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Arizona Corporation Commission  
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**BEFORE THE ARIZONA CORPORATION COMMISSION**

8 Bob Stump, Chairman  
 9 Gary Pierce, Commissioner  
 10 Brenda Burns, Commissioner  
 11 Bob Burns, Commissioner  
 12 Susan Bitter Smith, Commissioner

12 IN THE MATTER OF THE APPLICATION  
 13 OF ARIZONA PUBLIC SERVICE  
 14 COMPANY FOR APPROVAL OF NET  
 15 METERING COST SHIFT SOLUTION.

Docket No. E-01345A-13-0248

16 **THE ALLIANCE FOR SOLAR CHOICE RESPONSE TO THE OCTOBER 17, 2013**  
 17 **LETTER TO THE DOCKET FROM COMMISSIONER GARY PIERCE**

18 The Alliance for Solar Choice ("TASC")<sup>1</sup> strongly objects to the October 17, 2013, letter  
 19 Commissioner Pierce submitted to this docket. TASC has highlighted on numerous occasions the  
 20 lack of rate case-quality, cost-of-service information that is necessary to justify any of the various  
 21 and conflicting rates, charges and classifications that have been proposed in this docket.

22 The October 17, 2013, letter threatens to muddy the record further in this proceeding by  
 23 inviting parties to generate new proposals for additional charges without allowing a reasonable  
 24 opportunity for discovery or for parties to try disputed issues of material fact through evidentiary  
 25 hearings. Commissioner Pierce asked for Staff's recommendations in a letter issued to the  
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27 \_\_\_\_\_  
 28 <sup>1</sup> TASC's member companies represent the majority of the nation's rooftop solar market and include SolarCity, Sungevity, Sunrun, Solar Universe, Verengo Solar, REC Solar.

1 docket on July 16, 2013. Yet the October 17, 2013, letter disregards Staff's primary proposal  
2 (and a secondary one as well) without discussion.

3 In particular, TASC rejects the suggestion in the October 17<sup>th</sup> letter that a reasonable  
4 charge could be determined simply by soliciting party input (while not under oath or subject to  
5 cross-examination) on two simple variables used in the flawed methodology employed by  
6 Alternative 2 in the Staff Report. The Staff Report clearly states: "a precise determination of DG  
7 costs and benefits to APS's system is beyond the scope of Staff's analysis for the instant  
8 application" and should be "determined in a general rate case when all of APS's costs can be  
9 considered." TASC strenuously agrees.

10  
11 The proxy values used by Staff in developing Alternative 2, which give rise to a wide  
12 range of proposed charges in Appendix III, have no evidentiary support, and soliciting written  
13 input from parties that are not under oath and are not subject to cross-examination will do  
14 nothing to bring this proceeding into compliance with the Commission's constitutional and  
15 statutory obligation to ensure that new rates, charges and classifications are just and reasonable.  
16 Below, we identify numerous procedural, methodological and factual flaws that militate against  
17 the development of any new charge under the auspices of Staff Alternative 2:  
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20 **I. Staff Alternative 2 Includes Energy Used Onsite, Even Though That Energy Never**  
21 **Touches the Grid and Does Not Impact Other Ratepayers.**

22 According to the Staff Report, the goal of Alternative 2 is to "establish a cap on the net  
23 metering incentive to ensure that it is no greater than the price APS would pay to acquire the  
24 same amount of solar via a wholesale PPA." Staff Report p. 13. Accordingly, Staff proposes a  
25 charge "based on the difference between APS's cost for purchasing a DG customer's *excess*  
26 *generation*, and its cost to purchase an equivalent amount of energy from a wholesale PPA."  
27 Staff Report p. 13 (italics added). Although Staff unequivocally proposes to compare solar PPA  
28

1 prices with APS's cost for purchasing a DG customer's "excess generation," the methodology  
2 used by Staff incorrectly looks at all onsite generation, not just "excess generation." This  
3 methodological flaw by itself leaves Staff Alternative 2 inadequate for the Commission's use.  
4

5 Net metering, which is the focus of this docket, is a bill credit mechanism through which  
6 a customer receives credit for power exported to the grid, and thus any look at the costs and  
7 benefits of net metering should focus solely on "excess generation," i.e. net exports. Studies that  
8 look at the value of distributed solar more generally, as opposed to net metering policy  
9 specifically, often look beyond net exports and examine all generation; however, that is not the  
10 focus of this proceeding and a broader reach is not in keeping with Staff's stated intent to  
11 compare "APS's cost for purchasing a DG customer's *excess generation*, and its cost to purchase  
12 an equivalent amount of energy from a wholesale PPA." (Italics added.)  
13

14 There is no basis in logic or reason to compare APS's cost from customers using less  
15 energy (because they use solar generation onsite) to APS's cost of wholesale PPA procurement  
16 for solar power. Such a comparison would require this Commission to accept the logical fallacy  
17 that wholesale power prices are a proxy for APS's fixed infrastructure cost of providing service.  
18 There is simply no connection between the two, and a customer using solar panels to serve onsite  
19 electricity needs should be treated no differently than a customer that turns the lights off, installs  
20 energy-efficient appliances, or adds a solar hot-water heater to replace an electric water heater.  
21

22 All of the scenarios listed in the Staff Report, including Appendix III, are flawed due to  
23 this failure to focus only on net exported power from net-metered systems. The Testimony of  
24 Meissner (p. 4, ll. 12-12) states: "On average for a residential customer, roughly 80% of the solar  
25 generation immediately serves their household load and the remaining 20% is excess  
26 generation." Accordingly, the line item identified as "Assumed Annual Rate of Production" in  
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1 the Staff Report, including Appendix III, should be reduced by 80% to exclude energy that is  
2 used onsite and not exported. However, the correction of this significant methodological flaw  
3 still does not render this approach acceptable for Commission ratemaking for the additional  
4 reasons stated below.

5  
6 **II. Alternative 2 Incorrectly Assumes 1-5 Solar PV Generators Interconnected to Sub-  
7 transmission Provide the Same Benefits as Residential Rooftop PV.**

8 Staff Alternative 2 proposes a “cap on the net metering incentive to ensure that it is no  
9 greater than the price APS would pay to acquire the same amount of solar via a wholesale PPA.”  
10 Staff specifically proposes to base this comparison on 1 to 5 MW PV systems interconnected to  
11 the APS sub-transmission system. Staff Report p. 13. However, there is no evidentiary support  
12 for the proposition that a 1 to 5 MW PV system interconnected to the APS sub-transmission  
13 system offers the same costs or benefits as a large number of small, residential PV systems that  
14 are dispersed across the APS system and serve nearby customer load.

15  
16 In fact, the two categories of generators that Alternative 2 proposes to compare are  
17 fundamentally different in terms of the costs and benefits provided to APS and its ratepayers. The  
18 Staff Report notes that “the distribution of DG systems appears relatively even across the  
19 urbanized areas within APS’s service territory.” Staff Report p. 5. An even distribution of  
20 thousands of small systems located across the APS service territory are likely to provide lower  
21 integration costs and higher capacity values than a small number of larger systems, which may  
22 need to be located farther from customer load and may entail greater grid integration costs. These  
23 important differences must be taken into account in comparing the two categories of generators.

24  
25 In addition, there are significant differences in the line losses associated with the two  
26 categories of generators that Alternative 2 proposes to compare, which has a significant impact  
27 on the overall value of the power that is provided. The Testimony of Bernosky (p. 9, ll. 22-24)

1 acknowledges the cost savings to APS and its customers from rooftop solar related to avoided  
2 transmission and distribution losses, which Bernosky describes as “the ‘extra’ energy that would  
3 have been needed from a centralized facility to replace the energy lost during delivery from the  
4 plant to the customer.” Likewise, APS’s SAIC Report (p. 2-9) states: “Electricity generated at the  
5 site of application, such as a distributed solar PV system, reduces the load required to be served  
6 by a centralized power generating facility and thus reduces the electricity line losses that occur  
7 during delivery of electricity to load.”  
8

9         SAIC uses a seven percent average energy loss and an 11.7 percent system peak demand  
10 loss. Crossborder Energy, by comparison, has determined that “APS will avoid marginal line  
11 losses of 12.1% based on the detailed analysis of the loss impacts of solar DG that is in the Beck  
12 Study.” Thus, before any version of Staff Alternative 2 could be used as a basis for imposing a  
13 new charge on solar customers, the difference in line losses between the two categories of  
14 generators that Alternative 2 proposes to compare, and the associated financial benefit to APS,  
15 must be determined through hearings and factored into the methodology.  
16

17         Finally, there are likely significant differences in the transmission savings provided by the  
18 two categories of generators that Alternative 2 proposes to compare. The Testimony of Meissner  
19 (p. 13, ll. 14-18) states: “because rooftop solar is available intermittently during the day and  
20 located at the customer’s home, it could theoretically have a small impact on the cost of  
21 transmission service by delaying the investment in future infrastructure.” The APS SAIC Report  
22 (p 1-3) offers a paltry assessment of the potential savings – just 0.32 cents per kWh. Crossborder  
23 Energy, in contrast, determines the potential savings to be 2.1 to 2.3 cents per kWh. This  
24 disputed issue of fact must also be resolved through evidentiary hearings.  
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27         If Alternative 2 is to be used as a framework for developing a new charge on net-metered  
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1 customers, the Commission must also determine if there is a difference in the transmission  
2 savings provided by rooftop PV systems versus 1 to 5 MW solar PV systems interconnected to  
3 the sub-transmission system. The only sworn testimony in the record – that which was entered by  
4 APS – suggests transmission savings are a function of the proximity between generation and  
5 load. That difference must be evaluated and quantified before Alternative 2 could provide a  
6 methodological framework for imposing a new charge on customers.  
7

### 8 **III. Evidentiary Hearings are Necessary to Try Disputed Issues of Fact.**

9         Setting aside the numerous methodological flaws with Alternative 2, significant  
10 disagreement exists regarding the two simplistic variables that Alternative 2 takes into account.  
11 This further highlights the need for evidentiary hearings once an appropriate methodology for  
12 assessing the costs and benefits of net-metered systems is determined. For example, the October  
13 17, 2013 letter asks: “What is the most realistic Assumed Retail Rate?” The Testimony of  
14 Meissner (p. 10, ll 17-18) says the average pretax, fully bundled rate for residential customers is  
15 12.6 cents for average customer. However, Meissner’s testimony (p. 14, ll. 18-20) muddies this  
16 issue by further surmising that the amount may be as high as 13.5 cents before taxes for the  
17 average solar customer. TASC disputes whether the figures offered by Meissner are correct.  
18 Moreover, these numbers should be subject to discovery and cross-examination through  
19 evidentiary hearings before being accepted by parties or the Commission.  
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22         The October 17, 2013 letter also asks: “What is the most realistic Assumed Utility Scale  
23 PPA Rate?” Appendix III provides a range of scenarios that assume values between 7 cents and  
24 10 cents per kWh. However, there is absolutely no evidentiary basis for these numbers. The Staff  
25 Report simply states Staff “understands that utility scale solar PV generation can be obtained in  
26 Arizona for between 7 and 10 cents per kWh under a PPA arrangement.” Staff Report at p. 14.  
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1 However, there is no evidentiary support or exhibit to prove Staff's "understanding." Moreover,  
2 Staff does not say whether its "understanding" of solar PPA prices even relates to the 1 to 5 MW  
3 solar PV facilities interconnected to the APS sub-transmission system that are supposed to  
4 provide the basis against which the costs of residential net metered exports are to be compared.  
5

6 It is highly suspect that the all-in cost of output from 1 to 5 MW solar PV facilities  
7 interconnected to the APS sub-transmission system would be below 10 cents per kWh. This is  
8 particularly unlikely for projects on the lower end of the size range, which would be more  
9 comparable in terms of value to residential rooftop solar systems. However, no hearing has been  
10 held to resolve disputed issues of fact regarding this issue. Parties should be provided reasonable  
11 time for discovery and to develop testimony on this issue, particularly given uncertainties as to  
12 whether there are even PV projects of this size interconnected to the APS sub-transmission  
13 system that are under a PPA with APS. Data may need to be extrapolated from other  
14 jurisdictions, and such extrapolation should be tested through sworn statements from individuals  
15 that are subject to cross-examination.  
16

17 It is particularly important to determine through evidentiary hearings whether the 7 to 10  
18 cent per kWh range of PPA costs assumed by Staff is reasonable. On September 27, 2013, TASC  
19 submitted a public comment letter in this docket to point out an unreasonable and misleading  
20 claim by APS in its August 1, 2013, data response in this docket. In that data response, APS  
21 relied on PPAs signed by Riverside Public Utilities in California to support APS's suspect claim  
22 that it can develop utility-scale projects and interconnect them to the distribution system for all-in  
23 costs between 7 to 9 cents/kWh. In its September 27 letter, TASC pointed out that the Riverside  
24 projects exclude normal development costs, are connected to the transmission system (not the  
25 distribution system), and are part of an established 100 MW project already in the advanced  
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1 stages of development. *See* September 27, 2013, TASC Public Comment Letter.

2 Staff acknowledges that it did not attempt precisely to determine the costs and benefits of  
3 residential solar in offering Alternative 2. The Staff Report clearly acknowledges that Staff  
4 “developed a range of proxy values for DG as a basis for its alternative recommendations.” Staff  
5 Report at p. 6. These proxy values offer an inadequate basis for the Commission to discharge its  
6 constitutional and statutory duty to ensure that rates and classifications are just and reasonable.  
7

8 Given the lack of procedural safeguards employed in this proceeding and the significant  
9 disagreement that exists regarding the underlying assumptions behind Staff Alternative 2, TASC  
10 vehemently objects to the use of this flawed methodology to adopt a new charge on customers in  
11 this proceeding. Soliciting written input from parties that are not under oath and are not subject  
12 to cross-examination will do nothing to bring this proceeding into compliance with the  
13 Commission’s constitutional and statutory obligation to ensure that new rates, charges and  
14 classifications are just and reasonable.  
15

16 **III. Evidentiary Hearings Regarding the Setting of Rates, Charges and Classifications**  
17 **Should Take Place Within a Rate Case.**

18 The Staff Report recommends “that the Commission take no action on the instant  
19 application and defer the matter for consideration during APS’s next rate case.” Staff notes that  
20 “any cost-shift issue created by net metering is fundamentally a matter of rate design,” and “[t]he  
21 appropriate time for designing rates that equitably allocate the costs and benefits of net metering  
22 is during APS’s next general rate case.” Moreover, “the objective value aspects of DG to the  
23 APS system can best be determined in the context of a general rate case when all of APS’s costs  
24 can be considered.” *See* Staff Report at p. 6.  
25

26 TASC strongly agrees that a general rate case is the right forum for addressing rate  
27 classifications and charges for an important and growing segment of APS customers. A rate case  
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1 requires APS to submit a range of information on its fair value of assets used to provide service  
2 and the cost of serving customers with different service characteristics. Moreover, ratemaking  
3 issues are litigated in Commission hearings, where the Commission has the power of a court to  
4 compel the attendance of witnesses and the production of evidence. ARIZ. CONST. art. XV, § 4.  
5 The production of hard evidence is an essential prerequisite to determining whether proposed  
6 rates, charges and classifications are just and reasonable.  
7

8 A rate case will also allow the Commission and stakeholders to consider a broad range of  
9 alternatives, such as a system-benefit credit, minimum bills, or other rate design options that can  
10 only be implemented in a rate case. The Staff Report concurs: “the Commission has more options  
11 available within a rate case than it has outside a rate case.” Staff Report at p. 10. The  
12 Commission is constitutionally and statutorily required to set rates on the basis of hard evidence.  
13 It would be a supreme injustice, and a violation of Arizona law, to render a decision on the basis  
14 of the deficient record in this proceeding.  
15

16 **V. A Methodology Should Be Established Outside This Process, As Proposed by Staff.**

17 The only conclusion supported by the record in this proceeding is that parties  
18 fundamentally disagree on the methodology that should be used to measure the costs and benefits  
19 of distributed solar. This disagreement is noted in the testimony submitted with the APS  
20 Application; it is highlighted in the Rocky Mountain Institute study referenced in the Staff  
21 Report; and it is further highlighted by Staff in recommending that the Commission should  
22 resolve this issue in APS’s next general rate case.  
23

24 If the Commission feels that immediate action is needed, TASC encourages the  
25 Commission to accept the well-reasoned recommendation of Utilities Division Staff to develop a  
26 common set of assumptions regarding the costs and benefits of net metering, which APS can then  
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1 use to propose an appropriate charge *or credit* in its next general rate case.

2 No final decision that rests on reason or evidentiary support can be found in this  
3 proceeding where so little weight has been accorded to procedural due process and the resolution  
4 of disputed issues of material fact. These issues can only be reasonably resolved in the next APS  
5 general rate case.  
6

7 RESPECTFULLY SUBMITTED this 1st day of November, 2013.

8  
9 By



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**CERTIFICATE OF SERVICE**

I hereby certify I have this day sent via hand delivery an original and thirteen copies of the foregoing **RESPONSE TO THE OCTOBER 17, 2013 LETTER TO THE DOCKET FROM COMMISSIONER GARY PIERCE** on this 1st day of November, 2013 with:

Docket Control  
Arizona Corporation Commission  
1200 W. Washington Street  
Phoenix, Arizona 85007

I hereby certify that I have this day served the foregoing documents via regular mail on all parties of record and all persons listed on the official service list for Docket No. E-01345A-13-0248 on the Arizona Corporation Commission's website:

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13 Dated this 1st day of November, 2013.

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