

BEFORE THE ARKANSAS PUBLIC
SERVICE COMMISSION

IN THE MATTER OF AMENDMENTS TO THE)
ARKANSAS PUBLIC SERVICE COMMISSION'S)
NET METERING RULES)

DOCKET # 12-001-R

INITIAL COMMENTS WILLIAM BALL, pro se.

PREFACE

May I first express my gratitude to the Commission and the Parties for the establishment of this Docket and my opportunity to participate. For decades renewable energy (RE) generation has been viewed as a technology of the future. As RE technology has evolved and costs have continued to decrease, the perceptions and realities are changing. Not for all, but for some involved in providing energy from mature and conventional energy sources, RE is seen as a threat to their business model and these industries have resisted efforts to reduce barriers and provide incentives to encourage investment in RE. For RE, the future is now. I am hopeful that the Parties will, set aside bias and self interest and, allow RE to be all it can be in Arkansas. Please accept that my remarks are sincere and that I include the background remarks because I believe them helpful in establishing a perspective and context to my remarks.

BACKGROUND

For those Parties that may not know me, I started my company in Little Rock in 1976. I began to install solar water heating systems in 1977, and purchased my first photovoltaic modules in 1980. My company has been designing, distributing and installing solar energy systems for 35 years.

My first experience with the APSC dates back about twenty years, when I intervened in an IRP Docket (Integrated Resource Plan) dealing with what I hoped would lead to integrating the use of renewable energy into the mix of generation options, instead, our IRP "plan" became interrupt-able power contracts.

My first effort with the Arkansas General Assembly was in 1999, a session that was fully consumed by, what most would agree turned out to be a bad idea, utility deregulation. Competition in and of itself is a good thing, however, as we learned of the poor results experienced by other states that had adopted such policy, the Arkansas deregulation statute was first delayed and later repealed. My disappointment with the entire concept was that we were running a race to a bottom line that did not exist, instead of developing the kinds of policies that would have universal benefit and begin to solve our state's and nation's future energy problems.

I went to the Arkansas Legislature again during the 2001 Session with the *Arkansas Renewable Energy Development Act of 2001*, the statute that today provides for net metering. It is worth noting that not ONE vote was cast against the Bill, not in Committee or on the House or Senate floor. Clearly the General Assembly wanted Arkansas to move forward with the development of our renewable energy resources.

In 2002, the APSC set the Docket to promulgate the Rules and Procedures with which utilities would develop their tariffs and interconnection contracts. I intervened in the docket to argue for the best outcome for my company and renewable energy use in Arkansas. There were four major points of contention;

- 1) Utilities wanted to pay “avoided cost” for energy generated by a net metering facility. This was not allowed because the statute defines net metering as an exchange of kWh as opposed to payment for energy produced by a net metering facility.
- 2) Utilities did not want to carry over net excess generation from a net metering facility at the end of a billing period, complaining that it would be too difficult for their accounting departments. Although I pointed out that utilities offered levelized billing, believing it to be comparable to levelized crediting, the Commission did not require utilities to carry over net excess generation. The Arkansas General Assembly subsequently amended the law to require a month to month carry over of net excess generation, and allowed that any remaining credit would be granted to the utility at the end of the calendar year.
- 3) Utilities requested the requirement of a visibly open, lockable disconnect switch that would enable them to disconnect a net metering facility from their system in the event of a power outage or other problem. I pointed to the substantial vetting that my industry's equipment must go through to achieve the UL, IEEE and other certifications necessary for safe interconnection to a utility system. I further argued that the requirement for such a switch was redundant, would increase the costs of renewable energy installations and could theoretically leave a utility liable in the event they failed to open the switch while working on lines during a power outage. It should be noted that certified net metering equipment connected to the utility system automatically shuts down during a utility power outage. The Commission deemed that such a switch would not be required. It should also be noted that we often specify and install these switches to accommodate utilities.
- 4) The final point was a request by the utilities that a net metering facility be required to carry and maintain liability insurance in the event of damage to the utility's system, or injury to, or death of, a

utility lineman, that may be caused by a malfunction of net metering equipment. I again pointed to the redundant levels of safety built into my industry's equipment, the certifications required and above all, that the Price Anderson Act, a federal statute that waives requirement for nuclear power plants to carry liability insurance, had just been renewed. The compromise was indemnification, an issue that has turned out to be much more of a barrier than perhaps any of us thought at the time. I am pleased that the Commission and Parties now have the opportunity to revisit this issue.

INITIAL COMMENTS

My first request to the Commission and Parties is that utility requirements for indemnification be stricken from utility interconnection agreements. My arguments are as follows:

- 1) Indemnification requirements have proven to be a substantial barrier for government, municipal and institutional net metering facilities in Arkansas. Because of sovereign immunity, which prohibits government agencies and institutions from signing existing utility interconnection agreements, a number of facilities installed in good faith have remained idle and unable to produce power. With current and emerging directives from governments and commitments from institutions, this problem will grow and persist.
- 2) This barrier is what I believe to be an unintended consequence of the *Rules and Procedures* governing net metering in Arkansas. If this barrier had been foreseen by the Commission and Parties at the time of promulgation of the *Rules and Procedures*, we would have found a way to avoid the problem.
- 3) While the thought of damage to utility equipment or unsafe conditions to utility linemen caused because a net metering facility's equipment fails to function properly is disconcerting, historical evidence supporting a cause for concern is virtually non-existent. A broad range of stakeholders, including but not limited to the IBEW, equipment manufactures, utility engineers, electrical engineers, national and private laboratories and testing facilities have been involved in the development of the certifications required to qualify net metering equipment for interconnection to the utility grid. Vetting and standards are rigorous, and redundant levels of safety are required. Among others, I have contacted the Solar America Board for Codes and Standards, John Wiles, New Mexico State University College of Engineering, SANDIA National Laboratory, the National Renewable Energy Laboratory, the Interstate Renewable Energy Council, the Solar Electric Power Association, the Solar Energy Industries Association and colleagues in the renewable energy

industry, and to date I have been unable to document one single incident where a renewable energy net metering system has caused damage to utility equipment or injured a utility worker. The position of the PV equipment manufacturers is that compliance with national standards, including those developed by the Institute of Electrical and Electronics Engineers (IEEE) and Underwriters Laboratories (UL), ensure that RE net metering systems, properly installed, are incapable of causing the safety or power quality problems of concern to the utilities.

- 4) Utilities may argue that as long as there is a risk, no matter how small, of being held financially accountable for safety or power quality problems caused by a customer-owned generating facility, then net metering customers should be required to protect the utilities against such financial risks. Any other outcome, they argue, results in utility ratepayers or shareholders unfairly bearing risks from the operation of facilities over which the utilities have limited control. I would make the point that manufacturers either carry their own product liability insurance or, in some cases, are self-insured. In either case, the manufacturers are in a position to indemnify customers or utilities compelled to pay for property damage or personal injury attributable to the malfunction of the manufacturers equipment. The manufacturers believe that for RE systems manufactured and installed in compliance with applicable standards, no additional consumer insurance or indemnification should be required.
- 5) In several of the cases where the owners of net metering facilities have been prohibited from signing utility interconnection agreements because of the issue of indemnification, the utility has offered to waive the indemnification requirement and, in lieu thereof, purchase liability insurance and charge the owner of the net metering facility to recover the costs of such insurance. In another case the utility offered to waive the indemnification requirement if the owner of the net metering facility purchased liability insurance to protect the utility. In every case, these costs far outweigh the value of the electricity produced from the net metering facilities. I would argue that both of these options would not comport with Section 4(b)(2) of Act 1781, *The Arkansas Renewable Energy Development Act of 2001*, which reads as follows:

(b) The commission, following notice and opportunity for public comment:

(2) May authorize an electric utility to assess a net-metering customer a greater fee or charge, of any type, if the electric utility's direct costs of interconnection and administration of net-metering outweigh the distribution system, environmental and public policy benefits of allocating the costs among the electric utility's entire customer base.

Without first meeting the requirements stated above, utilities cannot charge a net metering customer for a cost they might incur to protect themselves from a risk that by and large does not exist. For these preceding reasons, I am hopeful that the Commission and Parties to this Docket will agree that it is in the best interest of all concerned, including the ratepayers and citizens of Arkansas that any requirement(s) for insurance or indemnification be stricken from utility net metering contracts and interconnection agreements, and indemnification language in previously signed agreements be declared null and void.

Additionally, I do not believe it to be in the best interest of rate payers, or the development of renewable energy in Arkansas, to allow utilities to recover costs from rate payers for insurance utilities may choose to purchase to protect themselves from what is virtually a nonexistent risk. The prudent and fiscally responsible way to address this risk is to allow utilities to recover costs that they might incur for damages attributable to, or as the result of, a failure of net metering equipment, after the fact. This approach has worked numerous times in the past where utility equipment or infrastructure has been damaged as a result of acts of nature. I am reminded of an ice storm nearly a decade ago that caused some \$160,000,000.00 in damage to utility equipment and infrastructure, and those costs were recovered from ratepayers.

ADDITIONAL BARRIERS

As stated in Order #1 of this Docket, I would like to request that the Commission and Parties address four additional impediments to the development and use of net metering facilities in Arkansas.

(1) Meter Aggregation:

A review of the 47 states that currently have net metering programs reveals that 29 states, including Arkansas, have not specifically addressed meter aggregation. Of the 18 states that have addressed the issue, only Florida does not allow meter aggregation.(1)

There are existing and pending net metering facilities in Arkansas that would benefit tremendously from the ability to aggregate numerous meters in order to take advantage of a single net metering facility they may own and operate. These facilities are capable of, or would be capable of, consistently producing energy in excess of their consumption to the single meter located at the net metering facility.

(1) <http://www.dsireusa.org/> Database of State Incentives for Renewables & Efficiency.

By and large this condition exist, or would exist, for net metering facilities owned and operated by federal, state or local governments, municipalities, institutions or commercial entities. In some cases these entities may receive a single bill from their utility for consumption at numerous meter locations.

As example, consider the existing 50kW wind powered net metering facility located on City property in the City of Burdette, Arkansas. It should be noted that the installed wind facility has not yet been commissioned because of the indemnification clause in the utility interconnection agreement. Once commissioned, the consumption of energy from the utility at the facility will be a small fraction of the projected energy production from the wind turbine. Absent the ability to credit this net excess energy production against metered consumption at other city-owned facilities, under existing NMR, the City will forfeit the majority of the energy produced by their renewable energy installation. This situation will adversely affect the City's investment to the point that it will never provide a return on the investment. It should be noted that the national company that installed the wind turbine for the city has moved out of Arkansas and is focusing it's efforts in states with fewer barriers and more favorable incentives for RE development.

The ability to aggregate meters will provide other opportunities to expand the use of renewable energy in Arkansas as well. Commodity of scale often dictates that larger capacity net metering facilities are more economical to install and operate. Larger facilities that are able to provide more attractive returns on investment will more easily attract the investment in renewable energy that is the very intent of the *Arkansas Renewable Energy Development Act of 2001*.

Farmers could jointly own larger net metering facilities and individually benefit from the facility's energy production. Neighborhood associations could install net metering facilities and all of the residents of the neighborhood could enjoy the benefits.

A single rural residential property may have a meter on the house and a separate meter on the barn and the barn may be the optimal location for a solar net metering facility, yet the house consumes the majority of the energy used at the property. The ability to aggregate the two meters would allow the customer to maximize the return on their investment in renewable energy.

One can imagine numerous situations where the ability to aggregate meters will open the door to more investment in renewable energy in Arkansas. I am hopeful that the Commission and Parties will expand the NMR to allow for the aggregation of meters for net metering facilities under a given set of circumstances.

(2) Capacity Limits for Net Metering Facilities:

The current capacity limitations in the existing NMR are 25kW and 300kW for residential and commercial, respectively. In 2002, through collaboration with Commission staff and Parties, during the original promulgation of the NMR, those limits were deemed to be sufficient for our emerging industry.

A 25kW residential photovoltaic system will produce a monthly average of 3,000 kWh per month in Arkansas. With the average residential monthly energy usage being about 1,000kWh, the 25kW limit was thought to be adequate. The 300kW limit for commercial systems limits maximum average production from a solar array to around 35,000kWh per month and the limit established in 2002 by the Commission and Parties was more arbitrary than based on average commercial energy usage. There are many larger homes that use well in excess of 3,000kWh per month and certainly many commercial customers that use far in excess of 35,000kWh per month. The following section in the RE Development statute suggests that these limits should be raised: *SECTION 3 (5)(E) Is intended primarily to offset part or all of the net-metering customer requirements for electricity.*

I would suggest that the existing capacity limits be raised to standard interconnection levels of 100kW for residential and 1mW for commercial, with an exception allowing for larger systems in cases where the limitations would restrict a customer's ability to offset all of their requirements for electricity. The Commission and Parties clearly have the authority to do this as stated below in SECTION 4 of the *Arkansas Renewable Energy Development Act of 2001*.

(3) May expand the scope of net metering to include additional facilities that do not use a renewable energy resource for a fuel or may increase the peak limits for individual net-metering facilities, if so doing results in desirable distribution system, environmental or public policy benefit.

(3) Forfeiture of Net Excess Generation at the End of the Calendar Year:

Of the 47 states that currently have net metering programs, only 11 states, including Arkansas grant excess generation from a net metering customer back to the utility.(1) All others either carry over credits indefinitely or compensate net metering customers for net excess generation at the avoided cost rate or above, some being based on time of use/generation or energy supply rate.

(1) <http://www.dsireusa.org/> Database of State Incentives for Renewables & Efficiency.

Some programs that previously granted net excess generation to utilities have moved to pay net metering customers at the avoided cost rate for net excess generation because of concerns of being out of compliance with the PURPA Act of 1978. Others, recognizing the public policy, distribution system and environmental benefits provided from renewable energy generation, such as TVA's *Generation Partners Program*, pay net metering customers a retail-plus rate for all of the energy they generate, not just net excess generation. Renewable energy advocates argue that the benefits of renewable energy generation are sorely undervalued in Arkansas.

(4) Fair and Appropriate Compensation for Renewable Energy Generation:

I am hopeful the Commission and Parties will not only amend the NMR to require payment to net metering customers for their net excess generation, but consider the opportunity we have to move beyond, or expand, net metering to provide for *feed in tariffs* (FIT) or some other means of offering long-term contracts that compensate renewable energy generation at rates that recognize the full range of benefits that RE offers. Long term contracts requiring utilities to purchase RE generation will provide the stability needed to attract investment in RE generation facilities and RE equipment manufacturing facilities.

Such an undertaking by the Commission and Parties would also provide stability to ratepayers and utilities. Stability afforded to us through the opportunity to deliberately and prudently develop appropriate rates. Rates which might be differentiated by such attributes as type of resource, size of facility, location of facility, dispatch-ability or time of generation. Programs might be developed that not only open the door for distributed generation at the residential, commercial and industrial level, but also provide utilities the opportunity to participate with utility scale facilities.

It would not be overstated to suggest that Arkansas has been slow to move forward in developing our RE resources. Arkansans wanting to use and invest in RE must rely on legislators and regulators to develop programs and policy that help us to do so. The Commission has the opportunity to take positive steps now and I would argue that existing Arkansas statute provides the Commission the authority to do so. I cite the following sections from three existing Arkansas Statutes:

Arkansas Renewable Energy Development Act of 2001:

SECTION 4 (1) Shall establish appropriate rates, terms and conditions for net-metering contracts, including a requirement that metering equipment be installed to both accurately measure the electricity supplied by the electric utility to each net-metering customer and also to accurately measure the electricity generated by each net-metering customer that is fed back to the electric utility over the applicable billing period;

Arkansas Energy Conservation Endorsement Act of 1977 :

23-3-403. Energy conservation programs and measures defined.

As used in this subchapter, unless the context otherwise requires, "energy conservation programs and measures" may include, but shall not be limited to:

(3) Programs which encourage the use of renewable energy technologies, including solar energy, wind power, geothermal energy, biomass conversion, or the energy available from municipal, industrial, silvicultural, or agricultural wastes.

Arkansas Clean Energy Development Act of 2007 :

23-18-701. Legislative findings and declaration of purpose.

The General Assembly finds that it is in the public interest to require all electric and natural gas public utilities subject to the jurisdiction of the Arkansas Public Service Commission to consider clean energy and the use of renewable energy resources as part of any resource plan or natural gas procurement plan.

CLOSING COMMENT

Entrenched industries resist the entry of new technologies that they have deemed a threat to their bottom line, unless they gain control over them. A good example might be the resistance on the part of "Ma Bell" that brought about a law suit in 1968, which, resulted in a ruling from the FCC known as "The Carterfone Decision". Had the company that made the answering machine lost their case, we might all still be asking Mable to connect us to BR-549.

It is not as if we are seeking to support a technology that is prohibitively expensive or will never survive on it's own. Last year, for the first time, more of our nation's energy came from renewable energy than from Nuclear. The life cycle cost of energy from many RE resources is already cheaper than some of our conventional resources. I don't believe we need to follow the lead of some 37 other states that have required their utilities to purchase RE through an RPS (renewable portfolio standard), we just need the right policies that will allow us to pay up front costs the same way we pay for conventional power plants, namely through long-term contracts that make these investments bankable.

I have been in the RE industry in Arkansas for 36 years and I have experienced resistance from the established energy sector every time my industry tried to effect a policy change regarding RE. I would ask “at long last, have we no shame”, but that line has been used. There has been very little good faith negotiation and my industry is out gunned and outspent. We have few forums, such as this Docket, where rational and deliberate discussion has an equal footing with political and corporate clout. I can only hope that opponents do not employ false and misleading arguments that the cost is too dear to fairly compensate those who would invest in renewable energy, invest in jobs, invest in economic development, invest in national security, invest in choice, invest in our future and the future of our environment. I pray the Parties and Commission will agree we can do more, only then will we truly develop Arkansas' renewable energy resources and avoid the lost opportunities we will surely regret in the years to come.

Sincerely,

A handwritten signature in cursive script that reads "William Ball".

William Ball

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