BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Ohio Power Company for Approval of its Renewable Energy Technology Program.	))))	Case No. 09-1871-EL-ACP
In the Matter of the Application of Columbus Southern Power Company for Approval of its Renewable Energy Technology Program.	))))	Case No. 09-1872-EL-ACP

REPLY COMMENTS BY THE OFFICE OF THE OHIO CONSUMERS' COUNSEL AND THE VOTE SOLAR INITIATIVE

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TABLE OF CONTENTS

Page

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I. INTRODUCTION

The Office of the Ohio Consumers' Counsel ("OCC"), on behalf of the residential utility consumers in of the Columbus Southern Power Company and the Ohio Power Company ("AEP" or "Companies"), respectfully submits these reply comments along with the Vote Solar Initiative ("VSI"). These reply comments respond to initial comments on AEP's Application for its Renewable Energy Technology Program ("RET") by the Industrial Energy Users – Ohio ("IEU"), and Public Utilities Commission of Ohio staff ("Staff"). The Application was originally filed on November 30, 2009 and proposes to provide up front incentives to AEP residential and other customers in order to facilitate the installation of distributed renewable generation wind and solar projects. These reply comments are being filed in accordance with the Public Utilities Commission of Ohio ("PUCO" or "Commission") Entry of September 24, 2010. OCC and VSI submit these comments jointly to address several issues presented by IEU and Staff and to encourage the PUCO to approve the Application after employing the program revisions recommended below and in OCC and VSI comments filed on October 8, 2010.

II. COMMENTS

A. The Upfront Design Of The Program Presents Minimal Risk Of Non-Recovery And Is Employed In Other Jurisdictions.

1. Upfront Design

Staff does not state an objection to the program design in their initial comments, however Staff notes concern regarding the upfront incentive design of the RET program, stating that "the upfront payment shifts the risk of performance from the resource to the Companies' generation ratepayers."[1] According to the comments, the risk is that "a failure to perform as expected over those 20 years raises the question as to what ratepayers received in return for their 'investment.'"[2] Before addressing the minimal risk of failure, it is important to understand why an upfront incentive program design, with some modifications, is an appropriate mechanism to employ for financing renewable systems and encouraging distributed generation. Investment in distributed generation of renewable energy is an important part of Ohio's future, and state policy.[3] First, the prices of solar generating systems are nearly exclusively fixed. There are no on-going or variable fuel costs, annual maintenance costs are minimal and the devices are considered to be solid state, meaning they have no moving parts and therefore are highly reliable and long-lived.[4] Thus, the economics of a solar generating system are such that a solar

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[1] PUCO Staff Comments at 2 (Oct. 8, 2010).
[2] Id. at 2.
[3] See RC 4928.02 (J) and 4928.02 (K).
[4] http://www.eere.energy.gov/basics/renewable_energy/pv_system_performance.html

investor must pay the entire cost of the system upfront. A residential customer does not differ from a commercial customer in the ways in which they determine whether purchasing a solar system is a sound investment or not. Similar to a large solar farm developer who enters into long-term fixed price contracts for the electricity output of a large system, it is beneficial for a small-scale customer generator to offset the cost of financing a system by entering into a long-term contract for the RECs the system will produce. With these long-term agreements, both types of investors reduce the payback time of a system. The shorter the payback time, the more feasible it is to purchase and install a system.

In addition to a long-term REC purchase contract, state or federal grants may provide other options to help offset the upfront cost of the purchase and installation of a renewable system. For example, the Ohio Department of Development Advanced Energy Fund offers state grants which assist in defraying the upfront cost of a renewable system installation.[5] However, these funds are set to expire December 31, 2010.[6] In the absence of a long-term contract, and without these state grants, the payback time for a solar system may be up to 35 years.[7] Thus, the RET program will be an important source of funding that will continue to provide an offset to the upfront cost of system purchase and installation. With the approval of the RET program, an investor, and in this case an AEP customer, will be able to include the value of any state or federal tax credits and/or grants, as well as the value of the energy produced, at the time of purchase to determine the payback period and thus determine whether a renewable energy system investment is

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[5] http://www.development.ohio.gov/Energy/Incentives/AdvancedEnergyFundGrants.htm
[6] http://www.lbo.state.oh.us/fiscal/fiscalnotes/128ga/HB0301IN.htm.
[7] See Application at page 4, paragraph 9 (November 30, 2009).

reasonable. The RET program, especially if the Advanced Energy Fund is not renewed, makes the purchase and installation of small renewable systems more feasible.[8]

2. Incentive Recovery For Premature System Failure

A concern relayed in Staff comments is how incentive amounts paid to customers who own systems that experience performance failure would be recovered.[9] Related to this, Staff expresses concern over whether the process will be "administratively burdensome" which in turn would generate "significant participant resentment."[10] Staff provides no support to substantiate these concerns. In fact, solar photovoltaic panels and arrays, which would likely be the type of system installed in the Companies' territories, are considered to be "highly-reliable and long lived" due to the fact that systems are solid-state and contain no moving parts.[11] In addition, the US DOE comments on system reliability by noting that component failure rates are low and that a high level of system reliability may be achieved.[12]

In fact, the most common system component failure is the inverter. The panels themselves are expected to perform for 20-25 years.[13] However, an inverter in a system usually lasts about 10-12 years.[14] Accordingly, it is likely the inverter will need to be replaced at least one time during the life of the system. Or, to address Staff's concern directly, once during the term of the incentive contract. However, this component is the

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[8] A discussion of economic payback periods for a solar system notes that some utility incentives reduce the payback period of a system to "5-7 years." See: http://www.solarbuzz.com/Consumer/Payback.htm
[9] Staff comments at 2 (Oct. 8, 2010).
[10] Id. at 2-3.
[11] http://www.eere.energy.gov/basics/renewable_energy/pv_system_performance.html
[12] Id.
[13] http://www.solarpanelswork.net/solar-photovoltaic-project-warranties-by-gennadi-saiko
[14] http://sunpluggers.com/2009-09/questions-to-ask-solar-installer.php

subject of much research and continual improvement.[15] Replacement is anticipated, and newer installations reduce the amount of time it will take for this replacement to occur.[16]

For a solar system, parts and labor are typically guaranteed for five years, and panels are typically guaranteed for up to 25 years.[17] The panels themselves are expected to perform for 20-25 years.[18] However, if the panels or other individual components fail, warranties may be employed by the purchaser of the system to have the system repaired.[19] AEP could recommend during a review of a customer application that the customer evaluate certain warranties. In addition, a system owner will be highly motivated to make any repairs as quickly as possible, in order to realize the full potential of a system.[20]

Using certified installers in the State of Ohio also reduces the risk of prolonged system non-performance. The Company has proposed using the same installers qualified under the incentive programs provided by the Advanced Energy Fund to complete installations for this program as a way to minimize the risk that an installer will not respond expeditiously to replace a failed inverter or other system component if necessary. These installers have met the criteria proposed by the Department of Development to

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[15] Id.

[16] Id. The author notes that "A goal of the solar industry is to make inverter replacement a straightforward job requiring only an hour or two of work by a single trained installer."

[17] http://www.solarpanelswork.net/solar-photovoltaic-project-warranties-by-gennadi-saiko

[18] http://www.solarpanelswork.net/solar-photovoltaic-project-warranties-by-gennadi-saiko

[19] Id.

[20] http://sunpluggers.com/2009-09/questions-to-ask-solar-installer.php: the author states that: "For a solar-power owner, time is money. If an inverter's ability to deliver electricity from the array to the home or business fails, the modules will continue to make electricity, but it won't be usable, and the owner will be losing money." Thus, the owner of a system has sufficient motivation to make repairs as quickly as possible.

become certified in Ohio and have collectively completed over 400 installations in Ohio to date.[21]

Thus, solar panel and system components are considered to be highly reliable by the DOE. In addition to warranties that exist for the installation and parts, extended warranties may be employed by a homeowner to cover any premature failure. As time is money for a solar system owner, the motivation to fix a non-performing system is strong.

Therefore, the risk of non-performance is minimal and should not be a reason for the Commission to deny the proposed program design. The upfront incentive program design should be employed as proposed by AEP, and with the recommended modifications noted in these reply comments as well as in OCC and VSI's comments filed on October 8.

In addition, it should be noted that AEP has not echoed staff concerns about the program being administratively burdensome. The unexplained assertion of "significant customer resentment" has not been an issue in the Companies' Application or follow-up comments, nor have either of these issues been expressed in any discussions that OCC or VSI has had with the AEP representative. The Commission cannot rely on Staff's unsupported argument that the program would be administratively burdensome. OCC and VSI have had multiple discussions with various solar installation companies, renewable energy organizations and installers that would lead to the opposite conclusion of the argument presented by Staff. These unsupported arguments are without merit and should be dismissed by the Commission.

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[21] http://www.development.ohio.gov/Energy/Incentives/AdvancedEnergyFundGrants.htm

3. Changes In System Ownership May Be Addressed To Minimize Any Negative Effects On System Performance.

Staff also raises concerns about recovery difficulties resulting from possible changes in system ownership over the life of the incentive period.[22] OCC has considered these potential problems in discussions with other utilities on similar program designs. Although there is always a potential for some problems, there are certainly ways to ensure that any difficulties resulting from a change in ownership will be minimized. Accordingly, OCC and VSI propose the following solutions that may be incorporated in the contractual framework between the Companies and customers to cover the change of ownership scenario:

> If ownership of the property changes, the customer must exercise one of the following options:
>
> a. The contract can be transferred to the new homeowner so long as it is agreeable to all parties, including the mortgage company.
> b. If moving within the utility service territory, the panels can be moved to the new residence with comparable solar access at no cost to AEP.
> c. The customer can refund to the Company a pro-rata amount of the incentive based upon the remaining term of the agreement.

With the above modifications, the potential for performance problems resulting from a change in ownership is minimized. These should be adopted by the PUCO and the Application should be approved.

OCC and VSI agree with Staff's comment explaining that recovering costs over 20 years, as would be required by employing the Staff's preferred performance-based method, could create an administrative expense that may exceed the benefits of the RET

[22] Staff Comments at 3 (Oct. 8, 2010).

program.[23] Although Staff does not explain this argument, OCC and VSI agree that since the incentive payment is upfront, this could potentially add carrying charges to be paid to the Companies which could outweigh the benefits provided by the program because cost recovery would be intermittent. Under this scenario, cost recovery would be spread out over a twenty-year period as RECs are produced by customers' systems.

OCC and VSI agree with Staff's recommendations for modification of the upfront design. Employing these recommendations would alleviate any concerns related to allowing AEP to recover these costs upfront. Those specific recommendations are:

> i. The RECs obtained from participants should be assigned a cost of $0 for purposes of ultimately determining a REC expense. Therefore, when these particular RECs are consumed (i.e., retired) to achieve compliance with the requirements under Section 4928.64, Revised Code, they should be assigned no cost to ratepayers in recognition that they were already paid for by ratepayers.
>
> ii. Because the RECs obtained from participants would have already been paid for by ratepayers, the proceeds from any decision to ultimately sell these RECs should flow directly to the benefit of ratepayers via the FAC or other such mechanism that may be in place at the time.
>
> iii. In the event of a refund from a participant associated with nonperformance, such refund should flow directly to the benefit of ratepayers via the FAC or other such mechanism that may be in place at the time. The RECs obtained from participants should be assigned.[24]

In addition to the recommendations above, OCC and VSI also support Staff's recommendation that the application should be revised to be consistent with Commission

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[23] Staff Comments at 3.
[24] Staff comments at 4.

rule 4901:1-40-04(d)(1). This aligns the program with Ohio Administrative Code provision governing distributed generation.

B. The Development Of The Ohio Renewable Industry And Distributed Generation Should Not Be Delayed.

The purpose of the AEP program will do more than simply "assist the Companies in meeting their alternative energy resource benchmarks pursuant to Section 4828.65, Revised Code" as stated by Staff.[25] This program will, in fact, provide additional benefits to the Companies, consumers and to Ohio beyond providing AEP short-term compliance with mandatory benchmarks. As stated in the Companies' Application at page 2, paragraph 5, this program will also "encourage residential and non-residential customers to install renewable energy resource facilities." This is directly aligned with Ohio energy policy of encouraging the development of distributed generation.[26] Renewable energy systems also provide other additional benefits to Ohioans, including increased energy security, improved environmental quality, and measurable economic impact.[27] The proposed program design, with the modifications proposed, will assist in the achievement of those benefits.

The upfront design is preferred by AEP's customers.[28] According to AEP market research, an upfront design was most appealing to 55 percent of customers overall.[29]

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[25] Comments on the Applications of Ohio Power Company and Columbus Southern Power Submitted on behalf of the Staff of the Public Utilities Commission of Ohio at 1.
[26] RC 4928.02 (C) States that: "It is the policy of this state to do the following throughout this state: Ensure diversity of electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities."
[27] The U.S. Department of Energy states that: "Renewable energy technologies have the potential to strengthen our nation's energy security, improve environmental quality, and contribute to a strong energy economy." http://www.eere.energy.gov/basics/renewable_energy/
[28] See AEP Application at 4 (November 30, 2009).
[29] See Attachment 1, PowerPoint slide of AEP Market Research.

This is likely due to the high upfront costs that many customers would be unable to afford. The upfront design best addresses this barrier and should be implemented by the PUCO.

IEU's assertion that the program is not needed for purposes of meeting AEP's 2010 and 2011 benchmarks[30] is short-sighted and divergent from Ohio law. As the Commission has previously stated, the PUCO interprets ORC 4928.65 and 4928.66 as "*requiring* a role for distributed generation in the state's alternative energy portfolio standard."[31] (Emphasis added). Further the PUCO has stated that similar programs should not be discouraged due to potential circumstances of over-compliance.[32] The development and installation of additional solar projects now will assist AEP in meeting its mandatory benchmarks in the future. Therefore, the fact that these are not "necessary" for immediate or near-term compliance does not provide good cause to discourage or oppose the program.

Finally, OCC and VSI disagree with IEU's alternative recommendation that the program be delayed. IEU suggests that program implementation should wait and be discussed with interested parties in the context of its next SSO application.[33] IEU mischaracterizes Signatory parties' intent in signing the stipulation, of which IEU was not a signatory party, by stating that it was contemplated by signatory parties that the program would be discussed in the next SSO proceeding.[34] In fact, it is the fuel adjustment clause, under which costs of this program are to be recovered, rather than the

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[30] IEU Comments at 2 (October 8, 2010).
[31] *In the Matter of the Application of Duke Energy Ohio, Inc. for Approval of a Residential Solar Renewable Energy Credit Purchase Program Agreement and Tariff*, Case No. 09-834-EL-ACP, Finding and Order at 5 (¶10(c)) (July 29, 2010).
[32] Id.
[33] See IEU comments at 5.
[34] See IEU comments at 5 and 6.

RET program that will be discussed in the Companies next SSO, as explained by IEU in their initial comments. IEU is selectively advocating for a delay of a residential program application in this case, while implying frustration with delays in approval of mercantile customer programs elsewhere.[35] In fact, this program has been a topic of discussion between OCC and AEP, as well as others, since January 2009 and was originally aiming to announce the program on Earth Day 2009 to be rolled out in June 2009.[36] Because discussions regarding future recovery mechanisms have already commenced, OCC and VSI recommend the Commission extend the AEP RET program for a minimum of two years from the approval date, or require AEP to propose a continuation of this program or a new, similar program no later than August 31, 2011 as proposed in the stipulation of the AEP REC purchase program.[37] The costs of this program would then be recovered under the mechanism in place after 2011 as approved by the PUCO.

If the Commission should require the program to be discussed in the next SSO proceeding, all program details should be required by the Commission as part of any Stipulation presented in that proceeding. However, the immediate application should be approved, including the modifications proposed by OCC and VSI. The recommendations of IEU should not be followed by the PUCO.

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[35] In a recent Platt's article, an IEU representative complains that "[H]undreds of businesses have filed applications to move forward with energy efficiency that have been sitting at the PUC [Public Utilities Commission] for nine months."
http://www.platts.com/RSSFeedDetailedNews/RSSFeed/HeadlineNews/ElectricPower/6499883

[36] See Attachment 2, AEP powerpoint slide.

[37] *In the Matter of the Application of Ohio Power Company for Approval of its Renewable Energy Credit Purchase Program*, Case No. 09-1873-EL-ACP, et al, Stipulation at 5 (Oct. 8, 2010).

III. CONCLUSION

OCC and VSI respectfully request that the Commission modify the RET program as described in the above comments and in the initial comments. OCC has been a part of meaningful discussions with other utilities in Ohio which have led to the implementation of REC purchase programs that are performance based. The proposed upfront incentive program design provides Ohio with a unique opportunity to explore various program designs to determine the best method of encouraging distributed generation in Ohio. The AEP program, with the modifications recommended by OCC, VSI, and Staff would create a dynamic program in line with Ohio's current energy policy.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a copy of this *Reply Comments by the Office of the Ohio Consumers' Counsel and the Vote Solar Initiative*, was served on the persons stated below *via* regular U.S. Mail Service; postage prepaid this 15th day of October 2010.

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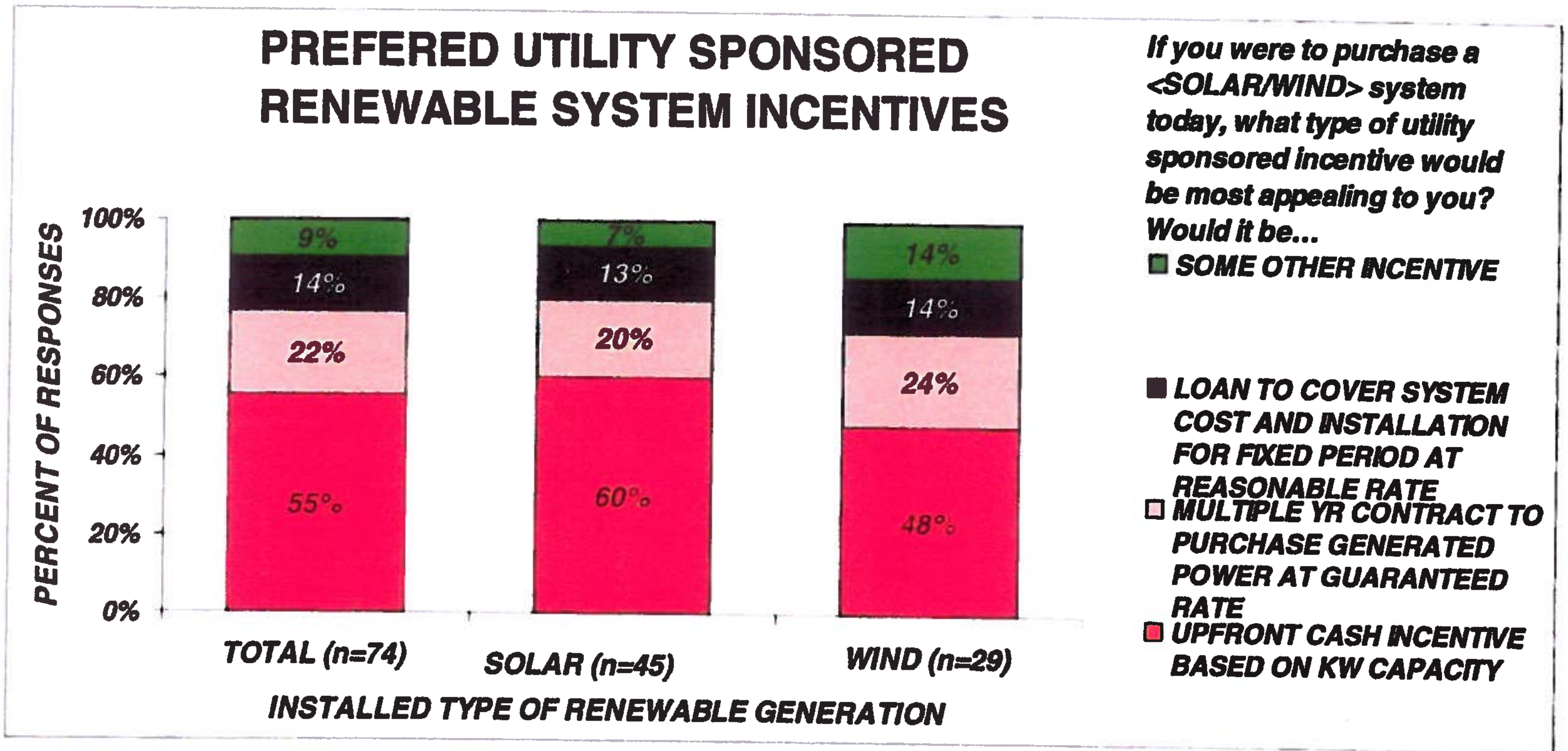
Attachment 1

AEP OHIO
A unit of American Electric Power

Market Research

Customers prefer upfront cash incentives compared to other incentives.



AEP OHIO
A unit of American Electric Power

Recommendations

- Develop and offer a customer rebate program that can be announced on Earth Day and kicked off by June 1, 2009
- Establish administration of program and tracking of RECs
- Coordinate with the Ohio Energy Office to promote the rebate program
- Begin development of requirements and IT proposal to modify MACSS to accommodate feed-in-tariffs