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February 13, 2014
ARIZONA CORPORATION COMMISSION
DOCKET CONTROL

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

ORIGINAL

Re: Comments of the Interstate Renewable Energy Council, Inc. on the Value and Cost of Distributed Generation, Docket No. E-00000J-14-0023

Dear Docket Control:

Please find enclosed an original and thirteen copies of Comments of the Interstate Renewable Energy Council, Inc. on the Value and Cost of Distributed Generation for filing in Docket No. E-00000J-14-0023. Please contact me or Giancarlo Estrada (602-635-7414, gestrada@estradalegalpc.com) with any questions or issues with the filings.

Sincerely,

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On behalf of: Interstate Renewable
Energy Council, Inc.

Arizona Corporation Commission

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enc. Comments of the Interstate Renewable Energy Council, Inc. on the Value and Cost of Distributed Generation

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ARIZONA CORP COMMISSION
DOCKET CONTROL

BEFORE THE ARIZONA CORPORATION COMMISSION

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

IN THE MATTER OF THE COMMISSION'S
INVESTIGATION OF VALUE AND COST OF
DISTRIBUTED GENERATION

Docket No. E-00000J-14-0023

**COMMENTS OF THE INTERSTATE RENEWABLE ENERGY COUNCIL, INC.
ON THE VALUE AND COST OF DISTRIBUTED GENERATION**

On January 24, 2014, the Arizona Corporation Commission (Commission) established this docket to explore the value that distributed generation (DG) installations bring to the grid to help inform future Commission policy. The Commission's recognition of the need for this docket grew out of its evaluation in Docket No. E-01345A-13-0248 of an application by Arizona Public Service Company (APS), which proposed changes to APS's net metering program. Over the course of the Commission's consideration of the APS application, it received a wide range of comments from parties addressing the benefits and costs of DG. In its final order in Docket No. E-01345A-013-0248, the Commission ordered the opening of this investigatory docket to consider these issues further in workshops. On January 27, 2014, Commission Staff issued a letter in this docket requesting that stakeholders provide comments to inform the workshop process. In response, the Interstate Renewable Energy Council, Inc. (IREC) respectfully submits these comments.

IREC is a 501(c)(3) non-profit organization whose goal is to enable greater use of clean energy in a sustainable way by (1) introducing regulatory policy innovations that empower consumers and support a transition to a sustainable energy future, (2) removing technical constraints to DG integration, and (3) developing and coordinating national strategies and policy guidance to provide consistency on these policies centered on best practices and solid research. The scope of IREC's work includes expanding programs that facilitate consumers' ability to host a renewable energy system to directly self-supply energy needs or sell energy, for example via net metering. As part of this work, IREC has been involved across the United States in discussions and proceedings regarding DG valuation, including in California, Colorado, Minnesota and Hawaii. In addition, in Arizona, IREC was involved in Docket No. E-01345A-013-0248, filing several sets of written comments and participating in the November 2013 Commission meetings.

In its letter, Staff requests stakeholder input on four issues:

1. The relevance and significance of each of the listed categories of DG values and costs.
2. Other DG-related issues that should be considered in this docket.
3. The process and methodology for assigning monetary values to DG costs and values.
4. Persons or entities that would be appropriate presenters at the upcoming workshops.

IREC responds to each of these issues in turn. We also refer the Commission and its Staff to our recent publication, *A Regulator's Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation (Regulator's Guidebook)*.¹ IREC's *Regulator's Guidebook* identifies best practices for evaluating the benefits and costs of distributed solar generation, and could serve as a useful reference for the Commission as it pursues such an evaluation in Arizona. Specifically,

¹ Available at www.irecusa.org/wp-content/uploads/2013/10/IREC_Rabago_Regulators-Guidebook-to-Assessing-Benefits-and-Costs-of-DSG.pdf.

the *Regulator's Guidebook* reviews the benefits and costs that may be considered in a valuation study, and describes other key considerations for establishing a valuation methodology.

I. RELEVANCE AND SIGNIFICANCE OF EACH OF THE LISTED CATEGORIES OF DISTRIBUTED GENERATION VALUES AND COSTS

In its letter, Staff identifies an extensive list of potential DG benefits and costs for the Commission to consider. IREC applauds Staff's compilation of this list, which should serve as a good starting point for discussions in the workshops. IREC believes that the next step will be to define each of these benefits and costs, and then to detail the appropriate methodology for calculating them. IREC refers the Commission to our *Regulator's Guidebook* for a thorough discussion of the definition of the majority of Staff's listed benefits, as well as best practices in valuing them.

In this section, we specifically address three listed categories of benefits—capacity benefits, environmental benefits, and social benefits—as well as the cost of lost revenue, and highlight certain of our concerns with respect to their consideration and valuation.

A. It Is Essential that Distributed Generation Customers Receive Credit for Avoided Capacity Costs.

One of a utility's fundamental functions is to predict the net load in its service territory and to build out its system accordingly, investing as needed in generation, transmission and distribution capacity. In making these investment decisions, a utility must take into account not just customer demand, but also customer self-generation as well as energy-efficiency and other demand-reduction measures that customers may take. If a utility fails to predict its system capacity needs accurately, it may "overbuild" its system, for example by installing excess generation capacity that is unnecessary due to the DG within its service territory. When a utility

miscalculates in this way, it does not negate the fact that DG reduced the need for this capacity and the DG customer should receive credit for any avoided capacity costs. The utility should bear the burden of its miscalculations—that is, its investments in unnecessary capacity. If DG customers do not receive the benefit of those avoided capacity costs, then the utility effectively receives that benefit for free. IREC urges the Commission to include avoided capacity costs in any benefit-cost evaluation and to ensure that DG customers are compensated accordingly.

B. The Social and Environmental Benefits of Distributed Generation Should Be Calculated and Appropriately Compensated.

The environmental and social benefits of DG represent the reasons that most citizens support DG. These benefits also reflect an important rationale underlying net metering legislation as well as Commission decisions related to net metering and other pro-DG policies. Although they may not be as straightforward to calculate, it is critical that the Commission keep environmental and social benefits in mind in considering the value of DG to the grid. IREC understands that in the past utilities, including specifically APS, have acknowledged the existence of environmental and social benefits, but have objected to their inclusion within the net metering framework. While IREC does not take a position on the appropriate way to attribute environmental and social benefits in these comments, we urge the Commission to acknowledge these benefits explicitly and to value them as part of this proceeding. At that point, the Commission and stakeholders can consider whether or not to count those benefits as net metering benefits or to set up a separate system by which to compensate DG customers for them. Regardless of the path the Commission takes in the end, it is essential that DG customers are compensated for these fundamental benefits.

C. Lost Revenue Is Not Equivalent to a Utility's Retail Rate.

Although not emphasized in Staff's list, the largest commonly considered cost associated with DG is a utility's lost revenue on the basis that the DG customer would pay for all consumption at retail rates in the absence of a DG system. IREC disagrees with this approach because it does not reflect what actually occurs in a DG arrangement, or at least a net-metered DG arrangement. In reality, the majority of the generated energy is used on-site, offsetting customer load, with an impact equivalent to energy conservation. The Commission and APS encourage conservation efforts and do not view the associated "lost revenue" as a cost of conservation; DG generation that offsets customer load has the same impact and should be treated the same way.

For exported energy, utilities pay for a kilowatt-hour (kWh) exported by the DG customer when a DG system is generating (e.g., during the day, for solar DG) with an imported kWh when the DG system is not generating (e.g., at night). Similar to energy exchanges at trading hubs, sometimes a utility buys energy and sometimes it sells it, with prices depending on demand at that time. In considering the appropriate value to attribute to the cost of exported energy, IREC suggests that the Commission move beyond the argument that cost is equivalent to a utility's retail rate. Instead we recommend developing a more accurate valuation based on APS's generation and delivery costs at the times that APS will typically be providing energy to DG customers.

II. OTHER DG-RELATED ISSUES THAT SHOULD BE CONSIDERED IN THIS DOCKET

Beyond the benefits and costs, there are a host of other methodological issues that the Commission will need to consider if it undertakes a DG benefit-cost study. IREC outlines these issues in our *Regulator's Guidebook*. They include:

- The applicable discount rate.
- Whether to consider all generation or exports only.
- The timeframe over which to assess the benefits and costs.
- Predicting the utility's load in the future.
- Assumptions related to DG market penetration in the future.
- The models used to provide analytical inputs.
- The appropriate geographic boundaries.
- The appropriate system boundaries.
- The perspective from which benefits and costs are measured.
- Whether benefits and costs are estimated on an annualized or levelized basis.

The *Regulator's Guidebook* discusses each of these in detail and offers best practices related to each.

It is essential that the Commission identify the underlying methodology and assumptions to be used in any DG valuation study. The Commission should not leave this critical task to utilities or other interested stakeholders, as was demonstrated in Docket No. E-01345A-013-0248. In that docket, the Commission received numerous DG benefit-cost studies and evaluations, including one study submitted by APS, done by SAIC Energy, Environment and Infrastructure, LLC (SAIC), and another study submitted by the Solar Energy Industries

Association (SEIA), done by Crossborder Energy. The SAIC and Crossborder studies come to substantially different conclusions regarding the value of DG. As explained in IREC's protest in that docket, filed on August 29, 2013, we commissioned Clean Power Research (CPR) to validate and assess the two studies as a neutral third party. Ultimately, CPR found that both studies were valid, but based on different sets of inputs and assumptions. It was these different inputs and assumptions that drove the vastly different results that the two studies reached. The significant gap between the findings of the SAIC and Crossborder studies demonstrates how essential it is that the Commission establish the underlying methodology and assumptions that any future valuation study will use. IREC believes this docket and the proposed workshops represent a critical first step in this process.

III. PROCESS AND METHODOLOGY FOR ASSIGNING MONETARY VALUES TO DG COSTS AND VALUES

Rather than providing additional comment here, IREC again refers the Commission and its Staff to our *Regulator's Guidebook*, which reviews best practices in process and methodology for assigning monetary values to DG benefits and costs.

IV. PERSONS OR ENTITIES THAT WOULD BE APPROPRIATE PRESENTERS AT THE WORKSHOPS

Given our expertise with respect to DG valuation and net metering nationally, IREC suggests that a representative from our organization would be an appropriate presenter at the workshops. We recommend either of the authors of the *Regulator's Guidebook*, Jason Keyes and Karl Rábago. In addition, we suggest that Ben Norris from CPR would be an appropriate presenter. CPR has a 20-year history of solar valuation work. In the past two years alone, CPR has performed or supported ten value of solar studies for organizations in five states. Most

recently, the Minnesota Public Utilities Commission has contracted with CPR for a customer-sited solar valuation analysis in that state. Given the breadth and depth of CPR's experience on these issues, IREC believes its perspective and input would be valuable in Arizona. Mr. Norris conducted the analysis of the SAIC and Crossborder studies discussed in these comments and is available to give a presentation at a workshop in this docket.

V. CONCLUSION

IREC appreciates the opportunity to submit these comments. We commend the Commission in its efforts to take a close look at the benefits and costs of DG, and to develop a comprehensive evaluation of DG's value to the grid to inform future policy. IREC looks forward to continuing our participation in this docket, including attending the proposed workshops as appropriate.

Respectfully submitted this 14th of February, 2014.

Estrada-Legal, PC

By /s/ Giancarlo G. Estrada

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Filed this 13th day of February 2014 with:

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Copies of the foregoing electronically mailed / mailed this 14th day of February 2014 to:

ALL PARTIES OF RECORD

By /s/ *Erica Schroeder McConnell*