



## Arizona Corporation Commission - Renewable Energy Questionnaire

*To provide voters with information on your position on Renewable Energy issues, please provide your views on the questions below. Please take the opportunity to elaborate on your responses.*

1. Do you believe the ACC has jurisdiction to establish the Renewable Energy Standard and Tariff? Y/N Explain your answer.

**Boyer:** Yes, I believe this jurisdiction is implied and essential for the ACC to perform its express duties and power of regulating rates and quality of service in the production of energy.

**Fowlkes:** Yes. Is this a good idea? No. I believe that we should let free market competition operate without government intervention such as the ACC proposed renewable energy mandate. It currently costs about twice as much with today's technology to generate electricity from renewable energy sources as compared to conventional power generation. This gap will naturally narrow if government stays out of the way, but a government mandate to manipulate this market place will cause the gap to widen. If utility companies are forced to purchase the renewable energy equipment regardless of cost, the result will likely be higher electric rates for most consumers.

**Manoil:** Yes. I believe the ACC's Constitutional rule-making authority gives it jurisdiction to establish a Renewable Energy Standard.

**Mayes:** Yes, the ACC has the jurisdictional authority to establish and enact the RES. The Commission derives its authority for adopting the new RES from both statute and the Constitution. The ACC first established the Environmental Portfolio Standard (EPS) in 2001 and the proposed RES is an expansion of the current EPS program. The ACC is the best positioned branch of state government to enact renewable energy policies. The Legislature can enact tax credits, which it has done, the Governor can issue executive orders on renewable energy, which she has done, but the best opportunity for enacting renewable energy policy lies squarely with the ACC due to the Commission's exclusive regulatory oversight of the state's electric utilities.

**Pierce:** I understand there is some question as to whether the ACC has jurisdiction to establish the Renewable Energy Standard and Tariff, although I have not researched the question myself. I do believe that the time to have questioned and determined the ACC's role and limits to their authority would have been at the beginning of the process and not now that numerous stakeholders, including representatives of the renewable energy industry, utility officials, customers and ACC staff have devoted significant work to the proposal to ensure limited resources are spent effectively.

2. Do you support increased development of solar and other renewable resources in AZ? Y/N Explain your answer.

**Boyer:** Yes, and I would vote for increasing the 1.1 % to 15% by year 2025. However, I hasten to add that 15% is too modest and 2025 needs to be shortened by at least 10



years given the substantial body of evidence showing that the threat of Global Warming is upon us, the substantial increase in the cost of natural gas, which ironically parallel Arizona's dependency on and increasing use of natural gas, and imminent danger to Arizona's economy (For example, APS says that Arizona faces a one-half billion dollar energy crisis similar to what California experienced several years ago. Interestingly, while the ACC has been talking about increasing the 1.1% standard, which incidentally has not been achieved, to 15%, the not so sunny Germany has opened the largest solar energy plant in the world.

**Fowlkes:** I do support the development of solar and other renewable energy resources in Arizona. What I oppose is a government mandate that dictates how much power the electric utility companies generate in this manner. Such a mandate will surely cause an increase in electric rates for the average consumer.

**Manoil:** I support the development of renewable energy resources so strongly I have made it the centerpiece of my campaign with the slogan "New Energy for Arizona." The first reason for my support is to ensure greater consumer protection in the long term. As consumers have borne the brunt of volatile and increasing fuel costs, it makes sense to invest in resources with no or stable fuel costs. Thus, developing renewable energy resources keeps more energy dollars in the state, circulating among local economies and multiplying the benefit. Finally, renewable energy sources do not deplete our increasingly scarce water supplies, and are more environmentally benign than traditional sources.

**Mayes:** Absolutely. As the Solar Energy Industry Association's 2005 National Solar Champion, I have been and will continue to be a strong advocate for increased solar and renewable energy in Arizona. With more days of sunshine than any other state, we are well positioned to be the leader in solar energy in the United States. The new RES rules, once enacted, will place Arizona second in per-capita consumption of solar energy in the country. Currently, Arizona is third, behind California and New Jersey in the amount of installed solar energy. I believe Arizona has great potential for the development and deployment of other forms of renewable energy. Northern Arizona is well suited for wind, and there currently exist a number of geothermal hot spots, especially in central and southeastern Arizona, that we should be harnessing. I will continue to advocate for the expeditious and efficient implementation of the Renewable Energy Standard in my next term on the ACC.

**Pierce:** I do support increased development of solar and other renewable resources in Arizona. I believe that a diversity of fuel sources and technologies can only aid the development of energy supplies, and the pursuit of reliable, cost-effective renewable resources is a laudable goal. I am, however, an advocate of accountability and transparency for the true costs of renewable energy supplies. I realize there are historical subsidies of the development of fossil fuel energy sources as well, and so I encourage the development of renewable energy in a manner that conveys accurate information on costs and benefits in comparison to other traditionally available energy supplies.



**3. Do you support net metering of customer-owned solar electric systems? Y/N Explain your answer.**

**Boyer:** Yes, net metering is crucial to the success of distributive generation.

**Fowlkes:** I support net metering of customer owned solar electric systems. The ACC should encourage arrangements between electric utility companies and their customers that facilitate the transfer of power in either direction. Privately owned solar powered electric systems have the potential to become a vital resource in meeting growing demand.

**Manoil:** Yes, I support true net metering of solar electric systems to give a more accurate price signal to consumers. Solar electric systems are high in initial cost, and the value they provide by easing demand on the utility grid, especially at peak demand times, reducing local and global pollution, and conserving water supplies should be reflected in a one-to-one credit to the owner of the system.

**Mayes:** Net metering is a crucial to developing residential and commercial solar systems. Currently, the ACC is working on net metering and interconnection rules. It is my hope that a vote on net metering and interconnection can occur in close proximity to the vote on the RES rules, as the three items go hand in hand. I believe that the benefits of net metering for residential and commercial customers necessitate quick ACC action to establish these standards.

**Pierce:** Net metering of customer-owned solar electric systems is a positive technological development in that it serves as an incentive for the development and use of solar energy by bringing consumers into the effort in a proactive manner. Allowing consumers to have the ability and the incentive to generate their usage equips them to change energy use and make priorities of a limited resource.

**4. If you support net metering, do you support applying it to all rate plans applicable to retail customers? Y/N Explain your answer.**

**Boyer:** Yes, all retail customers should be able to choose the rate plan that best fits their renewable energy needs and use.

**Fowlkes:** I feel that net metering should be made available to any customer requesting it, commercial customers and individual households alike.

**Manoil:** Yes. If end-users want to take it upon themselves to invest in distributed generating assets, they should receive a fair price for their product. To avoid skewing the market and to encourage small business and community investment in more efficient solar generation, Arizona should consider capping net metering payouts at certain capacity levels, such as the 2 MW level that other states and FERC have approved.

**Mayes:** Net metering must be made available to all customer classes to enable residential and commercial customers the ability to take advantage of the solar energy programs offered by our state's utilities as part of the ACC's RES rules. The smallest



residential customer must be offered the same attendant benefits of selling back their excess power to the grid as a large commercial customer.

**Pierce:** While I support the use of net metering and would prefer it be applicable to as many consumers as possible, I understand the costs required to construct transmission lines and the limitations of providing the full retail value with the existence of a native load and a utility's obligation to serve. I expect that the most responsible utilities will utilize net metering in ways that encourage the development of solar energy without compromising critical facilities that provide service to other customers and ratepayers.

5. If a customer, on a monthly basis, had a net-positive sale of electricity from their net-metered solar electric system, which of the following would you support:

- Pay the customer the average avoided cost of generation
- Pay the customer the average avoided cost of purchased power
- Pay the customer the full retail value of the energy provided
- Pay the customer the full retail value of the energy provided, and carry over any surplus energy generated and apply it to subsequent billings, with a yearly reconciliation

Explain your answer.

**Boyer:** Pay the customer the full retail value of the energy provided, and carry over any surplus energy generated and apply it to subsequent billings, with a yearly reconciliation

**Fowlkes:** Regarding net metering rate plans, I feel that the best thing the ACC can do is to end the monopoly system for the electric power industry in this state. When individual customers have three or more choices for their electric power provider, customers will be able to seek out the best deal for their particular situation. At that point, what the ACC thinks about net metering pricing options will be irrelevant.

**Manoil:** I would favor the fourth option. We need to encourage people to make the capital investment in solar energy first for themselves. Conceptually, the customer has a small power plant on their side of the meter. The customer should be credited on a one-to-one basis for the energy produced on that side of the meter. After their total annual consumption has been offset, then the utility's avoided cost of generation is an appropriate rate for excess electricity.

**Mayes:** (D) Pay the customer the full retail value of the energy provided, and carry over any surplus energy generated and apply it to subsequent billings, with a yearly reconciliation. If a customer with solar PV on their rooftop turns back power to the utility, through net metering when the price of power is at its apex, that customer should be reimbursed by the utility for the full retail value of that power. Furthermore, with net metering technology, the customer should be reconciled at the end of the year for the total sum of power they "sold back" to the grid during the year.

**Pierce:** I prefer free market principles over regulatory approaches to achieve these goals, but I challenge utilities to provide the most generous net metering solar electric



system that is prudent to maintaining lost-cost and reliable power to all its customers and ratepayers.

**6. Do you support development of distributed solar resources as an alternative source of energy for utility customers? Y/N Explain your answer.**

**Boyer:** Yes

**Fowlkes:** I do support the development of distributed solar resources as a viable alternative for utility customers. We need to broaden the playing field and encourage as many players as possible to enter the renewable energy mix. This will enhance service reliability for all customers.

**Manoil:** Yes. Sunlight is the most distributed energy resource on the planet and one we have in abundance in Arizona. Generating energy closer to the user avoids the need for extensive transmission and distribution lines and the line losses associated with such transport.

**Mayes:** Yes. One of the highlights of the RES rules is its aggressive distributed energy requirement. The rules will require that up to 30% of renewable energy generated by our state's electric utilities must come from distributed energy. Distributed solar will make up most of the distributed requirement. Our state's utilities will need to aggressively market this program, as, according to one estimate, it will take up to 3,700 3 kW PV systems to meet this requirement in 2007, increasing to 9,100 3 kW PV units by 2010.

**Pierce:** Distributed solar resources can be an excellent alternative source of energy for energy customers willing and able to finance the front-end cost of the equipment. I support tax incentives to reduce the consumer's cost and favor reductions in regulations that streamline the permitting and installation of the equipment.

**7. Do you support development of statewide interconnection standards for distributed generation? Y/N Explain your answer.**

**Boyer:** Yes, in order to make Arizona more attractive for development by having a single predictable regulatory standard

**Fowlkes:** Regarding statewide interconnection standards for distributed power generation, I feel that this is better left to industry experts rather than state government. The electric power industry has done a good job in standardizing such things in the past, and I expect this to continue.

**Manoil:** Yes. To strengthen Arizona's economy and ensure a more prosperous future, we must utilize our abundant renewable energy resources. Streamlining interconnection standards will make it easier to harness renewable energy and bring it through the transmission grid to where it is needed.

**Mayes:** As I mentioned in my net metering answer, interconnection standards are key to the success of the RES and I am hopeful the Commission will vote on



interconnection standards in close proximity to our vote on the RES rules. Interconnection standards ensure a standard state-wide method for renewable projects to interconnect with the state's utilities, which will help develop our burgeoning solar market by providing certainty and ease of connection both to customers and installers.

**Pierce:** I do support statewide interconnection standards for distributed generation and believe that uniformity in process and protocol will facilitate the development and use of distributed generation. I have every expectation that utility companies will step up to deliver this uniformity to increase efficiencies to the maximum extent possible within their respective system designs.

**8. Do you think more renewable energy should come from utility-owned systems, or from individual end-user owned systems? Explain your answer.**

**Boyer:** This should not be an either or proposition, but rather the ACC should provide incentives for both and in a sense let the market determine what the mix will be.

**Fowlkes:** I believe that a mix of customer-owned and utility-owned systems will become the norm for solar power. I don't know if one or the other approach will prove to be more cost effective, but I do feel that the best we can do is to keep government out of the way, and let the market place dictate the mix.

**Manoil:** I believe our goal should be to expand renewable energy production on both sides of the utility meter as quickly and efficiently as possible to deal with the energy and water challenges of the 21st Century.

**Mayes:** APS and TEP have done a wonderful job with the Prescott Airport and Springerville solar arrays. That said, I believe that our focus must increasingly be on promoting individual end-user owned systems. Locating renewable systems at the end-user's property lessens the need for high voltage power lines to carry power across the desert and incrementally decreases the need for new power plants. Distributed renewable systems also empower consumers to take control of their energy usage.

**Pierce:** I support a mix of distribution channels including both customer-owned and utility-owned renewable energy systems. I believe that a variety of systems makes for a healthy and diverse energy provider, and while some efficiencies can be gained with utility-owned systems, customer-owned systems must be a critical component to ensure consumers play a vital role in the development and use of renewable energy.

**9. Should the ACC include additional considerations of demand side management as part of the evolution and implementation of the EPS? Y/N Explain your answer.**

**Boyer:** Yes, because the demand-side is an integral part of Arizona's energy requirements and shares a responsibility for helping Arizona become more energy independent rather than so heavily dependent on importing fuel and on fossil fuels.



**Fowlkes:** This question assumes that the ACC should dictate how power companies generate their electricity through implementation of the Energy Portfolio Standard. As I have pointed out before, I disagree with this assumption. The question goes on to ask if the ACC should get involved in demand side management as well. The traditional model for pricing electric services in a government regulated market has been to reward high volume users with lower discounted rates, while penalizing low volume users with higher rates. Obviously there would be some benefit in reducing demand for electric power by the consumer, but the question is how to achieve this in the most efficient manner. Advocates of big government will say government knows best, so let government get involved in pricing strategies as well. I would say keep government out of the process as much as possible. End the monopoly system in the electric power industry, and lay the groundwork for a regulated competitive market instead. This would more likely bring about the desired result of power companies rewarding low volume users with lower rates. Please visit our website [www.rfowlkes.com](http://www.rfowlkes.com) for more information on this issue.

**Manoil:** Yes. Demand-side management precludes the need for relatively more expensive energy production, whether from renewable or traditional sources. If we can bring down the gross total demand, it will be easier to achieve a higher percentage of that amount with renewable energy.

**Mayes:** As drafted, the RES rules (which will replace the existing EPS when they take effect) do not contain any demand side management (DSM) provisions. I believe that it is best to separate DSM programs from renewable energy programs. The Commission has been very successful in implementing DSM programs outside of the EPS or RES. For example, in 2005, the Commission approved \$48 million in DSM programs for APS customers. As part of the Southwest Gas rate case, the Commission approved more than \$4 million in DSM programs. DSM and renewable energy are related, as they both help decrease consumers energy usage from the utility, but I believe they merit separate treatment. As the rules evolve, the degree to which renewable energy applications assist our utilities with their demand side management efforts should be monitored, as this is one of the primary goals of the RES.

**Pierce:** Demand side management is a critical part of a renewable or sustainable portfolio, irrespective of whether it's integrated or separately accounted for, in the environmental portfolio standard. DSM provides an additional tool to manage energy use and achieve conservation goals.