

APS's Proposal to Change Net-Metering*Published October 2013**Updated December 2013****The Essentials***

- Rooftop solar installations have exponentially increased in recent years, in Arizona and nationally. With the continued increase penetration of distributed generation from rooftop solar installations, utilities have begun re-evaluating the price structures they use to compensate owners for the electricity their installations feed into the grid.
- Currently, Arizona Public Service Company's (APS) net-metering program compensates a solar rooftop owner at retail rates for the excess electricity the solar rooftop installation exports to the grid.
- APS recently proposed to reduce compensation for electricity put onto the grid by solar rooftop installations, reducing the value that rooftop installations provide to their owners.
- APS argues that the current net-metering rates effectively subsidize rooftop solar owners and unfairly shift costs from solar rooftop owners to non-solar rooftop owners. Rooftop solar installations also decrease residential electricity demand, thereby decreasing APS's revenue.
- The solar industry opposes the proposal because they argue the current plan fairly compensates for the value solar provides to the system, and will stall the development of the industry. Free market proponents also argue that the policy hurts competition and endorses the regulated monopoly utility model.
- On October 1, 2013, the Arizona Corporation Commission (ACC) staff rejected both of APS's suggestions for net-metering changes. Instead, they recommended addressing the distributed generation concerns during the next APS rate-case.
- **On November 14, 2013, the ACC voted to implement a \$0.70/kW fee for customers with rooftop solar installations who participate in their net metering program. The fee equals roughly \$5/month for a typical residential installation. The ACC agreed to review the net metering policy in more depth during the next APS rate case.**

What is net-metering?

Net-metering is a policy adopted in 43 states that has been a major driver of the recent growth in the nation's rooftop solar industry. The electricity produced by a rooftop solar installation flows first to the building upon which it is installed. Any excess electricity is exported onto the grid, and the net-metering program compensates the solar installation owners for that electricity via billing credits or cash payments. The amount of compensation differs from one state to another, and is currently the subject

of Arizona Public Service’s recent proposal to the Arizona Corporation Commission (ACC). For a more detailed explanation of the ACC net-metering policy,¹ see our [Net-metering Brief Sheet](#).

APS’s current net-metering program

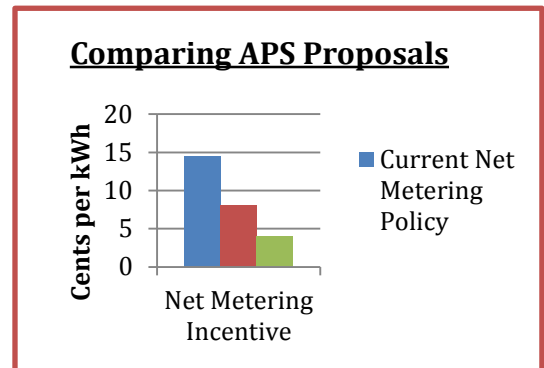
Solar rooftop owners participating in APS’s net-metering program receive credits on their next utility bill for excess electricity exported onto the grid at **retail** rates (typically, \$0.13-\$0.16/kWh after taxes). At the end of the year, APS compensates the rooftop solar owner for any remaining excess energy credits at the “avoided cost” rate, which usually only occurs with relatively large solar systems.²

APS argues today’s solar rooftop installations shift costs to non-solar customers

In its [Application for Approval of Net-Metering Cost Shift Solution](#) (“Proposal”)³ filed on July 12, 2013, APS proposes changing the net-metering compensation structure. APS argues it pays for most of its purchased power at wholesale prices, which is about \$0.04/kWh, but are paying solar rooftop owners higher retail rates for their power under the net-metering program. APS also contends that each customer with solar on their rooftop shifts about 8.1 cents per kWh, or \$1,000 annually to non-solar customers to fund APS’s fixed costs for maintaining the grid and ensuring reliability. APS calculated the \$1,000 cost shift by estimating that current DE solar customers save an average of 13.5 cents per kWh,⁴ but DE solar provides 5.4 cents per kWh benefit back to APS as fuel and power plant service costs avoided. Proponents argue, however, that solar rooftop systems on APS’s grid provide a \$34 million benefit to all ratepayers, due to reduced investments on in transmission and distribution infrastructure and other efficiencies.⁵

APS’s two proposed methods to recalculate net-metering compensation:

APS has proposed two reforms to its net-metering rate structure: the “**Net-metering Option**” and the “**Bill Credit Option.**” Residential customers that already have rooftop solar installed would be grandfathered into the current net-metering policy, and the current net-metering policy would attach to the property for twenty years regardless of ownership.



¹ http://www.azsos.gov/public_services/Title_14/14-02.htm#ARTICLE_23

² Avoided costs are “costs that utility avoids by purchasing power from an independent producer rather than generating power themselves, purchasing power from another source or constructing new power plants.” (<http://energync.org/resources/regulatory-landscape/glossary.html>)

³ ACC e-Docket No. E-01345A-13-0248. Available at <http://edocket.azcc.gov/>.

⁴ See Proposal, Exhibit 3 “Testimony of Charles Meissner” pp.12-15.

⁵ <http://www.seia.org/news/new-study-distributed-solar-energy-provides-34-million-benefits-arizona-ratepayers>

Under the **Net-metering Option**, APS would retain the current net-metering rate structure, but would add a monthly demand charge of \$50-\$100 to the average net-metered customers' bills. This "[ECT-2 rate](#)" is a demand-based rate that about 100,000 APS (about 10 percent) customers currently use. Customers in this rate are charged less per kWh for energy use but are assessed an additional charge based on their peak load usage, or peak demand.

Fig. 2 – Compensation per kWh under APS's two proposals (Source: APS Proposal estimates)

Under the **Bill Credit Option**, APS would place residential customers with grid-tied solar rooftop installations on a regular rate plan and give them a credit toward their bill for power produced by their solar energy devices at an **avoided cost rate** based on the forward market at Palo Verde Nuclear Generating Station. This proposal effectively turns residential net-metered customers into wholesale producers of solar power that must sell all of their power to APS at about \$0.04/kWh, around a 70 percent decrease from the current net-metering compensation.⁶

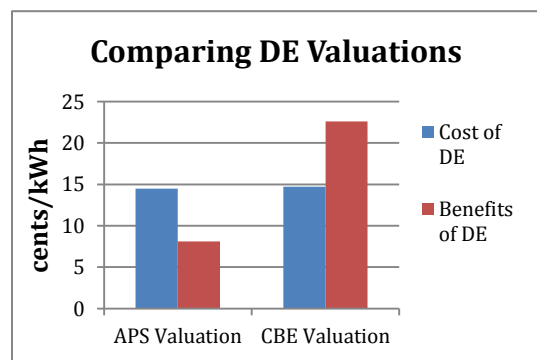
APS's calculations of the value of future solar rooftop installations

Concurrently with the development of its proposed changes to the current net-metering system, APS commissioned an update of a 2009 study to determine the potential future value of solar rooftop installations. The "2013 Updated Solar PV Value Report" estimates that the potential future value of solar PV to the APS system in 2025 will be **8.19 cents/kWh**. When adjusted for present-day value, solar's value is estimated at 3.5 cents/kWh.⁷

AP's calculations have been disputed on the grounds that they used a one-year "snapshot" for their analysis rather than the 20-30 year timeframe that all other utility resources are assessed within. APS's calculations have also been criticized for evaluating solar rooftop installations on par with conventional, large scale power plants, by failing to recognize the benefits of solar rooftop's quick, easy installation times in a greater variety of places.

Rooftop solar proponents' calculations of the value of future solar rooftop installations

Consulting firm Cross Border Energy conducted their own study "Benefits and Costs of Solar DG for APS,"⁸ which looked at demand-side solar impacts on APS ratepayers. Crossborder's methodology used a 20-year



⁶ See note 5, above.

⁷ P.47, Available at: http://azenergyfuture.com/wp-content/uploads/2013/05/2013_updated_solar_pv_value_report.pdf

⁸ Crossborder Energy, "The Benefits and Costs of Solar Distributed Generation for Arizona Public Service," p.2 (May 2013). Available at <http://www.seia.org/sites/default/files/resources/AZ-Distributed-Generation.pdf>

timeframe for its analysis and included the relative ease of installation and locational benefits in its calculations. Crossborder found:

- **Total costs** of solar rooftop installations for APS = **13.9 cents to 15.5 cents/kWh**
- **Total benefits** of solar rooftop installations for APS = **21.5 cents to 23.7 cents/kWh.**⁹

Other benefits included in the calculations were APS's savings on operating and maintaining expensive and polluting conventional power and power plants, reduced investments on in transmission and distribution infrastructure, reduced electricity lost during transportation over power lines, and savings on the cost of meeting Arizona's renewable energy requirements. Solar rooftop systems on APS grid were found to provide a \$34 million benefit per year to all ratepayers.¹⁰

Is net-metering a threat to the conventional utility business model?

Rooftop solar installations have exponentially increased in recent years, in Arizona and nationally. In 2009, APS had 1,000 customers operating with the net-metering program. As of the June 2013, APS had over 18,000 customers operating with the net-metering program, with approximately 500 new applications each month.¹¹

The Edison Electric Institute, the main trade group for large utilities, recently identified the increase in solar rooftop systems as the "largest near-term threat" to the electric utility industry.¹² Electric utilities across the country are beginning to address this disruption to their traditional business model by appealing to their state regulatory bodies. The Idaho Public Utilities Commission recently denied Idaho Power's proposal to change its net-metering program because the changes could "discourage investment."¹³ The Louisiana Public Service Commission also recently denied Entergy Corps' proposal to decrease its net-metering payments to customers.¹⁴

How have other stakeholders responded to APS's proposal?

Solar advocates and free-market proponents argue that changing the net-metering policy would send Arizona in the wrong direction on solar energy. Critics include:

⁹ Crossborder Energy Study, note 4, at p.2 above.

¹⁰ <http://www.seia.org/news/new-study-distributed-solar-energy-provides-34-million-benefits-arizona-ratepayers>

¹¹ Proposal, p.1.

¹² Edison Electric Institute, "Disruptive Challenges: Financial Implications and Strategic Responses to a Changing Retail Electric Business," p. 4 (Jan. 2013). Available at: <http://www.eei.org/ourissues/finance/Documents/disruptivechallenges.pdf>

¹³ <http://online.wsj.com/article/SB10001424127887324507404578594122250075566.html>

¹⁴ *Id.*

- Barry Goldwater, Jr., a prominent Arizona Republican, has started an initiative called [“Tell Utilities Solar Won’t Be Killed”](#) (TUSK). TUSK argues that adoption of either of APS’s proposals will stymie the growing rooftop solar market and would be “the most anti-solar move in the country.”
- The [Vote Solar Initiative](#) called on the ACC to reject both proposals, calling the Bill Credit option “particularly offensive . . . [because] it takes from Arizonans the right to reduce their electricity bill by installing solar energy on their roofs.”
- The [Solar Energy Industry Association \(SEIA\)](#) opposes the proposal, principally because it disputes the calculations underlying APS’s argument and conclusions. SEIA commissioned the Crossborder Energy Study.

Other advocacy groups argue that net-metering customers receive an unfair subsidy over non-net-metering customers and support APS’s stance.

- [60 Plus](#), a Washington, D.C.-based conservative group focused on seniors’ issues, supports APS’s argues that California-based companies, such as the leasing company SolarCity, receive the bulk of benefits from net-metering.
- [ProsperHQ](#), a newly-formed advocacy group focusing solely on the Arizona net-metering debate, argues that the current net-metering policy forces utilities to pay over the market price for solar generation.

What are the next steps for APS’s proposal? – Updated December 2013

On November 14, 2013, the ACC voted to implement a \$0.70/kW fee for customers with rooftop solar installations who participate in their net metering program. The fee equals roughly \$5/month for a typical residential installation. The ACC agreed to review the net metering policy in more depth during the next APS rate case.

Read more

- Read the original proposal filed with the ACC on July 12, 2013 here: http://azenergyfuture.com/wp-content/uploads/2013/07/NetMeteringProposalFilingtoACC_130712.pdf
- The proposal is summarized here: <http://azenergyfuture.com/wp-content/uploads/2013/07/NetMeteringProposalOverview.pdf>
- ACC staff recommendations: <http://images.edocket.azcc.gov/docketpdf/0000148646.pdf>
- Read the ACC’s November 14, 2013 decision to implement a \$0.70/kW fee: <http://images.edocket.azcc.gov/docketpdf/0000149849.pdf>

Contact information

Arizona Corporation Commission
Consumer Services Section
1200 W. Washington St
Phoenix, AZ 85007