E-01345A-13-0248

ORIGINAL

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ARIZONA CORPORATION COM

UTILITY COMPLAINT FORM

Investigator: Trish Meeter **Phone:** (602) 542-0622 **Fax:** (602) 542-2129

Priority: Respond Within Five Days

Opinion No. 2013 - 112720 **Date:** 9/10/2013

Complaint Description: 06F Disconnect/Terminations - Termination Notices
N/A Not Applicable

	First:	Last:	
Complaint By:	William	Regner	
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State:	AZ **Zip:** 86324		**is:**

Utility Company. Arizona Public Service Company
Division: Electric
Contact Name: For assignment **Contact Phone:** (602) 250-2280

Nature of Complaint:

9/10 DOCKET NO. E-01345A-13-0248 OPPOSED NET METERING

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Arizona Corporation Commission
DOCKETED
SEP 11 2013
DOCKETED BY

AZ CORP COMMISSION
DOCKET CONTROL
2013 SEP 11 P 12:44
RECEIVED

9 Arizona Corporation Commission
10 Chairman Bob Stump
L1 1200 West Washington
L2 Phoenix, AZ 85007-2996
13
L4 Gary Pierce, Commissioner
15 Brenda Burns, Commissioner
16 Robert L. Burns, Commissioner
L7 SusanBitter-Smith,Commissioner
18
tg RE: Arizona Public Service Company's Application for Modifications to Net Metering, Docket #
20 E-01345A-13-0248,Position: Con
2t
22 Dear Chairman Stump,
23
24 All comments herein are my personatopinions solely and do not represent the opinions of
25 any individual, group, or organization with which I am affiliated.
26
27 The APS application submitted and received by the Arizona Corporation Commission on July 12,
28 20L3 and is filed under docket number E-01345A-13-0248 contains statements that may omit
29 information and perspectives that undermine the arguments of APS's case. I would like to

30 point out some of those omissions and add some perspectives.
31
32 Page T,lines 6-9: APS states the following.
33
34 But for this bill credit, the customer would have paid the full retail rate
35 for the energy subtracted from their bill. Ln other words, customers
36 effectively sell Export Energy to APS at the full retail rate at a time when
37 APS could produce or purchase in the wholesale market the same
38 amount of power at a much lower cost.
39
40 The awarded credits are for energy generated during peak consumption periods. While not at
4t the highest peak of consumption, this generation period is on the higher portion of the
42 consumption graph found on page six of the APS application. One can assume then that the
43 energy being generated by Distributed Energy (DE) roof-top solar is being sold to nearby users

44 at the full retail rate. Those same credits later being applied against usage by DE generators
45 would in large part be redeemed during "time of use" plan periods at lower retail rates' This
46 assumes that if the user did not have roof-top solar generation, the user would be on a "time of
47 use" plan in order to pay lower rates for energy used in non-peak times.
48
49 Utilities are actually purchasing the excess generation at lower retail rates and selling it at peak
50 retail rates. While it is true that a percentage of the credited energy is used during peak
5i- periods when the solar is not generating due to the setting sun, cloud cover, or other
52 interference, in Arizona it seems safe to say that the larger percentage of power credits are
53 being consumed during non-peak times when the sun is not shining. Regardless, most of the
54 energy consumed during high peak periods are a one-for-one exchange of peak generated for
55 peak consumed kWh.
56
57 On page 9 of their application, lines 22 * 28, APS states the following,
58
59 Because APS rates are established and authorized by the Commission
60 on a "cost of service" model, the fixed costs avoided by customers with
Gl rooftop solar are shifted to customers without solar. On average the
62 cost shift each year is approximately S1,fi)0 per rooftop solar system.
63 That means higher electricity rates for customers without solar. This
64 cost shift is unfair. And as more customers install solar, the cost shift
65 will continue to grow. Todan the total costs shifted to non-solar
66 customers are approximately $18 million. Each year, that amount could
67 increase by an estimated 56-10 million.
68
69 These are hypothetically assumed values that are not substantiated to any usable degree in the
7O application or addendums.
7T
72 APS appears to limit the savings shifts provided by a high market penetration of DE roof top
Zg solar by limiting those savings only to transmission, distribution, and generation while down
74 playing other savings. APS's own commissioned 2009 study entitled, Distributed Renewable
75 Energy Operating Impacts and Valuation Study by R. W. Beck, Inc. An SAIC Company, clearly
7G and elegantly describes the cost savings enjoyed by APS due to savings in fuel costs, purchase
77 of power from outside sources, power losses, fixed operation and maintenance, and
78 generation. There are even slight savings possible on distribution and transmission' (Beck*,
79 Figure 6-2)
80 g1 As indicated in the tables above, the primary driver of value for solar DE
82 deployment is the reduction in fuel and purchased power (discussed in
83 Section 51. While the capacity cost reductions do add value, they are

84 highly dependent on the number of solar DE installations, as well as the
85 specific location of these installations for the distribution system.
86 {Beck*, 6.4.71
87

88 The table 6-2 also indicates significant savings to fixed operations and maintenance costs of
89 between 0.81and 3.22 cents per kilowatt hour tn2O25 dollars. (S8.10 and 532.20 per MWh)
90
91 APS's arguments seem to seek to limit the calculations of savings to distribution, transmission,
92 and generation without including the larger savings from the other more significant sources of
93 savings mentioned previously. The Beck study clearly describes how the greater the market
94 penetration of DE, the greater the savings to the utility. While the savings at the current
95 market penetration might be negligible, looking ahead they may be significant. The DE energy
96 production in target year 2O25 at a high market penetration could by the Beck study's analysis
97 produce approximately 3,862,585 MWh of electricity. The total savings in 2008 dollars
98 estimated by the Beck study for the same scenario is estimated to be S55.05/MWh. That
99 amounts to a potential savings to the utility of 5251,250,000 per year in 2008 dollars {Beck*, 100 Table 6-6).
When adjusted to 2025 dollars of between SZg.fO and 5141.10 per MWh that
101 savings is considerably more. (Figure 5-2) Those annual savings in year 2025 could amount to
toz between 5305.5 million and $545.0 million. For that and other reasons, the study suggests that
103 a good case can be made for encouraging incentives to accelerate the level of market
104 penetration by DE.
105
106 6.4.5 "These results indicate that there is more solar DE deployment
t07 savings {both terms of total energy and total value} with higher levels of
108 deployment. The higher dollar savings in the Target scenario represents
109 the incremental benefit to the distribution system related to the
110 location specific installations (Beck*, Table 6-21."
111
L!2 Understandably, APS has sought to update this report to reflect changes in the marketplace
113 during the past four years. One modification to the study was to remove other forms of DE
tL4 such as single-axis tracking solar PV systems and solar hot water systems. Their rationales
115 stated the small percentage of installations did not warrant their inclusion. They noted but
L16 chose to exclude the energy storing and higher efficiency characteristics of these two systems
Lt7 that further reduce "demand after solar" and move the peak solar production to later in the
118 peak consumption period. Both would reflect more positively on the value of increased DE
119 production.
120
\21 The most significant updates are the lower cost of naturalgas due to increased national
122 supplies and a projected reduction in total load or demand and energy use. APS's update also
t23 modified the market penetration scenarios by including an Expected Penetration Case to reflect
124 the rapidly changing effects caused by such factors as solar leasing programs. The Total
t25 Avoided Costs under the Expected Penetration Case in the year 2025 are $97,457,000 per year.
T26 The savings under the High Penetration Scenario for the same year is 5153,058,000. The Total
tz7 Avoided Costs for year 2015 is 511,301.,000 for both scenarios listed here. (20L3 Updated Solar
t28 PV Value Report, SAIC, Table 3-10)
129
130 It would appear that the case for supporting higher market penetration can still be made from
131 cost savings and savings shifting standpoints- It seems, too, that assuming that the market cost

L32 of natural gas will stay at its current low point indefinitely ignores historical trends and future
133 carbon emission concerns.
134
135 Proposed option A (page 12) is too vague in its description of how usage energy charges and

136 demand charges would affect a DE generator's monthly bill. While it would likely be the
L37 preferred choice between the two options, it would largely remove any incentive to install a
138 solar system by expanding the payback period beyond a reasonable or justifiable time frame. A
L39 rough calculation of an assumed interpretation for a house consuming 1000 kwh in a month
L4o would be approximately S50. That rough calculation is determined by adding up the fixed and
t4t usage determined costs on a typicalAPS billfor a house with the consumption described in this
142 paragraph. Any consumption beyond the house's DE system generation would be charged
143 according to the EC'l-z rates for time of use. This would potentially add to the amount of the
L44 monthly bill.
L45
146 Proposed option B pays a wholesale rate against power sold at retailduring peak periods and
l47 ignores completely the benefits of DE infrastructure. The result would be the DE generator
148 purchasing power during peak periods at up to t7.257 cents/kWh and being reimbursed for
l49 generation at the Palo Verde rate of 4 cents/kWh. Option B is silent on how usage energy
150 charges and demand charges would affect a DE generator's monthly bill. This information is
151 important in understanding the impact on the payback decision when choosing solar or not. 5o
L52 before fixed and usage tallied charges are added, a house using an average of 1000kWh per
153 month could pay an averaged S .t0 per kWh resulting in a base bill of $L00 plus fixed and usage
154 tallied charges of approximately 550. If the house's DE generates that same 1000 kWh per
155 month, they would be reimbursed $40. That leaves them with a net billing of $110.00. The
155 payback on approximately 518,000 for the solar installation after incentives at S40 per month
l57 would probably discourage most prospective buyers.
L58
159 The current grandfathering suggested will rnake sales of homes more difficult. Attached
160 infrastructure is part of house and should transfer with the ownership of the house. Those who
161 purchased their solar systems will not be able to recuperate the cost of the system and those
162 with leases will not be able to convince prospective buyers of the economic sense of adding S50
163 to 5110 to their monthly lease amount. A house on the market for sale is considered to include
164 the furnace, air conditioners, hot water heaters, kitchen appliances and other attached or
165 installed amenities.
155
t67 APS states that capacity cost savings are minimal because they cannot control DE roof top solar
158 installation placements into areas where capacity building is needed and would create system
169 wide savings.
L70
L7L As indicated in the tables above, the primary driver of value for solar DE
172 deployment is the reduction in fuel and purchased power (discussed in
L73 Section 5). While the capacity cost reductions do add value, they are
t74 highly dependent on the number of solar DE installations, as well as the

L75 specific location of these installations for the distribution system.
176 (Beck*,6.4.71
L77
t78 The reduction of APS incentives to the current 10 cents per watt does not appear to have the
!79 positive impact on purchase decisions of the higher valued incentives. Ln a lease agreement,
180 current APS incentives impact the monthly cost of the lease minimally. Perhaps one solution to
181 consider is the use of incentives solely in targeted areas for purchased solar systems. This
l82 would increase DE roof top solar generation in areas that would delay increased generation
183 capacity needs thereby increasing the savings shift benefits system wide.
184
185 APS's own commissioned study clearly states that the higher the market penetration, the
186 greater the savings.
187
188 The results indicate that for the larger deployment cases (Medium and

189 High Penetration Cases, as wellas the Target scenario and single-axis
190 sensitivity), the savings associated with solar DE deployment are
191 overwhelmingly from variable energy savings rather than fixed capacity
192 savings. For the Low Penetration Case, where there are less savings
L93 overall, the value is roughly one-third fixed and two-thirds variable (for
L94 2025). {Beck*, 6.4.71
195
195 Efforts to reduce market penetration seem to suggest that cost savings and cost shifting are not
L97 the bottom line issues involved in this application.
198
199 What about carbon credits?
200
zo1- ". . . In the future, there will likely be an assignable economic value to
2o2 carbon which will accrue somewhere along the value chain. For the
203 purpose of the analyses in the Study, carbon value was captured in
2o4 Medium and High Penetration Cases in the parameter for APS Tariff
205 projection." (Beck*,6.6.2)
206
2a7 Perhaps utilities such as APS can exchange present and future carbon credits from DE roof top
208 solar as additional savings shifts against costs to maintain distribution, transmission, and
2o9 generation capacity. As long as the current APS, state, and federal incentives remain in place,
210 purchasers and leasers of roof top solar systems may be willing to allow the utility to keep the
211- credits in exchange for their connection to the grid.
212
2L3 Additional words of wisdom from the APS commissioned Beck Study* that could effectively
2L4 address the utilities' concerns .
2L5
216 APS may consider a new business model in which it directly provides
2!7 services that help promote solar DE market development. These could
zLg include such services as financial programs, technolory development,

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and supply partnerships, as well as design, billing and field support for the installation of solar DE rooftop units in conjunction with the marketplace. {Beck*, 6.5.3}

Arizona Public Service Company seems to be concerned by the unanticipated rapid crescendo of DE roof top solar installations brought on by leasing programs. Ln contradiction to their own 216 page Beck Study that thoroughly analyzes and projects significant system wide cost savings from a high market penetration of DE roof-top solar, APS seems rushed to do the opposite of what their study recommends. APS's request before the Arizona Corporation Commission currently will have a deleterious effect on decisions to purchase or lease roof top solar systems and as a result a devastating impact on the growing solar sales, installation, and maintenance industry. Their own study demonstrates how they can be kept whole by actually encouraging the growth of this industry.

As with many markets, the successful implementation and expansion of solar DE requires the coincidence behreen the needs of customers, the provision of technology, and a financial model that supports the economic need. The absence of any of these three criteria can result in a lack of demand, undersupply of product or service, or the inability to obtain the funding necessary to sustain the market development. (Beck*,6.6)

*Distributed Renewable Energy Operating Impacts and Valuation Study, 2O09 by R. W. Beck, Inc. Prepared for: Arizona Public Service

Needless to say, our Arizona economy can ill afford to stifle job creating clean industries that pay decent livable wages.

There is also a greater good issue involved that speaks to reducing carbon emissions that every Arlzona household whether they have solar panels on their roof tops or not will benefit from.

For this and the reasons stated in this statement, I encourage you to decline the application in docket E-01345A-13-0248 on behalf of the citizens of the State of Arizona present and future.

Respectfully su!mitted{

'*

End of Complaint

Utilities' Response:

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Investigator's Comments and Disposition:

docketed

End of Comments

Date Completed: 9/10/2013