
Case Studies by PACE

As an organization devoted to issues of fairness and equity for electricity consumers, PACE is acutely interested in net metering and the overall treatment of distributed generation by utilities. This was not a concern in the early days of solar, because only a small number of customers could afford the high cost of rooftop solar panels. Utilities simply set policies to deal with this small number of customers, posing no serious consequences to the customer base at large. However, as the price of solar panels fell, leasing became an option, and more residential consumers adopted the rooftop version of the technology, serious issues of equity and fairness began to arise.

Two cases in the U.S., in particular, have garnered our attention in the past two years. In February 2012, PACE wrote about an alarming situation for customers of Hawaiian Electric, in which the fixed costs of that utility’s operations were being unfairly shifted from solar-adopting customers to those without solar panels. In that case, a small vanguard of customers across the Hawaiian Electric system had installed 30 megawatts of nameplate generating capacity from solar panels, saving themselves about $7.4 million in electricity costs. But that lost revenue, as in any system with fixed costs, had to be replaced by someone. In the end, the non-solar customers on the system were saddled with a rate increase of 1.7¢ per kilowatt-hour (or about $10/month), which is especially meaningful since the island already has the nation’s highest power rates.
PACE addressed a situation of even greater magnitude in January of this year, when the organization focused on California, where the state requires utilities to pay their solar customers the same retail rate per kilowatt-hour of electricity as the utility charges other customers. This is referred to, of course, as net metering, and provides a strong financial incentive for households who choose to and can afford to install solar rooftops.

The result of this particular net metering arrangement has been a serious shortfall in revenue for the fixed costs of California utilities, totaling more than $1.3 billion today and growing. Specifically, non-solar customers of San Diego Gas & Electric are being forced to absorb an additional $20 million per year in costs and customers of the state’s largest utility, Pacific Gas & Electric, will eventually pick up an additional $700 million per year because of the cost shift.

In light of this obvious inequity, PACE concluded that California’s policy on net metering was “fundamentally unfair, financially regressive, and ultimately unsustainable. Under such a policy, not only do utilities face a shortfall of revenue for a system with fixed costs, but those uncompensated costs are born mostly by those customers least able to pay higher bills.”

Current Events & Opportunities in Arizona

We believe there is a strong opportunity to create a secure and sustainable future for residential solar. PACE is interested in being part of that conversation on behalf of working people and businesses who are counting on government decision makers and utilities to ‘get it right.’ This matters for the people of Arizona and can serve as a precedent for how other states should design net metering and distribution policies moving forward.

From the beginning, PACE has argued that distributed generation is best deployed where it works best, frequently citing the case of Arizona as a marketplace with high solar energy concentration and a low number of cloudless days that allows solar in that state to have optimal efficiency. Arizona, with the most solar power per capita in the nation, is an important bellwether for solar energy policy. How utilities in that state approach net
metering issues is likely to be considered strongly by other states with less developed, but growing, solar markets.

Currently, the largest utility in the state, Arizona Public Service Company (APS), has about 18,000 customers with rooftop solar and a total of about 700 megawatts of large-scale solar power on its system. Relative to other systems, this is a substantial number of solar customers and a large amount of solar generating capacity. With solar rooftop systems costing $20,000 - $30,000 to buy and about $11,000 to lease, most of this distributed generation predictably is found in more affluent communities. Leasing solar systems also requires good credit, further suppressing the ability of low-income customers to access the capital needed to invest in the technology.

Today, APS maintains a policy of net metering that pays solar customers a retail rate for electricity, similar to the policy in California. For a number of reasons, particularly those having to do with cost shifting, PACE believes that this kind of net metering design is unsustainable and must be altered. As more customers adopt rooftop solar, the portion of fixed costs borne by the remaining non-solar customers will continue to grow. This is an issue of basic economic fairness.

In recent days, APS has offered a plan for public scrutiny that transforms the current net metering arrangement, replacing it with a ‘bill credit’ system that pays solar customers a rate for generated power something less than the retail rate. The plan offered by APS, to our understanding, is prospective in nature, not affecting the rates paid to current solar customers or those who have applied for interconnection in the near future. The plan also does not affect commercial or industrial customers. In our opinion, this is an important feature that preserves the investment of early adopters of solar rooftops, many of whom bought systems when the price of the technology was higher. Changing the net metering structure for those customers could have violated the basic economics of decisions made in good faith by customers.

With the federal tax credit of 30% for residential rooftop solar set to expire in 2016, PACE believes it is critical for APS and Arizona’s energy regulators to establish a policy that sets a sustainable trajectory for distributed solar generation. The number of solar customers in Arizona, as is the case nationwide, is certain to grow in the next three years as savvy citizens rush to take advantage of the federal tax credit. Establishing a smart policy now provides certainty for APS and its customer base at large and allows potential
solar customers to make wise choices based on whatever new policy is set into motion.

Compared to current solar customers, who will be grandfathered in by the proposed policy and continue to receive the current retail rate, customers under the new structure would pay an estimated $50 to $100 more per month through the proposed bill credit. These additional costs distribute the fixed cost of the APS system more fairly than the current net metering arrangement and help ensure that costs are not unfairly shifted to other customers. Someone has to pay the utility’s fixed costs of maintaining the generation, distribution, and transmission system. Our belief is that ‘someone’ should be all customers, even those with solar rooftops, notwithstanding those grandfathered in by a new policy.

It is not a smart investment, nor economically rational, for a utility to purchase power from customers at a rate of 16¢ per kilowatt-hour (significantly higher than the rate available on the open market), but this is what is happening under the current APS arrangement with its solar customers. Recalibrating the current net metering arrangement, either through the ‘bill credit’ system APS has proposed or some other policy that provides a significantly curtailed rate, makes sense. In the long run, this helps to make APS a stronger utility for all of its customers, including those using solar power.

Conclusion

Arizona has an opportunity to set an important precedent for the treatment of residential distributed generation, particularly in showing other markets the smart and sustainable way to compensate solar customers for their electrical generation. The state has a utility, APS, that is committed to the growth of solar power on its system and that has a customer base that has invested significantly in the technology.

PACE believes strongly that, as more solar power comes online, regulators have an obligation to protect customers against inequities in electricity rates by ensuring that the fixed costs of maintaining the electricity grid are distributed fairly.