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December 12, 2018

RE: In the matter of the Notice of Proposed Rulemaking regarding Interconnection of Distributed Generation Facilities, Docket No. RE-00000A-07-0609.

Chairman Forese and Commissioners,

AriSEIA appreciates the opportunity to offer its input on the draft interconnection rules proposed by Commission Staff on November 30, 2018. We are encouraged by the Commission's progress toward developing statewide interconnection rules and recognize the critical role these rules will play in facilitating solar and battery storage deployment in the state. The rules have been under development for the last twelve years, and during that time solar and battery storage technology has continued to progress. Yet, as drafted, the proposed rules include a few issues that AriSEIA wishes to highlight for the Commission. AriSEIA urges the Commission to correct these problems now.

#### I. Actual Operating Characteristics Must Guide Capacity Evaluation

Under Staff's proposal, the rules include a flawed definition of "Maximum Capacity."<sup>1</sup> It defines Maximum Capacity as "the nameplate AC capacity of the Generating Facility,"<sup>2</sup> while only permitting the actual operating characteristics of the Generating Facility to be taken into account if the "Utility and Customer reach an agreement"<sup>3</sup> as to the amount of power actually transferred across the point of interconnection. This would result in a highly inaccurate evaluation of systems, because the only relevant impact to the Utility *is how the system actually works*, not the total nameplate capacity of various parts. Indeed, if Staff's proposal is adopted, the rules will only allow consideration of how a system actually functions if the utility allows it. This means that Arizona's default interconnection policy would ignore the *actual* impact of the system and consider a nameplate capacity that *will never be reached* because the system's programming eliminates that possibility.

On December 12, 2018, UL, LLC (UL), the premier global independent safety science company, docketed a letter that conclusively demonstrates that the output of battery storage and PV solar

<sup>1</sup> See Utilities Division Memorandum and Proposed Order, November 30, 2018, Exhibit A at R14-2-2601, Definition 32.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

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devices can be reliably limited by control systems. UL explains that it is working on standards that will be completed shortly that can be used to certify energy storage systems and inverters using control systems. UL writes that “use of listed energy storage systems and inverters including the additional UL1741 PCS certification will provide DERs with a means to program a reliably [sic] export current flow limit and may provide a useful means to address the intent of the existing Rule language related to Maximum Capacity.” In essence UL is saying that the Commission has nothing to fear from technology that controls the output of energy from DG and storage systems and that this technology has been vetted and careful standards are being promulgated.

The actual operating characteristics of a system must be the default standard for evaluating maximum capacity, and the customer should never be forced to negotiate an agreement with the utility so that the real impact of the system is considered. Other jurisdictions consider actual operating characteristics when evaluating the maximum capacity of a system, and Arizona needs to follow suit. The Energy Storage Association has already pointed out this flaw in its November 27<sup>th</sup> letter.<sup>4</sup> Nevada,<sup>5</sup> New York,<sup>6</sup> Xcel Energy in Colorado,<sup>7</sup> and Hawaii<sup>8</sup> all evaluate maximum capacity in this manner, and it would be wrong for Arizona to deviate from this common approach so dramatically. After working on rules for 12 years, AriSEIA believes they should be reflective of safe and reliable modern technology.

## II. The Interconnection Manual Requires Transparency and Oversight

The Interconnection Manual is a critical document because it controls so many aspects of the interconnection process. The terms contained in each manual can dramatically impact the costs associated with storage and distributed generation projects, and can therefore impact a project’s viability. Numerous parties have participated in this docket, which demonstrate both the importance of these rules and the need for transparency going forward.

It is unclear if the rules include this needed transparency. Under Staff’s proposal, the Interconnection Manual would be “approved by the Commission,”<sup>9</sup> but that approval lacks specificity. This document must be filed and reviewed by the Commissioners and not just by staff. The manual should be considered in a public hearing where stakeholders and the public can comment and where Commissioners are afforded an opportunity to vote on the matter. The

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<sup>4</sup> See Letter to Docket, Energy Storage Association, November 27, 2018.

<sup>5</sup> See Nevada Rule 15, Generating Facility Interconnections.

<sup>6</sup> See New York State Standardized Interconnection Requirements and Application Process

<sup>7</sup> See Footnote 3, *Guidance No. 2 for Interconnection of Energy Storage Systems*, Xcel Energy, available at <https://www.xcelenergy.com/staticfiles/xcel-responsive/Programs%20and%20Rebates/Residential/CO-solar-residents-Storage-Guidance-2.pdf>. This instructional document for interconnection is based on Colorado Public Utilities Commission Decision No. C16-1075.

<sup>8</sup> See Section 2, Generator Qualifications, Application for Interconnecting a UL1741 Certified Inverter-Based Small Generating Facility No Larger than 10 kW, available at [https://www.hawaiianelectric.com/Documents/my\\_account/rates/hawaiian\\_electric\\_rules/14.pdf](https://www.hawaiianelectric.com/Documents/my_account/rates/hawaiian_electric_rules/14.pdf)

<sup>9</sup> See Utilities Division Memorandum and Proposed Order, November 30, 2018, Exhibit A at R14-2-2601, Definition 27.

Interconnection Manual can control the level of distributed generation and storage deployment in each utility's service territory, so anything less than complete transparency and Commission oversight would be inappropriate.

### III. Overly Punitive Retaliation Should be Deleted

Section 2621(G) gives the utility the right to terminate all electrical service to a customer that is discovered to operate a generating facility without utility approval. The idea that the utility can simply disconnect a paying customer and leave them without electrical service without any notice or an opportunity to remedy an issue seems overly punitive and could even be life threatening to customers relying on a constant source of electricity for medical reasons. Certainly a reasonable dispute resolution or notice and cure period should be permitted and AriSEIA respectfully requests that this simple fix be made.

AriSEIA believes that with these revisions, the interconnection rules will be greatly improved. These changes are necessary for the rules to be harmonized with new Commission policies facilitating energy storage deployment. Thank you for your consideration of these important issues for our state.

Sincerely,

/s/ Lucy Mason

Lucy Mason

Executive Director

Arizona Solar Energy Industries Association.