BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Long-Term Forecast Report of Ohio Power Company and Related)	Case No. 18-501-EL-FOR
Matters.)	
)	
In the Matter of the Application Seeking)	Case No. 18-1392-EL-RDR
Approval of Ohio Power Company's Proposal)	
to Enter into Renewable Energy Purchase)	
Agreements for Inclusion in the Renewable)	
Generation Rider.)	
)	
In the Matter of the Application of Ohio)	Case No. 18-1393-EL-ATA
Power Company to Amend its Tariffs.)	

DIRECT TESTIMONY OF BRUCE BURCAT ON BEHALF OF THE MID-ATLANTIC RENEWABLE ENERGY COALITION

January 2, 2019

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Attorneys for Mid-Atlantic Renewable Energy Coalition 1 Q. Please state your name and business address.

A. My name is Bruce Burcat. My business address is 29 North State Street, Dover,
3 Delaware.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Mid-Atlantic Renewable Energy Coalition (MAREC) as its
6 Executive Director.

7 Q. Please provide a description of the Mid-Atlantic Renewable Energy Coalition.

8 A. MAREC is a nonprofit organization formed to help advance opportunities for renewable energy development primarily in the PJM Interconnection, LLC (PJM) territory.¹ MAREC's 9 10 membership includes a diverse coalition of renewable energy developers, equipment 11 manufacturers, and public interest organizations dedicated to the growth of renewable energy 12 technologies that will improve our environment, boost economic development in the region, and 13 diversify our electric generation portfolio-thereby enhancing energy security. MAREC's 14 primary areas of focus include working with state regulators to develop rules and supportive 15 policies for renewable energy; providing education and expertise on the environmental 16 sustainability of wind and solar energy; and offering technical expertise and advice on 17 integrating variable wind and solar energy resources into the electric grid.

18 Q. Please describe your professional background.

19 A. I am an attorney with over 25 years of experience in the utility and energy regulatory 20 fields. I am responsible for MAREC's efforts to promote the growth and development of 21 renewable energy in its nine jurisdictions. I joined MAREC as its Executive Director in 2010 22 after serving for nearly 15 years as the Executive Director of the Delaware Public Service

¹ MAREC's footprint includes the District of Columbia, Maryland, New Jersey, Delaware, Pennsylvania, Ohio, Virginia, West Virginia, and North Carolina.

1 Commission (Delaware PSC). In that capacity, I was responsible for the major policy and 2 technical positions taken by Delaware PSC staff in proceedings before the Delaware PSC. I was 3 involved in all facets of utility regulation, including the restricting of Delaware's electricity 4 market and the reintroduction of integrated resource planning for Delaware's major electric 5 utility. As part of the integrated planning process, Delaware's major electric utility was required 6 to incorporate electricity generated from renewable resources into its long-term procurement 7 plan. My office supervised compliance by electric suppliers with the state's renewable portfolio 8 standard. Prior to the Delaware PSC, I was an attorney for the New Jersey Division of Rate 9 Counsel. Before that position, I served as a Senior Rate Attorney for General Waterworks 10 Management and Service Company.

11 Q. Have you previously provided testimony in regulatory proceedings or testified 12 before a legislative body?

13 In my position as Executive Director of MAREC, I provided pre-filed written testimony A. 14 and stood for cross-examination before the Public Utilities Commission of Ohio (PUCO) in In re 15 Ohio Edison Co., et al., for Authority to Provide for a Standard Service Offer Pursuant to R.C. 16 4928.143 in the Form of an Electric Security Plan (Case No. 14-1297-EL-SSO) and In re Ohio 17 Power Co.'s Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the 18 Power Purchase Agreement Rider (Case No. 14-1693-EL-RDR, et al.) ("PPA Rider Case"). I 19 have also provided written testimony related to the procurement of renewable energy through 20 long-term contracts in In re the 2010 Long-Term Forecast Report of Duke Energy Ohio, Inc. 21 (Case No. 10-503-EL-FOR).

In another proceeding before the PUCO, I provided testimony on the cost cap provision of Ohio's Alternative Energy Portfolio Standard in *In re Review of the Alternative Energy Rider* *of Ohio Edison Co., et al.* (Case No. 11-5201-EL-RDR). I have also testified before the Maryland Public Service Commission (Maryland PSC) in its proceeding to approve the merger of Exelon Corporation and Constellation Energy Group, Inc. Finally, I testified as a witness in two of the Exelon/Pepco merger proceedings: one before the District of Columbia Public Service Commission and the other before the Maryland PSC, having submitted pre-filed written testimony and stood for cross-examination on behalf of MAREC in both matters.

I have also appeared before legislative committees in Ohio, Pennsylvania, New Jersey, West Virginia, and Maryland to testify regarding legislation and issues concerning renewable energy policy. In my role as the Executive Director of the Delaware PSC, I testified before the Federal Energy Regulatory Commission on the impact of electric transmission congestion on the Delmarva Peninsula and appeared numerous times before the Delaware House and Senate to respond to questions on proposed energy legislation and major energy issues facing the State.

13

Q. Please describe your educational background.

A. I am a graduate of the University of Delaware. I received my Juris Doctor degree from
Rutgers School of Law – Camden and a Masters in Law (LL.M) in Taxation from Villanova
University School of Law.

17 Q. What is the purpose of your testimony?

A. The purpose of my testimony is to support a finding of need for the renewable energy projects of Ohio Power Company ("AEP Ohio"). My testimony will show there is a resource planning need for at least 900 megawatts (MW) of renewable generation resources in Ohio and that AEP Ohio's in-state renewable energy projects can help meet this need.

22 Q. Would you briefly summarize the relevant recommendations in your direct

23 testimony?

1 A. I recommend the PUCO find there is a need for AEP Ohio's 900 MW renewable energy 2 commitment in Ohio because "need" encompasses more than just the capacity and energy 3 supplied to consumers. Rather, when determining need, the PUCO should focus on the need for 4 long-term rate stability in the Ohio energy marketplace and consider how fixed-price renewables 5 will help achieve this need. In addition to long-term rate stability, in-state renewables will 6 provide Ohio with substantial environmental benefits, such as clean air and water, and direct and 7 indirect economic benefits to the Ohio economy at large. I recommend the PUCO consider the 8 totality of benefits that would result from AEP Ohio's renewable energy projects, as they 9 certainly outweigh any costs.

10 Q. How do the PUCO's Orders affirm your direct testimony recommendation?

11 In its Opinion and Order in the PPA Rider Case, the PUCO approved AEP Ohio's 900 A. 12 MW renewable energy commitment, recognizing that "renewable energy plays an integral role in promoting a reliable and cost-effective grid."² In the same Opinion and Order, the PUCO 13 expressed its support for the construction of new in-state renewables,³ and commented on the 14 15 importance of enhancing the diversity of available fuel source options by investing in renewables 16 "to offset the price volatility impact that any single fuel source might have on electric rates."⁴ 17 These insights are consistent with the factors I recommend as critical to determining whether 18 there is a need for AEP Ohio's proposed renewable energy projects.

19 Q. What factors should be considered in determining whether there is a "need" for20 renewable energy projects?

A. The need for long-term rate stability is the core tenet upon which the PUCO should be
reviewing this case. Mechanisms for additional price stability are needed and would benefit

² *PPA Rider Case*, Opinion and Order (Mar. 31, 2016) at 82.

 $^{^{3}}$ *Id.* at 83.

⁴ *Id*.

1 customers, especially when considering the price advantage offered by the Company's proposal 2 that is competitive with current and future market prices. The Company's proposal would 3 remedy against the exposure of supply cost escalation as natural gas pricing continues its 4 historically volatile pricing trends.⁵

5 The Ohio grid and PJM at-large have more natural gas generation in the supply stack than 6 ever before due to the low cost of natural gas that has been extracted out of the regional shale 7 formations. This concentration in natural gas generation creates an increased exposure to natural gas supply cost escalation.⁶ While wholesale and retail competition has resulted in significant 8 9 benefits for ratepayers during this era of declining fuel costs, it has also resulted in an increased 10 exposure to future natural gas cost escalation. Specifically, ratepayers face increased risk that 11 will result in higher electricity bills should natural gas costs rise in the future. The remedy to this 12 cost escalation risk is to act as a prudent investor, and have a diverse set of supply resources (the same way that portfolio theory states a prudent investor shall pursue a diverse set of 13 14 investments). Fuel-diversity will result in long-term rate stability for ratepayers, and solar energy 15 projects specifically will provide a hedge to ratepayers against rising electricity costs.

16 Q. How specifically will solar projects provide a hedge against escalating costs?

A. Solar Renewable Energy Purchase Agreements (Solar REPAs) allow customers to
receive stable and often low-cost electricity.⁷ In particular, Solar REPAs establish a set price for
the entire life of the contract. REPAs typically include a 20+ year term, allowing customers to
lock-in a fixed electricity rate over a significant amount of time. The importance of predictable

⁵ According to the U.S. Energy Information Administration (EIA), in November 2018, "natural gas prices rose well beyond market expectations." On November 23, 2018, the natural gas spot price at the Henry Hub in Louisiana was \$4.70/MMBtu, "the highest price since a temporary spike in January 2018, and before that, the highest price since June 2014," demonstrating the volatility of natural gas prices. *November U.S. Natural Gas Prices Increased Beyond Previous Market Expectations*, U.S. Energy Information Administration (Dec. 7, 2018), <u>https://www.eia.gov/todayinenergy/detail.php?id=37713</u>.

⁶ See id.

See The Customer's Guide to Solar Power Purchase Agreements, The Rahus Institute (October 2008).

electricity prices cannot be understated, as they provide ratepayers with long-term rate stability
 in all weather conditions. In this way, solar energy can provide a hedge against the unexpected
 and volatile price fluctuations of carbon-intensive fuel sources, such as coal and natural gas.

Q. How is your direct testimony responsive to the anticipated concerns of interveners regarding the "anti-competitive" nature of renewable energy projects and associated riders?

7 The proposed construct is not anti-competitive at the retail level because retail suppliers A. 8 still have the ability to serve 100% of the load of the retail customer base. At the wholesale 9 market level, an independent power producer (IPP) could argue that this construct is anti-10 competitive and creates an off-take contract that would enable the underwriting of a renewable 11 project on different grounds than the way fossil fuel plants participate in the market. While this 12 concern may be relevant at very high levels of penetration, the scale of these two projects versus 13 the size of the Ohio market makes the anti-competitive argument unsubstantiated in practice. In 14 other words, adding the proposed 400 MW of solar energy will have a negligible impact on 15 wholesale energy values and a limited impact on competition. Meanwhile, these renewable 16 energy projects will provide benefits in three major areas of great importance to Ohio: 1) long-17 term rate stability, 2) environmental benefits, such as clean air and water, and 3) local economic 18 impact. Moreover, a fixed REPA price that is market competitive would not constitute a market 19 subsidy at all.

20 Q. Can you comment on the local economic impact that AEP Ohio's projects will 21 provide?

A. The Highland Solar and Willowbrook Solar projects will provide both direct and indirect
economic benefits to both Appalachian Ohio and the Ohio economy at large. In terms of direct

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1 local benefits, the projects will provide local tax revenue, hundreds of construction and 2 (ongoing) operations / maintenance jobs, and landowner lease payments (to name a few). The 3 Willowbrook Solar project is estimated to create between 1,075 to 2,061 direct / indirect jobs 4 during construction, with corresponding payroll of \$53 to \$107 million, as well as 20 to 24 direct 5 / indirect jobs during operation, with corresponding payroll of \$975,000 to \$1.1 million.⁸ The 6 Highland Solar project is estimated to create approximately 268 new construction-related jobs, 7 plus 214 "secondary effect" jobs, with corresponding payroll of \$56 million. In addition, it is 8 expected to create 5 new operation-related jobs, plus 10 "secondary effect" jobs with 9 corresponding payroll of \$2.5 million.⁹

Further, both projects plan on sourcing equipment within Ohio. Willowbrook Solar has communicated its intent to use Ohio-based First Solar modules for its facility. Additionally, Hecate Energy has committed to bolstering local manufacturing jobs in Appalachian Ohio, an area that is in dire need of economic revival. Hence, its Highland Solar project will create 150 permanent manufacturing jobs in Appalachian Ohio.¹⁰

In addition to the economic benefits mentioned above, both projects will benefit local schools, municipal governments, and county governments through the projects' payments in lieu of taxes (PILOT). For example, local municipalities can expect to receive an estimated \$1.05

⁸ Willowbrook Solar I, LLC, Case No. 18-1024-EL-BGN, Application (Sept. 17, 2018) at 30 and Exhibit C. "The construction and operations spending supports jobs and spending in other industries, which are the indirect impacts of the project's activity." Exhibit C at 17. "The solar industry indirectly supports numerous economic sectors throughout the United States. . . . For example, solar energy developers indirectly support the providers of the raw materials that are required to manufacture solar panels, electrical equipment, and other supplies beyond the direct suppliers of the solar industry." *Id.* at 23. "Of the 2,061 total jobs supported through the project, 998 will be in the construction/installation sector, 588 will be in semiconductor manufacturing (which includes solar panels), and 196 will be in fabricated metals manufacturing." *Id.* at 18.

⁹ Hecate Energy Highland LLC, Case No. 18-1334-EL-BGN, Application (Oct. 10, 2018) at 26 and Exhibit C.

¹⁰ In re the Matter of the Long-Term Forecast of Ohio Power Company and Related Matters, Case Nos. 18-501-EL-FOR et.al, AEP Ohio Response to MAREC Interrogatory 01-001 (Dec. 21, 2018).

million each year during the life of the Willowbrook Solar facility.¹¹ All of these direct and
indirect economic benefits should be taken into account as the PUCO considers the totality of
benefits stemming from approval of these projects.

4 Q. Can you comment on the advantage of local manufacturing associated with in-state 5 renewable energy projects?

6 A. In April 2018, the U.S. Bureau of Labor Statistics reported that the two fastest growing occupations in the U.S. were in installing solar panels and servicing wind turbines.¹² In the same 7 8 month, a report commissioned by the Maryland PSC concluded that continued growth of solar 9 power in Maryland offers billions of dollars in wages, economic benefits, and local tax revenue 10 as well as tens of thousands of new jobs across the State of Maryland. Further analysis prepared by the state of Maryland's Power Plant Research Program indicated that the in-state solar 11 12 additions called for in Maryland Clean Energy Jobs Act (MCEJA) would contribute hundreds of 13 millions of dollars in annual economic benefits to the State of Maryland. Additionally, a recent 14 study by the U.S. Department of Energy estimates that by 2030, the U.S. offshore wind industry will require more than 250,000 workers.¹³ By supporting in-state renewable energy projects, 15 16 Ohio will be in position to capture many of these green jobs.

17 Q. Do these projects need to be developed quickly in order for AEP Ohio to benefit

18 from the federal tax credit?

A. Yes. The Federal Investment Tax Credit (ITC) is a policy mechanism that was instituted
to support the development of solar energy projects in the United States. This investment has
been well worth it, as the U.S. solar industry is estimated to be adding more than \$30 billion each

¹¹ *Willowbrook*, Exhibit C.

¹² 100 Years aAfter World War I: What's the Labor Market Status of Our Veterans in 2018?, Bureau of Labor Statistics (Nov. 9, 2018), <u>https://blogs.bls.gov/blog/category/career-outlook/</u>.

¹³ 20% Wind Energy by 2030: Increasing Wind Energy's Contribution to the U.S. Electricity Supply, U.S. Dept. of Energy, 204-05 (July 2008).

year into the U.S. economy.¹⁴ The PUCO should act quickly so that AEP Ohio can take 1 2 advantage of this credit, which was specifically designed for projects like Willowbrook Solar and 3 A sense of urgency exists because the ITC will step down if project Highland Solar. 4 construction does not commence by December 31, 2019. The current ITC is equal to 30% of a 5 solar project's capital costs and is available for projects that begin construction by December 31, 6 2019. The ITC then decreases to 26% for projects that begin construction between January 1, 7 2020 and December 31, 2020, and again to 22% for projects with construction starting between 8 January 1, 2021 and December 31, 2021.

9 Q. Are there any supplemental materials you wish to provide in this matter?

10 Yes. I have included a list of Ohio-based Fortune 500 companies with sustainability A. reporting. (See Attachment BB-1). As of 2016, 82% of Fortune 500s published sustainability or 11 corporate responsibility reports,¹⁵ while 88% of the Ohio-based Fortune 500s have published 12 such and/or are actively investing in renewable energy initiatives.¹⁶ Access to nearby clean 13 14 energy generators is a key criterion for many Fortune 500 companies as they think about siting 15 new facilities. At least 22 Fortune 500 companies have committed to having renewable energy sources supply 100 percent of their electricity use in the years ahead.¹⁷ Meanwhile, dozens of 16 17 Fortune 500 companies, including tech giants like Apple and Google, have already invested

¹⁴ Impacts of Solar Investment Tax Credit Extension, Solar Energy Industries Association, <u>https://www.seia.org/research-resources/impacts-solar-investment-tax-credit-extension</u>.

¹⁵ Flash Report: 82% of the S&P 500 Companies Published Corporate Sustainability Reports in 2016, Governance & Accountability Institute, Inc., <u>https://www.ga-institute.com/press-releases/npage/1/article/flash-report-82-of-the-sp-500-companies-published-corporate-sustainability-reports-in-2016.html</u>.

¹⁶ See Attachment BB-1. Out of 25 Ohio-based Fortune 500 companies, 20 have engaged in sustainability reporting, and two others have commenced renewable energy initiatives. A list of Ohio-based Fortune 500 companies can be found here: <u>https://www.mydaytondailynews.com/news/what-fortune-500-companies-arebased-ohio/yC4czZFxgv8V3SG8efr7RO/</u>.

¹⁷ Brad Plumer, A Year After Trump's Paris Pullout, U.S. Companies Are Driving a Renewables Boom, The N.Y. Times (June 1, 2018), <u>https://www.nytimes.com/2018/06/01/climate/companies-renewable-energy.html</u>.

billions of dollars in renewables to power their operations and offset conventional energy use.¹⁸
Utilities need to evolve to satisfy this growing demand for renewables. Projects like Highland
Solar and Willowbrook Solar will help meet this need and make the state of Ohio more attractive
to companies wanting to utilize renewables and continue pushing toward clean energy.

5 Q. Does this conclude your testimony?

6 A. Yes.

¹⁸ Id.

CERTIFICATE OF SERVICE

I hereby certify that the undersigned counsel served a copy of the Direct Testimony of Bruce Burcat on behalf of the Mid-Atlantic Renewable Energy Coalition on counsel for Ohio Power Company and counsel for all other parties of record in this case, by e-mail, on this 2nd day of January 2019.

> /s/ Christine M.T. Pirik Christine M.T. Pirik (0029759)

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Attachment BB-1

OH-Based Companies:	Sustainability		
Fortune 500 List	Reporting?	Link	
Kroger	Y	http://sustainability.kroger.com/	
Cardinal Health	Y	https://www.cardinalhealth.com/en/about-us/corporate-citizenship.html	
P&G	Y	https://us.pg.com/sustainability-reports/	
Marathon Petroleum	Y	http://www.marathonpetroleum.com/Corporate_Citizenship/	
	N, but investing in		
Nationwide	renewables	https://www.bizjournals.com/columbus/news/2018/02/08/nationwide-partner-investing-nearly-100m-in-solar.html	
Macy's	Y	https://www.macysinc.com/social-responsibility/sustainability-in-action/default.asp>	
Progressive	Y	https://www.progressive.com/socialresponsibility/	
AEP	Y	https://www.aepsustainability.com/	
Goodyear Tier	Y	https://corporate.goodyear.com/en-US/responsibility.html	
First Energy	Y	https://www.firstenergycorp.com/content/fecorp/environmental.html	
L Brands	Y	https://www.lb.com/responsibility/environment/overview	
Sherwin Williams	Y	https://sustainability.sherwin-williams.com/corporatesocialresponsibility/	
Parker Hannifin	Y	http://www.parker.com/portal/site/PARKER/menuitem.c7aa7c198ba66c9a5829dd92427ad1ca/?vgnextoid=18f94bad565e4310VgnVCM10000014a71dacRCRD&vgnextfmt=default	
J.M Smucker	Y	http://www.jmsmucker.com/company-news/corporate-publications	
Fifth-Third Bank	Y	https://www.53.com/content/fifth-third/en/personal-banking/about/in-the-community/sustainability.htm	
Owens-Illinois	Y	http://www.o-i.com/Sustainability/	
American Financial Group	N		
AK Steel	Y	https://www.aksteel.com/about-us/corporate-citizenship/sustainability	
Dana	Y	http://www.dana.com/corporate-pages/sustainability	
Ownes Corning	Y	https://www.owenscorning.com/corporate/sustainability	
TravelCenters of America	N		
Cincinnati Financial	N		
KeyCorp	Y	https://www.key.com/about/corporate-responsibility/crreports.jsp	
	N, but has		
	Touchstone		
	Sustainability and		
Western & Southern	Impact Equity		
Financial	Fund	https://www.westernsouthern.com/touchstone/mutual-funds/sustainability-and-impact-equity-fund	
		https://www.biglots.com/images/marketing/corporate/investors/annual_reports/2017-annual-report.pdf	
Big Lots	Y	"The Company will be adding to our website a Corporate Social Responsibility section in fiscal 2018."	
Other Fortune 500's w Notab	le Operations in Ol	4	
Amazon	Y	https://www.aboutamazon.com/sustainability	
Abbott Labs	Υ	http://www.abbott.com/about-abbott/abbott-citizenship/sustainability-reporting.htm	
JP Morgan Chase	Y	https://www.jpmorganchase.com/corporate/Corporate-Responsibility/corporate-responsibility.htm	
https://www.mydaytondailyr	ews.com/news/wh		
at-fortune-500-compani	ies-are-based-		
			1

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Case No(s). 18-0501-EL-FOR, 18-1392-EL-RDR, 18-1393-EL-ATA

Summary: Testimony of Bruce Burcat on behalf of the Mid-Atlantic Renewable Energy Coalition electronically filed by Christine M.T. Pirik on behalf of Mid-Atlantic Renewable Energy Coalition