STATE OF MISSOURI
PUBLIC SERVICE COMMISSION

In the Matter of Staff's Review of Commission Rules 4 CSR 240-20.060 (Cogeneration) 4 CSR 240-20.3.155 (Filing Requirements for Electric Utility Cogeneration Tariff Filings) and 4 CSR 240-20.065 (Net Metering)	)))))	**File No. EW-2018-0078**

JOINT COMMENTS OF RENEW MISSOURI AND CYPRESS CREEK RENEWBLES

Renew Missouri Advocates ("Renew Missouri") and Cypress Creek Renewables ("CCR") jointly submit these comments pursuant to the Commission's September 27, 2017 Order opening this docket to review the Commission's rules related to Cogeneration. With these comments, Renew Missouri and CCR aim to both propose specific changes to existing rules, and to encourage discussion through an in-person stakeholder process.

Communications and correspondence should be directed to:

Andrew J. Linhares
Staff Attorney
Renew Missouri Advocates
409 Vandiver Dr, Building 5, Suite 205
Columbia, MO 65202
Andrew@renewmo.org
(314) 471-9973 (T)
(573) 303-5633 (F)

James Owen
Executive Director
Renew Missouri Advocates
409 Vandiver Dr, Building 5, Suite 205
Columbia, MO 65202
james@renewmo.org
(417) 496-1924 (T)
(573) 303-5633 (F)

Kevin Borgia
Midwest Policy Director
Cypress Creek Renewables
18 S Michigan Ave #1200
Chicago, IL 60603
Kevin.Borgia@ccrenew.com
(309) 310-9831 (T)

I. General Comments Regarding PURPA, Cogeneration

a. Context of PURPA

Congress passed the Public Utility Regulatory Policies Act ("PURPA") (16 U.S.C. §2601) in 1978, with the aim of diversifying the country's power supply by facilitating market access for small renewable energy generators and cogeneration facilities. PURPA requires utilities to purchase power generated from Qualifying Facilities ("QFs") at the price that it would have cost the utility to generate or purchase the power, commonly referred to as the utility's "Avoided Cost." Prior to PURPA, there was no way for non-utility generators or independent power producers ("IPPs") to access the market to sell power, leaving the business of power generation entirely in the hands of a select few government-regulated monopoly power companies. Moreover, these monopolistic utilities had not shown a willingness to develop renewable energy and co-generation facilities, despite their many benefits to the public. Congress anticipated the immense value that could come from diversifying and decentralizing the generation of electricity if it could be done at no increased cost to ratepayers.

Today, the goals of PURPA are even more important than in 1978. While encouraging diversification and market access are still worthy objectives, larger energy trends and economic forces have made the growth of independent renewable energy and co-generation even more important and inevitable.

b. The New Renewable Landscape, and the Value of Distributed Renewables.

One of the major changes is in the cost of utility-scale and distributed renewable generation, solar in particular. The cost of solar generation on the small and medium-sized scale has fallen dramatically in recent years. Since 2000, the median installation price for residential solar has fallen from $12/watt to below $4/watt; for systems over 500 kW, the price has fallen

from $8/watt to almost $2/watt.[1] For larger ground-mount systems, cost dropped below $1/watt for the first time in the second quarter of 2017.[2] Where state law allows for non-discriminatory, fixed long-term financing structures that are compliant with federal law, private solar developers are now able to offer solar power to customers at rates far below those of utilities. This has fundamentally changed the role of distributed solar, as it offers a way for customers to significantly reduce power bills. In the case of distribution-grid connected solar, ratepayers benefit in the short term from generation with zero fuel volatility risk delivered at competitive prices and in the longer term from power delivered from solar facilities with fixed operating costs far lower than traditional power plants

There are many other values that distributed energy resources bring to the grid. The Commission has chosen to separately study and invite input on distributed energy resources in File No. EW-2017-0245. Many emerging technologies – such as demand response, AMI meters, electric vehicles, and various types of dispatchable battery storage – may allow for our future grid to reduce load factor and the need for expensive peaking capacity. Increased resiliency is another value that can be served from a more distributed and diversified generation portfolio. For these reasons, it is not only important to encourage the installation of distributed generation, but to make sure that its integration into the grid is smooth and standardized.

c. Examples from Other States

The Commission has great authority to decide how Missouri should guide and encourage the development of distributed renewable resources and independent power producers (IPPs). But it does not need to approach these issues from scratch. Many other states have taken productive and efficient approaches to PURPA implementation and to cogeneration. In its May

[1] Galen Barbose and Naim Darghouth, "Tracking the Sun: The Installed Price of Residential and Non-Residential
[2] "Solar Market Insight Report 2017 Q2" Solar Electric Industries Association & Genentech Media. https://www.seia.org/research-resources/solar-market-insight-report-2017-q2

1, 2017 comments in File No. EW-2017-0245, Renew Missouri shared the example of North Carolina, which has used PURPA to catapult the state to 2nd in the nation in installed utility-scale solar owned by IPPs. While North Carolina has a comparable solar resource and population profile to Missouri, the state had approximately 20 times the amount of installed solar by the end of 2016.[3] Private companies in North Carolina have invested more than $5.5 billion in solar and employ over 7,000 people, compared to Missouri's investment of about $447 million and 2,380 employees.[4] One of the primary reasons for this difference is North Carolina's approach to implementing PURPA.

Another state that the Commission should find instructive is Michigan, which used a Technical Advisory Committee process to develop an avoided cost methodology, on which the Michigan Public Service Commission issued a Report in April 2016, including how to implement PURPA and determine avoided costs for utilities situated in MISO and PJM. See below for some of the specific recommendations stemming from that proceeding. Also, see the Michigan PSC's Report attached.

Below, we propose several changes to the Commission's rule at 4 CSR 240-20.060 that can help Missouri get on the right track for encouraging the types of valuable market investment that will make Missouri's grid more decentralized, efficiency, diverse, and resilient.

[3] According to SEIA's website, Missouri has a total of 152 MW installed, while North Carolina has roughly 3,016 MW. See: https://www.seia.org/state-solar-policy/north-carolina-solar , https://www.seia.org/state-solar-policy/missouri-solar

[4] Id.

II. Proposed Rule Changes, 4 CSR 240-20.060

a. Public Availability of Avoided Cost Data

PURPA compliance begins with a standard process for Commission review of utility costs, and subsequent review and approval of utility avoided cost forecasts. Avoided cost forecasts serve as the basis for standard contract pricing and for PPAs under PURPA.

The availability of utility cost data is required by PURPA in Subpart C, Section 292.302, and applies to all utilities producing more than 500 million kilowatt-hours per year. A key provision for Commission staff to consider for rulemaking is the requirement to make avoided cost forecasts "available for public inspection" on a per kilowatt-hour basis per year. It is the understanding of Renew Missouri and CCR that this information is filed as confidential and is not currently made available for public inspection as required by federal law. We recommend that avoided cost forecasts inclusive of energy and capacity be made available over a 30-year period, and that this forecast be used to inform integrated resource planning processes.

We also recommend that staff and the Commission have adequate time to review avoided costs and resulting standard offer tariffs before approval. We believe that the Commission currently has only 30 days to review and approve avoided cost filings. This is far too short of a time period for adequate review of utility cost structures necessary to arrive at an avoided cost. Nearly every state with a non-negligible number of QFs has a multi-month biennial review period of avoided cost methodology and inputs, and also an annual review of key avoided cost model inputs to keep rates fresh. Renew Missouri/CCR suggest that the Commission adopt a procedural timeline for review of avoided costs consistent with other states that have seen significant QF development.

b. Standard Offer Contract: section (2), etc.

PURPA requires state utilities commissions to adopt a "standard offer" program under which qualifying facilities below a specified size threshold are eligible for standard, commission-approved avoided costs rates and contract terms and conditions. This Commission does not currently have such a standard offer contract in place. In addition to satisfying the requirements of federal law, we believe that much clarity would result from a clear process of developing a shared standard offer contract template for all investor-owned utilities. Such a template would be similar to the way stakeholders and utilities developed the standard "Interconnection Application/ Agreement" for net-metered customers in rule 4 CSR 240-20.065. This process would create a systematized method for solar developers and others to approach PURPA contracts, and would remove inconsistencies between utilities. A Standard Offer Contract template would also integrate well with a standard avoided cost methodology, as recommended below. Finally, a Standard Offer Contract would remove the Commission's role in constantly settling disputes regarding contract terms between utilities and customers.

To effectuate this concept, our individual recommendations include:

- Adding definition for "standard offer contract" to section (1).
- Adding to section (2) a requirement that the PSC develop a Standard Offer Contract with the input of investor-owned utilities, regulators and interested stakeholders.

> (F) Every contract shall provide fair compensation for the electrical power supplied to the utility by the customer **pursuant to the commission-approved and Standard Offer Contract form and the Avoided Cost Methodology in section (4)(E).** ~~If the utility and the customer cannot agree to the terms and conditions of the contract,~~ ~~t~~**T**he Public Service Commission (PSC) shall ~~establish the terms and conditions upon the request of the utility or the customer.~~ **create a Standard Offer Contract template with the input of utilities, regulators, and interested stakeholders.** ~~Those~~ **The** terms and conditions **of the Standard Offer Contract** will be established in accordance with Section 210 of the Public Utility Regulatory Policies Act of 1978 and the provisions of this rule.

- Requiring each investor-owned utility to post standard offer contract on its website. PSC should include a PURPA page on its website as well.

(G) Following the Commission's approval of a Standard Offer Contract template, each electric utility shall make the Standard Offer Contract available to the public on its website.

c. System Size Limit for QFs: section (4)(C)

Currently, each electric utility must have a standard rate for purchase for QFs with a capacity of 100 kW or less. The rule also allows the option to have a standard rate for QFs larger than 100 kW. We believe the rule needs a *larger size limitation* for QFs that qualify for a standard rate for purchase. In addition to putting Missouri more in line with successful PURPA states like North Carolina, this will enable developers to achieve greater economies of scale.

We recommend changing the rule to a size limit of 5 MW under a standard offer contract utilizing the standard avoided cost methodology. We also recommend allowing utilities to offer a standard rate for systems up to 20 MW in size. The below recommendation is for inclusion in section (4)(C), although such a change could be accomplished in section (2) as part of the Standard Offer Contract requirements:

(C) Standard Rates for Purchases.

1. There shall be put into effect (with respect to each utility) standard rates for purchase from qualifying facilities with a design capacity of ~~one hundred (100)~~ **five thousand (5000)** kilowatts or less.

2. There may be put into effect standard rates for purchases from qualifying facilities with a design capacity of ~~more than one hundred (100) kilowatts~~ **between five thousand kilowatts and twenty thousand (20,000) kilowatts.**

d. Standard Contract Term Length: section (4)

Fundamentally, all energy assets are financed through long term capital investments that are recouped through relatively fixed revenue streams over many years. This is true whether or not an energy asset is owned by a utility or an independent power producer

("IPP"). For utilities, the recouping of costs over many years comes in the form of Commission approved cost recovery. For IPPs, recouping costs over many years comes in the form of a power purchase agreement. Regardless of ownership structure of a generation asset, recouping costs over a longer period of time means a lower levelized cost of energy paid by the ratepayers. In addition, PURPA requires that utilities offer power purchase agreements to that are of sufficient duration "to allow QFs reasonable opportunities to attract capital from potential investors."[5] FERC has recognized that without a long enough contract term, IPPs cannot finance facilities with private capital. Additionally, an IPP asset is much more likely to provide competitive power relative to a rate-based, utility owned asset with a contract length that is comparable to Commission approved amortization timeframes for IOU assets.

Thus, to level the playing field between utilities and independent power producers, and to comply with the requirements of PURPA, we propose that the rule include a minimum or standard contract term length. Specifically, we propose a standard contract term of 20 years. While the below language is proposed for insertion after section (4)(C), the same could be accomplished in section (2) as part of the Standard Offer Contract requirements:

(D) Standard Contract Term Length for Purchases.

1. There shall be put into effect (with respect to each utility) a standard contract term length of twenty (20) years for purchases from qualifying facilities taking service under the Standard Offer Contract.

2. There may be put into effect a standard contract term length of more than twenty (20) years from qualifying facilities with a design capacity of between five thousand (5,000) kilowatts and twenty thousand (20,000) kilowatts or less.

[5] Windham Solar LLC. Notice of Intent Not to Act and Declaratory Ruling. Federal Energy Regulatory Commission. Nov. 22, 2016. https://www.ferc.gov/CalendarFiles/20161122181956-EL16-115-000.pdf

e. Avoided Cost Methodology: section (4)(E)

The method by which a utility's avoided costs are calculated is perhaps the most consequential aspect of PURPA implementation. It is also the most complex. Section (4)(A) requires that rates for purchase under the rule shall be "just and reasonable to the electric consumer of the electric utility and in the public interest;" and section (4)(E) then lists the factors to consider when determining whether a rate satisfies (4)(A).

We believe that a standard *Avoided Cost Methodology* is needed in the Commission's rule that is applicable to all major IOUs in the state. In the same way that a Standard Offer Contract may avoid later conflicts in front of the Commission in exchange for time spent on the front end, an agreed-upon Avoided Cost Methodology may save utilities and IPPs much time and trouble and provider greater certainty and stability to the market.

Renew Missouri and CCR recommend that the Commission employ a similar approach to that taken in Michigan in 2015-2016 as part of MPSC Case No. U-17973. In October 2015, the Michigan PSC directed the Staff to form the PURPA Technical Advisory Committee (TAC) and conduct a series of five in-person meetings to develop a shared avoided cost methodology. Following this process, in April 2016, the MPSC released its final TAC Report,[6] attached with these comments. The Report proposed a new PURPA Administrative Process, and directed each utility to file their new avoided cost calculations according to the consensus of the TAC.[7]

In addition to a process similar to that conducted in Michigan, we recommend that the final Avoided Cost Methodology be posted publicly on the Commission's website, along with each utility's most recently-submitted avoided cost calculation.

[6] See attached, Michigan Public Service Commission, *Report on the Continued Appropriateness of the Commission's Implementation of PURPA*. MPSC Case No. U-17973, April 8, 2016.
[7] Each Michigan utility's avoided cost calculation filings can be found here: http://www.michigan.gov/mpsc/0,4639,7-159-80741_80743-406273--,00.html

f. Legally Enforceable Obligation

PURPA provides that qualifying facilities can sell their output utilities pursuant to a contract or a "legally enforceable obligation" ("LEO"). The purpose of the LEO concept is to ensure that utilities are not able to delay or otherwise adversely affect QFs' exercise of their right to sell their output to the utility. A QF establishes a LEO when it unequivocally commits to sell its output to the utility. State public service commissions have the responsibility to define what a QF must do to demonstrate such a commitment, but this Commission has not previously articulated a test for LEO formation. It is a common observation that utilities have attempted to avoid entering into LEOs with qualifying facilities developers in numerous circumstances.[8] There have been a number of FERC rulings on this subject to offer clarity on the rights of QFs and resolve conflicts.

In order to ensure that qualifying facilities are able to exercise their right to sell output to a utility, we recommend that the Commission adopt a LEO standard with reasonable procedural timelines for utilities and developers to allow for sufficient certainty and visibility for all parties privy to the qualifying facilities development process. We suggest that the Commission adopt such a test and provide that a QF establishes a LEO as follows:

(9) Legally Enforceable Obligations

(A) A qualifying facility may establish a legally enforceable obligation to sell by tendering a signed power purchase agreement to the utility; provided however, that if the utility proposes modifications to the power purchase agreement, the qualifying facility must either:

1. execute the modified power purchase agreement within thirty (30) days of receipt, or

2. notify the utility within 30 days of receipt of the modified power purchase agreement that it wishes to engage in further negotiations and

[8] Simon, Daniel R. "Understanding PURPA Rights in Power Purchase Agreements," Law 360. https://www.law360.com/articles/696190/understanding-purpa-rights-in-power-purchase-agreements

(a) execute the final power purchase agreement tendered by the utility reflecting a mutually agreeable resolution of such negotiations within 30 days of receipt, or

(b) dispute the utility's position on the power purchase agreement by submitting the issue to the commission for resolution, and execute the final power purchase agreement reflecting the commission's resolution of the dispute within 30 days of receipt of a commission order.

(B) Where the qualifying facility fails to execute a power purchase agreement tendered by the utility in accordance with this test within 30 days of receipt, it must reinitiate the legally enforceable obligation formation process by tendering a new signed power purchase agreement to the utility; provided, however, that a qualifying facility may not establish a subsequent legally enforceable obligation at a higher avoided cost rate than it would have been eligible for under its initial power purchase agreement tender.

* * *

Renew Missouri and CCR appreciate the opportunity to submit these comments and looks forward to any in-person meetings to discuss potential changes to rules 4 CSR 240-20.060, 4 CSR 240-3.155, and 4 CSR 240-20.065.

Please find the following documents attached:

1. Michigan Public Service Commission *Report on the Continued Appropriateness of the Commission's Implementation of PURPA*. MPSC Case No. U-17973, April 8, 2016.

2. Galen Barbose and Naim Darghouth, *Tracking the Sun: The Installed Price of Residential and Non-Residential Photovoltaic Systems in the United States*. Lawrence Berkeley National Laboratory and SunShot US DOE, September 2017.

Respectfully Submitted,

/s/ Andrew J. Linhares

Andrew J. Linhares, MO Bar ID #63973
409 Vandiver Dr. Building 5, Suite 205
Columbia, MO 65202
Andrew@renewmo.org
(314) 471-9973 (T)
(573) 303-5633 (F)

ATTORNEY FOR RENEW MISSOURI ADVOCATES AND CYPRESS CREEK RENEWABLES