



Arizona Community Action Association



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January 21, 2014

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DOCKET CONTACT

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Bob Stump, Chairman
Gary Pierce, Commissioner
Brenda Burns, Commissioner
Susan Bitter Smith, Commissioner
Bob Burns, Commissioner

Arizona Corporation Commission
DOCKETED

JAN 21 2014

ORIGINAL

Arizona Corporation Commission
1200 West Washington
Phoenix, AZ 85007-2996

DOCKETED BY

Re: In the matter of E-00000J-13-0375, the Commission's Inquiry into Potential Impacts to the Current Utility Model Resulting from Innovation and Technological Developments in Generation and Delivery of Energy

Dear Chairman Stump and Commissioners:

We would like to thank Commissioner Bob Burns for initiating this request. We at the Arizona Community Action Association (ACAA) believe it is critical to take a thoughtful approach to anticipating future technological innovations in the utility industry. We believe it is important to be mindful of the lessons learned from the rapid technological innovation in the telephone industry – while new devices, features, and applications have flourished, those unable to make the leap to new technology have been hit with price hikes¹ and may lose service altogether.² Proper planning must be undertaken to ensure that such a negative disruption does not occur as new technology and innovations are integrated into the electricity grid.

We believe that ACAA can bring expertise and a unique perspective to this investigation. ACAA works to alleviate and end poverty through community-based solutions. That effort entails a number of immediate assistance provisions, such as bill assistance and weatherization, which promote the public interest by encouraging economic security. These efforts also allow customers to weather acute disasters, avoid utility disconnection or even eviction, continue to pay their power bills, and contribute to the fixed costs and guaranteed returns that allow utilities to provide service across their territories. Because of their contribution to the public interest as well as the utility's bottom line, these programs must be protected and expanded where appropriate. However, ACAA also believes we need to take a longer view on such issues. We must examine how low-income communities can be empowered by a new energy economy or could be shut out – literally left in the dark – if the electric utilities follow the telecommunication industry's path.

Distributed Supply and Storage Resources Enabling Customer Self-supply

A study by the Center for American Progress found that a majority of the solar adoption in Arizona has been undertaken by middle-income communities, with nearly 80% of the installations in areas with a median income between \$40,000 and \$89,999. A large driver for this adoption has been the prevalence of solar leases, which

¹ <http://articles.latimes.com/2013/feb/12/business/la-fi-lazarus-20130212>
² <http://gigaom.com/2012/11/07/heres-atts-14b-plan-to-kill-its-copper-network-and-leave-rural-america-behind/>, and a CDC survey on wireless telephones: <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201306.pdf>

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depend heavily on credit rating to determine the ability to lease solar panels.³ However, 61% of Arizonans have subprime credit,⁴ meaning that even with solar leasing⁵ a great number of Arizonans who could most benefit from distributed power are unable to access it. As the "electrical divide" is ever approaching,⁶ how can new technologies be made available to all? California, through its Single- and Multi-family Affordable Solar Homes programs, has allotted 10% of the California Solar Initiative's funds to providing solar for those who cannot otherwise afford it.^{7,8}

Representatives from these programs, and/or Navigant Consulting, which has audited these programs, could provide valuable insight about these programs and their applicability to Arizona.

Name	Email	Phone	Description
Erica Mackie	emackie@gridalternatives.org	(510) 731-1310	Single Family Affordable Solar Homes, Program Manager
Kevin Cooney	kevin.cooney@navigant.com	(303) 728-2500	Lead Author, Low-Income Solar Program Evaluation, Navigant Consulting

Customer Load Management Technology, Energy Efficiency, Major New Loads and Related Services:

Weatherization has been an excellent benefit to low-income communities, improving homes with more efficient appliances, better insulation, health and safety upgrades that improve quality of life and allow low-income community members to save money on their utilities for years afterward, greatly improving their financial status. Moreover, 7% of electricity in the US is lost in transmission and distribution,⁹ meaning that every kilowatt-hour that we can save from being consumed yields significant benefits to all those who enjoy the grid's benefits. A representative from National Association of State Community Service Programs (NASCSPP) would be an appropriate speaker on this topic.

One of the valuable elements of dynamic pricing is the availability of demand response, where customers can work with the utility to reduce strain on the grid and receive compensation for their effort. Previous experiments by utilities have shown that crediting customers for reducing their use is preferred by customers to other programs such as time-of-use rates or critical peak pricing.¹⁰ It is often said that low-income customers will have no interest in demand response, because their use is constrained to those critical areas which they can afford and don't have the flexibility necessary to participate. However, a report by the Brattle Group shows that low-income customers

³ <http://www.sungevity.com/solar-panel-resources>

⁴ <http://scorecard.assetsandopportunity.org/2013/state/az>

⁵ "Third-party-owned systems accounted for over 50% of all new residential installations in most major residential markets, with Arizona topping 90%." <http://www.seia.org/research-resources/us-solar-market-insight-2012-year-review>

⁶ <http://www.americanprogress.org/wp-content/uploads/2013/07/DistributedGenerationBrief-3.pdf>

⁷ <http://www.cpuc.ca.gov/PUC/energy/Solar/sash.htm>

⁸ <http://www.cpuc.ca.gov/puc/energy/solar/mash.htm>

⁹ <http://www.eia.gov/tools/faqs/faq.cfm?id=105&t=3>

¹⁰ <http://www.greentechmedia.com/articles/read/bge-pushes-towards-one-million-peak-time-rebate-customers>

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do participate in demand response programs, sometimes at the same rate as other customer classes.¹¹ As these programs can provide liquidity in the budget of a low-income person,¹² they should be available to them. On the other hand, those with the least resources should not be unduly forced to go without to maintain the consumption habits of the more affluent members of our state.

The incorporation of dynamic pricing into retail electric rates, if integrated correctly, can yield significant benefits for all parties. To further this discussion, I believe the authors of the Brattle Group paper would make excellent presenters, or the managers of any of the programs listed in their report.

Name	Email	Phone	Description
Robert Scott	rscott@nascsp.org	(202) 624-5867	Director, Energy Services
Ahmad Faruqui	Ahmad.Faruqui@brattle.com	(925) 408-0149	Principal at The Brattle Group

Utility-Scale Storage Technology, Transmission and Distribution Automation, Metering Technology & Services

These innovations hold great promise. A question that must be addressed in these pursuits is one of distributive justice; that is, who pays, and who benefits? Will these be innovations funded by ratepayers, only to see the benefits reaped by shareholders?

To explore these questions, I believe representatives from the National Consumer Law Center or a representative from the National Resource Defense Council to discuss the impacts on resource consumption, health effects, and other areas affected by electricity generation technology.

Name	Email	Phone	Description
John Howat	jhowat@nclc.org	(617) 542-8010	Senior Energy Analyst, NCLC
Ralph Cavanagh	rcavanagh@nrdc.org	(415) 875-6100	Co-Director, Energy Program, NRDC

Micro-Grids:

Microgrids offer a great potential for our energy future. They provide resiliency against storms,¹³ cybersecurity attacks,¹⁴ and better integration of distributed generation sources.¹⁵ But we have to be aware of the context in which this innovation takes place; the United States has an aging electrical grid, recently given nearly failing marks in a report by the American Society of Civil Engineers.¹⁶ Without proper planning, it's entirely possible that microgrids could be implemented to provide greater reliability and control over energy generation to more affluent communities, taking the focus away from the hundreds of billions of dollars of investment the grid

¹¹ Faruqui, A., Sergici, S., Palmer, J. "The Impact of Dynamic Pricing on Low Income Customers" (2010). The Brattle Group.

¹² <http://www.greentechmedia.com/articles/read/mo-money-mo-demand-response>

¹³ <http://www.greentechmedia.com/articles/read/new-york-plans-40m-in-prizes-for-storm-resilient-microgrids>

¹⁴ <http://www.greentechmedia.com/articles/read/grid-edge-pulse-microgrids>

¹⁵ <http://escholarship.org/uc/item/9w88z7z1#page-2>

¹⁶ <http://www.infrastructurereportcard.org/energy/>

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currently needs.¹⁷ In this context, we may realize a Dickensian “best of times, worst of times” situation, where our grid embodies magnificent technological developments in some sections while others fail into unreliability and disrepair. It is therefore critical that we examine how such technology is implemented to guarantee an equitable energy future for all.

In conclusion, we believe all Arizonans should be aware of this conversation; the options in front of us are numerous, and the rewards could be great. But we must remember the collective nature of utilities at present; monopolies are guaranteed a rate of return, and in turn they provide service to the residents of their territory. As we embrace future technology, how will this relationship be impacted? Will sunk costs be shifted onto those without the affluence to exploit new technology? Will the incentive to generate and sell as much power to maximize utility revenue remain as the dominant paradigm? Underlying all of these questions about technology are the incentives present to adopt or avoid new and innovative practices. Throughout these discussions, we hope the question of what we value and want to see as a utility of the future remains an ever-present discussion point, as does the impact going forward on our most vulnerable families.

Thank you for the opportunity to participate in this discussion. If you have any questions don't hesitate to contact me.

Sincerely,



Cynthia Zwick
Executive Director
Arizona Community Action Association

c: Kevin Hengehold
ACAA Board

¹⁷ <http://www.asce.org/Infrastructure/Failure-to-Act/Electricity-Infrastructure-Report-Executive-Summary/>