APS rate case sparks concern beyond mandatory demand charge proposal

Along with a rate structure overhaul, the Arizona utility also wants to cut net metering credits to its avoided cost rate.

By Herman K. Trabish | June 7, 2016

After working for years to win approval from Arizona regulators for higher fixed charges and fees for solar customers, Arizona Public Service altered its strategy in a new rate case filed last week, requesting demand charges for virtually all its customers.

A year ago, APS filed with the Arizona Corporation Commission (ACC) for an increase of its $0.70/kW fixed charge to $3/kW. The utility said at the time the fixed charge was a more secure way to cover grid upkeep costs and protect customers without distributed generation from subsidizing those who have it.

When solar advocates argued such charges should be part of the utility’s rate case, APS withdrew the proposal and the two sides launched into an ongoing proceeding on the costs and benefits of distributed solar.

Now, a year later, APS has filed its general rate case, raising the cross subsidy question again, but with a more complicated and contentious solution.

In Docket E-01345A-16-0036, APS is asking the ACC for major changes to residential customers’ rates, shifting nearly all of them to one of three demand charge options, accompanied by a lower per-kWh volumetric charge.

All told, the rate case would pay for a $3.6 billion investment in utility operations over the next three years, amounting to an average 7.96% annual increase for residential customers.

While that new rate structure has garnered the most attention since APS filed the proposal on June 1, the plan also includes a number of more familiar requests that have already raised the ire of the solar industry in the state — namely fixed charge increases and a big cut to the net metering rate.

The net metering credit

The demand charges, being new, have raised a clamor. But the proposed change to the net metering credit is also of great concern to solar advocates who see opportunity in the enormous solar resource in the south-central region of Arizona that APS serves.

Under the rate plan, net metering credits for rooftop solar would fall from the retail rate, presently $0.128/kWh, to an avoided cost rate of $0.0299/kWh. The 44,000 APS customers who have already installed rooftop solar and those who install before July 1, 2017, would be "grandfathered" and allowed to keep the retail rate credit for the full life of their solar arrays.

"In Nevada, ending net metering killed the rooftop solar industry. In the SRP service territory, demand charges wiped out solar. So, what does the most anti-solar utility in America propose? To end net metering and implement demand charges of course," observed Court Rich, attorney for the Energy Freedom Coalition of America, a solar advocacy group backed by leading residential installer SolarCity.

"It’s a proposal guaranteed to stop APS’s customers from going solar," he said.

APS has long expressed concern that rooftop solar customers, due to their lower demand and net metering credits, do not pay their fair share for grid upkeep, leaving the costs to the rest of the customers. The rate case filing expands on those concerns with testimony from several of APS executives and industry experts who detail the concept of a cost shift and defend the utility’s assessment of its impacts.

“The total shift to non-solar customers already totals $42.7 million and is growing rapidly,” APS reports.
At its current pace of 1,300 new distributed solar arrays monthly, the utility estimates the cost shift will grow by $20.1 million in the time it takes the commission to rule on this case. If no change is made to the net metering credit (http://www.seia.org/policy/distributed-solar/net-metering), the utility expects to come to its next rate case, in three years, with an annual cost shift of $102.9 million. Extending the value of the 20-year life of the rooftop solar arrays, the utility estimates the “nominal value” of the cost shift to be at least $1 billion.

APS says the nominal value of the solar cost shift is over $1B.

Credit: APS (http://www.azenergyfuture.com/getmedia/e4a1465d-ef68-4581-ba52-1e250dcf16ae/Rate-Review-Testimony-Summary-Book_SinglePgs.pdf/)

At its core, that cost shift is why APS is asking the commission to reduce the net metering credit, APS Vice President Jeff Guldner told Utility Dive.

"We would reduce the amount of the subsidy for new customers because the current credit is not sustainable and is a cost for our non-solar customers," he said.

All the APS cost shift calculations, are based on the standard utility cost-of-service methodology (http://www.utilitydive.com/news/cost-of-service-arizonas-solar-saga-takes-on-the-valuation-question/406690/), Guldner said. That method of establishing cost has long been used for traditional fossil and nuclear power plants that require fuel purchases. But it is under scrutiny in Arizona, where regulators have expressed skepticism over its application to wind and solar facilities, which have no fuel costs.

When APS asked the commission to re-set the net metering credit last fall, it based its request on cost-of-service calculations. After protests by solar advocates, the commission questioned that filing (http://www.utilitydive.com/news/arizona-gears-up-for-full-cost-benefit-solar-value-proceeding/408375/) and APS withdrew it, saying it would re-file in its general rate case.
The ACC then initiated a value of solar proceeding to investigate whether, as solar advocates argue, it should settle on a valuation model that estimates solar’s benefits to the grid, along with its costs.

The value of solar docket is ongoing, “but we recognize the decisions in that proceeding could have an effect on the final outcome of our rate review,” Guldner said.

Without a ruling from the solar valuation docket, APS will “continue to ignore the real and quantifiable benefits to the ratepayers that DG solar provides,” Rich said.

Former Arizona commissioner Kris Mayes, now a spokesperson for the EFCA, agrees.

“APS proposes to undermine net metering by paying solar owners less than the true value of the energy,” she said of the rate proposal. “Making the retail rate credit an avoided cost (http://www.utilitydive.com/news/in-purpa-ruling-ferc-says-entergy-not-obligated-to-buy-from-large-qfs/412805/) rate credit would be a dramatic reduction in the solar value proposition.”

The outcome of the parallel solar valuation docket could be important, she added.

The rate case will last a year or longer and the VOS docket could very well conclude before it and with an outcome relevant to it, she said.

“The problem here is that APS appears to want to ignore all the benefits of solar and calculate only the cost, which sort of violates the notion of a cost-benefit study (http://www.cleanpower.com/2014/value-of-solar-9-equals-12/).” Mayes said. “That is like having apple pie and ice cream without the ice cream.”

The fixed charges

In addition to the net metering changes, APS also wants to increase fixed charges on all its residential customers.

There is a class of residential customers that currently has a basic charge of $8.67/month. Their basic charge would be increased to $14.50/month. The rest of the utility’s residential customers, now at $16.91/month, would see an increase to $24/month.

Raising it that high will impose "a significant burden on some customers," Mayes said. “I really don’t know how APS can do that.”

The request, Guldner said, comes from the desire to better align the utility’s costs with its rate structure.

With the proliferation of efficient appliances, home weatherization, and the use of DG for some customer electricity supply, revenues from the utility’s volumetric, per-kWh charges are dropping. While APS costs (http://www.utilitydive.com/news/tong-and-wellinghoff-why-fixed-charges-are-a-false-fix-to-the-utility-industry/364428/) are 70% fixed and 30% variable, the filing reports, revenues from the current residential customer base are 90% in variable charges and 10% in fixed charges.

“There are some costs to serve a customer that don’t change no matter how much energy a customer uses each month,” APS Director of Revenue Requirements Stefanie Layton wrote in an email. “The current almost $17/month basic service charge does not cover all of the fixed costs.”
Increasing fixed fees and imposing demand charges will help align APS revenues with its costs, utility leaders say.


Demand charges – the main event

Fixed charges and net metering rates will get their shares of hearing time in the rate case, but the more novel issue in the APS proposal is undoubtedly its push for residential demand charges.

Demand charges are assessed based on the customer's highest average kW usage during a pre-defined peak demand period. APS would use the customer's highest average hour of usage in each month between 3 p.m. to 8 p.m. The kWs used in that hour would be multiplied by the per-kW demand dollar charge. The total would be added to the monthly bill's volumetric charge and other bill fees.

APS wants the commission to approve a new rate structure [https://www.aps.com/en/residential/accountservices/serviceplans/Pages/combined-advantage.aspx] with three demand charge rates — R-1, R-2, and R-3. The new rates would include the higher fixed charges, lower volumetric rates, and the demand charge.

Typical residential customers, classified as R-1, would have their basic service charge increased to $24/month. They would be subject to a $6.60/kW demand charge during both the summer and winter. Their volumetric rates in the summer would be $0.15/kWh during the peak period from 3pm to 8pm and $0.08/kWh during other hours. Off-peak rates would stay the same in the winter, but peak rates would lower to $0.127/kWh.

A second (R-2) class of residential customers could choose to limit their fixed fee increase to $14.50/month by taking a higher summer and winter demand charge of $8.40/kW. They would be subject to R-1 volumetric rates.
Higher peak demand consumers would make up a third (R-3) class of residential customers. They would have the $24/month fixed fee. Their summer demand charge would be $16.40/kW and their winter demand charge would be $11.50/kW. Their volumetric rates would be $0.09/kWh for the summer peak period and $0.0547/kWh for the off-peak period. In the winter, peak rates would lower to $0.0667/kWh and off-peak rates to $0.0547/kWh.

A flat bill option would be available to a narrow group of customers, such as those with very low usage, seasonal demand, or lower income. The utility would assign those customers flat per-kWh rates, based on their past 12 months of electricity consumption. But if they did not opt-in to the flat rate, they would be assigned a demand charge category.

APS is confident its customers can benefit from the new rate structure. The utility has had a very similar but voluntary residential demand rate available since 1981 (https://www.azenergyfuture.com/rate-review/demand-rate/demand-rates-help-customers-save/). Approximately 120,000 residential customers use the plan and it is the utility’s “fastest-growing rate plan,” Guldner said.

Experience with that program shows the lowered volumetric rate allows customers to lower their overall bill by managing their peak usage (http://www.utilitydive.com/news/why-srps-controversial-demand-charge-unlocks-a-huge-opportunity-for-solar-/372548/), he said.

"In the summer among our customers currently on demand rates, we see a 3% to 4% reduction in demand, which is good for everyone, and 9% bill savings, which is good for customers," he said.

Those results could be tempered by the tendency of customers on a voluntary plan to be more aware of their rates than average consumers. An APS study of a portion of them found those who “actively manage their demands have achieved demand savings of 10% to 20% or more," Rates Manager Charles Meissner testified to the ACC.

They also “tend to save on their on-peak and monthly kWh usage through the various measures deployed (https://www.aps.com/en/residential/accountservices/meters/Pages/reading-your-digital-meter.aspx) and behavior responses to the rate,” he added.

Over 90% of that study group saw monthly bill savings, Meissner said. “Sixty percent of the customers in the study saved on their demand and energy.”

Demand charge reactions

In choosing to propose demand charges, APS stepped into a heated ongoing controversy. Earlier this year, opposition from solar and consumer advocates forced fellow Arizona utility UES Electric to drop its mandatory demand charge proposal (http://www.utilitydive.com/news/ues-electric-drops-mandatory-demand-charge-proposal-except-for-new-solar-c/419287/) , keeping it only for rooftop solar customers. That proceeding is ongoing at the ACC.

But while demand charges are attracting attention, they are still relatively new as a utility tactic. In the first quarter of 2016, six utility filings with state regulators in the U.S. proposed residential demand charges, compared to 22 states that considered or enacted net metering changes, according to a recent report (https://nccleantech.ncsu.edu/n-c-clean-energy-technology-center-releases-q1-solar-policy-update-to-the-50-states-of-solar-2/) from the NC Clean Energy Technology Center (NC CETC).

"Since the beginning of 2015, no public utility commission has approved a demand charge on residential solar customers," the NC CETC Sr. Policy Analyst Autumn Proudlove noted.

If properly designed (http://www.utilitydive.com/news/are-residential-demand-charges-the-best-rate-reform-forders/415605/), demand charges could serve as a driver for energy storage, according to GTM Research Analyst Ravi Manghani.

“Any kind of net energy metering reform that reduces the value of solar works in favor of storage,” he said.

But even if such an upside is real, “the utility isn’t giving its customers tools to defend themselves against the demand charges,” Mayes (https://sustainability.asu.edu/person/kristin-mayes/) , an Arizona State University professor, said. “There is no way for them to know how much energy they are using in real time and yet they will be charged for that usage. They will get hit by a charge but they won’t know when or where it came or why it is the amount it is.”

Because of limited empirical evidence on demand charges, arguments about their effectiveness are “speculative,” a recent report from the Rocky Mountain Institute noted (http://www.utilitydive.com/news/rate-design-demand-charges-time-based-rates/419997/). But among the “key design choices that will determine the efficacy” is whether or not the utility provides customers with technology and education that allows them to reduce their peak usage.
The finding highlights Mayes’s concerns.

“Even customers with the most advanced thermostats like Nest don’t have dashboards to monitor usage that way,” she said. “And APS has not indicated it will provide customers with a dashboard or inside-the-home meter or tool that will allow customers to see how much energy they are using. They will be shocked when they are hit with the charges.”

The utility does have plans for both customer education and enabling technology, according to Layton. New pilot programs in 2017 “will help customers learn about energy saving strategies and gain access to energy saving technologies.”

The utility’s “shift, stagger, and save [https://www.aps.com/en/residential/accountservices/serviceplans/Pages/demand-rates.aspx]” slogan, introduced with its filing, initiates the campaign. Next year, it will offer “web based energy and demand analyzers, personalized videos, and mobile phone apps that can provide feedback on a home’s demand and energy use,” she said.

The availability of enabling load control technology and customer education are factors that made APS’s voluntary demand rate one of the few that “achieved relatively high enrollment compared to other demand charge rates,” the RMI report noted.

Even if APS does provide customers with energy management technology in time, the solar sector is still concerned about the effect of the APS rate proposal in the short term. The RMI report, among others, noted that demand charges can reduce the value proposition for distributed energy technologies, particularly when solar generation does not coincide with peak demand periods.

In its filing, APS cited anecdotal success by some local installers who have added technologies that help customers control their usage in response to the voluntary demand charge program.

“Heavy Arizona companies such as Sun Valley Solar Solutions are devising innovative ways to thrive in the new market structure, which will be better for all simply because it is sustainable,” the utility noted.

Guldner stressed a March report of preliminary impacts from a Salt River Project [http://www.srpnet.com/menu/About/generalinformation.aspx] demand charge imposed in late 2015. The report showed 14% of SRP new solar owners are saving money by adjusting their usage [http://www.utilitydive.com/news/arizona-public-utility-data-shows-some-savings-with-demand-charge/416400/]. But the rest are not responding to the price signals by shifting consumption away from the utility’s peak demand period, the report also showed. Those customers are paying higher bills.

SolarCity, meanwhile reported a 95% drop in sales [http://www.azcentral.com/story/money/2015/03/03/solarcity-sues-srp-antitrust-violations/24318777/] after the SRP demand charge was imposed.
APS hopes to use the “shift, stagger, save” slogan to help customers understand variable rates and demand charges.

Credit: APS (http://www.azenergyfuture.com/getmedia/e4a1465d-ef68-4581-ba52-1e250dcf16ae/Rate-Review-Testimony-Summary-Book_SinglePgs.pdf/)

The brewing controversy

Even before hearings begin, rhetoric around the rate plan has flared.

The APS demand charge plan is “radical and untested” and amounts to an attack by the utility “aimed at all ratepayers of Arizona, designed to keep people from going solar,” said a statement from EFCA (http://www.prnewswire.com/news-releases/efca-arizona-public-service-seeks-unprecedented-rate-change-for-customers-elimination-of-net-metering-300278205.html) after the filing.

EFCA “is another front group for SolarCity and other for-profit companies in the rooftop solar leasing industry,” APS shot back (https://www.azenergyfuture.com/blog/june-2016/demand-rates-proven-with-our-customers/). They have “an enormous financial stake in delaying any action by the Arizona Corporation Commission that would reduce today’s subsidies for their industry.”

In the coming months, Mayes said EFCA and other clean energy advocates will press the commission to scale back or throw out the APS proposals, with a focus on the demand charges, fixed fees, and net metering cuts.

“All three will hit consumers hard in the pocketbook and we oppose all three,” Mayes said.

Top Image Credit: Getty Images contributor Robert Nickelsberg (http://www.gettyimages.com/license/82275107)

Filed Under:
Solar & Renewables Energy Storage Distributed Energy Efficiency & Demand Response Regulation & Policy Corporate News