rate, because solar DG enables the utility to avoid more costs than it incurs. In their view, to the extent that peak periods of solar generation coincide with periods of high overall demand, solar DG will reduce the utility's need to invest in generation. Moreover, some argue that by placing some of the generation closer to the point of consumption, solar DG may reduce the utility's need to invest in transmission or distribution facilities. Thus, because solar DG results in avoided costs for the utility, the correct price for solar DG ought to reflect the value of those avoided costs. Some also suggest that the government should incentivize consumers to install solar PV panels by factoring the environmental benefits of solar power into rate-making decisions. For example, because solar-generated electric power does not create the same pollution or other externalities as carbon-based sources of electric power, compensating solar customers at or above the retail rate may be a way to achieve desirable environmental objectives.

The question of how to compensate customers for the power they generate at their properties is complicated by the fact that the retail price in most jurisdictions is set by regulation, not directly by market forces. In jurisdictions that do not use variable retail rates, the regulated retail rate at any given moment does not typically reflect the often-variable prices for wholesale electricity purchased for resale to retail customers. For this reason, customers in these areas do not

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- Does retail net metering result in cross-subsidization? For example, if the fixed costs associated with building and maintaining the electricity grid are incorporated into the price per kilowatt hour (volumetric pricing), do solar customers end up cross-subsidizing solar DG customers because the latter do not pay a full share of fixed costs when they choose to rely on self-generation?
- Does cross-subsidization of one form or another always occur when retail rates are based only on volumetric charges and are time-invariant? Does cross-subsidization caused by net metering differ in any way from other forms of cross-subsidization inherent in regulated retail rates?
- Does it make sense for PUCs to target net metering for reform? Should the focus on reforming retail rates more generally better reflect the varying costs of supplying electric power?
- Is there a way to prioritize among various reforms? Potential reforms may include a “value of solar” tariff; dual metering/net metering at something other than the retail rate; fixed charge reforms; smart meters/time-varying pricing.
- Does the analysis change when the distribution utility is vertically integrated? When the utility is investor-owned, municipally-owned, or a co-op? When consumers have retail choice? When retail pricing is time-varying?
- To what extent does the optimal approach depend on penetration levels for solar DG?
- Should environmental externalities affect retail pricing?

## Competition Issues

DG may be a competitive alternative to utility-sourced electric power for some customers. Whether consumers can benefit from this competition depends on a number of factors, including the extent to which solar DG firms face entry barriers, whether sufficient competition exists among such firms, and whether utilities can use revenues from regulated sales to offset solar DG. In this workshop, the Commission intends to explore the competitive landscape in solar DG. The Commission invites public comment on questions relevant to this topic, including:

- Is solar DG a competitive threat to dis[(DG.)-2( )]TJ 0 Tc 0 Tw -32.24 -13(c)bc 0 Tw -32.24 -13(

panels? Are anti-discrimination rules for utility affiliates effective in achieving a competitive landscape?

- What is the state of competition among solar DG firms? Are there geographic areas where competition is particularly lacking between solar DG firms?
- What is the state of competition between solar DG firms and regulated utilities? How is competition affected by whether the utility offers distribution service only, electricity supply only, or both?
- How is this competition affected by the fact that regulated utilities revenues that are based, in part, on regulated rates of return?
- How do consumer protection issues such as comparative price information or disclosures of regulatory risk affect competition among solar DG firms and competition between solar DG firms and utilities?

### Consumer Protection Issues

Until recently, the only realistic option for consumers seeking to generate solar power was to buy and install solar PV panels themselves. In recent years, solar DG has grown in part because

- Do consumers or solar DG firms bear the risk of structural damage to homes from solar panel installations? What is needed for clear and conspicuous disclosures about damage or loss relating to rooftop solar?
- What gaps are there in information for consumers and businesses considering rooftop solar?
- Is it standard practice for solar DG firms to retain renewable energy credits (RECs) when selling or leasing solar PV panels to consumers? Do solar DG firms make disclosures to consumers concerning the sale of RECs on a secondary market? What information about RECs material to a consumer's decision to install rooftop solar?
- What types of disclosures are solar DG marketers or others providing to consumers? Are marketers using a standard format for such disclosures? Have standard disclosures for consumers been developed by solar DGs or others? If so, are there any additional mro1(?) -16(