

**BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Ohio Power)	
Company for Authority to Establish a Standard)	Case No. 16-1852-EL-SSO
Service Offer Pursuant to R.C. 4928.143 in the)	
Form of an Electric Security Plan.)	
In the Matter of the Application of Ohio Power)	
Company for Approval of Certain Accounting)	Case No. 16-1853-EL-AAM
Authority.)	

DIRECT TESTIMONY

OF

BRUCE BURCAT

ON BEHALF OF

THE MID-ATLANTIC RENEWABLE ENERGY COALITION

/s/ Christine M.T. Pirik

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***Attorneys for Mid-Atlantic Renewable Energy
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May 2, 2017

1 **Q. Please state your name and business address.**

2 **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 that was formed to help advance the opportunities
9 for renewable energy development primarily in the region where the Regional Transmission
10 Organization, PJM Interconnection, LLC (“PJM”), operates. MAREC’s footprint includes the
11 District of Columbia, Maryland, New Jersey, Delaware, Pennsylvania, Ohio, Virginia, West
12 Virginia, and North Carolina. MAREC’s membership consists of utility scale wind and solar
13 developers, a wind turbine manufacturer, service companies, nonprofit organizations, and a
14 transmission company dedicated to the growth of renewable energy technologies to improve our
15 environment, boost economic development in the region, and diversify our electric generation
16 portfolio, thereby enhancing energy security. The primary areas of focus of MAREC are to:
17 work with state regulators to develop rules and supportive policies for renewable energy; provide
18 education and expertise on the environmental sustainability of wind energy; and offer technical
19 expertise and advice on integrating variable wind energy resources into the electric grid.

20 **Q. Please describe your professional background.**

21 **A.** I am an attorney with over twenty-five years’ experience in the utility and energy
22 regulatory fields. I am responsible for MAREC’s efforts to promote the growth and
23 development of renewable energy in its nine jurisdictions. I joined the Mid-Atlantic Renewable

1 Energy Coalition as its Executive Director in 2010 after serving for nearly fifteen years as the
2 Executive Director of the Delaware Public Service Commission. In that capacity, I was
3 responsible for the major policy and technical positions taken by Commission staff in
4 proceedings before the Delaware Commission. I was involved in all facets of utility regulation,
5 including the restructuring of Delaware's electricity market and the reintroduction of integrated
6 resource planning for Delaware's major electric utility. As part of the integrated planning
7 process, Delaware's major electric utility was required to incorporate electricity generated from
8 renewable resources into its long-term procurement plan. My office supervised the compliance
9 by electric suppliers with the State's renewable portfolio standard. I was intricately involved in
10 the two-year process that resulted in the first purchase power agreement in the United States for
11 the energy generated from an offshore wind farm that will be located off the coast of Delaware.
12 Prior to coming to the Delaware Commission, I was an attorney for the New Jersey Division of
13 Rate Counsel. Before that position, I served as a Senior Rate Attorney for General Waterworks
14 Management and Service Company.

15 **Q. Have you previously provided testimony in regulatory proceedings or testified**
16 **before a legislative body?**

17 **A.** In my position as Executive Director of MAREC, I provided pre-filed written testimony
18 and stood for cross-examination before the Public Utilities Commission of Ohio ("Ohio
19 Commission") in *In re Ohio Edison Co., et al., for Authority to Provide for a Standard Service*
20 *Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan* (Case No. 14-1297-
21 EL-SSO) and *In re Ohio Power Co.'s Proposal to Enter into an Affiliate Power Purchase*
22 *Agreement for Inclusion in the Power Purchase Agreement Rider* (Case No. 14-1693-EL-RDR,
23 et al.) (*PPA Cases*). I have also provided written testimony related to the procurement of

1 renewable energy through long-term contracts in *In re the 2010 Long-Term Forecast Report of*
2 *Duke Energy Ohio, Inc.* (Case No. 10-503-EL-FOR), and the advancement of renewable energy
3 in *In re Dayton Power and Light Co. for Approval of Its Electric Security Plan* (Case No. 16-
4 395-EL-SSO, et al.). In another proceeding before the Ohio Commission, I provided testimony
5 on the cost cap provision of Ohio's Alternative Energy Portfolio Standard in *In re Review of the*
6 *Alternative Energy Rider of Ohio Edison Co., et al.* (Case No. 11-5201-EL-RDR). I have also
7 testified before the Maryland Public Service Commission in its proceeding to approve the merger
8 of Exelon Corporation and Constellation Energy Group, Inc. I also testified as a witness in two
9 of the Exelon/Pepco merger proceedings; one before the District of Columbia Public Service
10 Commission and the other before the Maryland Public Service Commission having submitted
11 pre-filed written testimony and stood for cross-examination on behalf of MAREC in both
12 matters.

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

19 **Q. Please describe your educational background.**

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

23 **Q. What is the purpose of your testimony?**

1 A. The purpose of my testimony is to address the proposal in Ohio Power Company's ("AEP
2 Ohio's") application ("Application") regarding the Renewable Generation Rider ("RGR").

3 **Q. What is AEP Ohio proposing in its Application?**

4 A. When the Ohio Commission adopted the stipulation in the *PPA Cases* ("PPA
5 Stipulation"), it approved AEP Ohio's nonbypassable Purchase Power Agreement ("PPA") Rider
6 for the recovery of costs associated with renewable energy projects and the Ohio Valley Corp.
7 (OVEC) entitlement. In this Application, AEP Ohio is proposing to replace its PPA Rider with
8 two separate mechanisms: one to recover the OVEC entitlement through its Generation Energy
9 Rider and Generation Capacity Rider; and another to recover the renewable energy costs through
10 the Renewable Generation Rider (RGR). AEP Ohio is proposing to change the cost recovery
11 vehicle for the renewable power such that, rather than the delta between the market price of
12 power and the cost of renewable power being recovered from all customers (as approved in the
13 *PPA Cases*), the Ohio Commission would approve a nonbypassable charge for the life of a
14 facility [as opposed to the term of the electric security plan (ESP)] when it reviews and approves
15 individual projects. Therefore, AEP Ohio is proposing a zero-rate placeholder RGR be
16 established to replace the PPA rider for renewable cost recovery, and that the RGR be filled in
17 future RDR proceedings upon approval of individual renewable projects by the Ohio
18 Commission. AEP Ohio states that all other provisions of the PPA Stipulation, including its
19 commitments (e.g., the commitment for the development of 900 megawatts (MWs) nameplate
20 capacity for wind and solar projects in Ohio), will continue to be implemented and remain fully
21 effective upon the Ohio Commission's approval of this Application.

22 **Q. Do you believe AEP Ohio's proposal is in the public interest?**

23 A. I do believe that the proposal as currently proposed as it relates to the RGR is in the
24 public interest. This aspect of the AEP Ohio proposal would help facilitate the development of

1 long-term power purchase agreements through competitive procurements, which MAREC
2 believes is a vital component of well-functioning energy markets. My testimony will further
3 explain our reasoning for this recommendation. Therefore, MAREC is supportive of AEP
4 Ohio's proposal that the charges included in the RGR be for the life of the facility, rather than
5 the term of the ESP.

6 **Q. Can you explain the importance of long-term power purchase agreements in energy**
7 **markets?**

8 **A.** Yes. Long-term contracts serve two essential functions in energy markets: (1) they
9 enable project finance for new projects and assist in ensuring revenue adequacy for existing large
10 generators; and (2) they provide a hedge against volatile energy prices.

11 **Q. Can you explain how long-term power purchase agreements enable project finance**
12 **and assist in ensuring revenue adequacy for existing large generators?**

13 **A.** Yes. Energy markets require large-scale capital investments. Large-scale capital
14 investments require large-scale financing. Large-scale financing requires some meaningful
15 degree of certainty that adequate returns can be achieved. In fact, virtually the entire electricity
16 system has been built based on government approved, long-term, guaranteed rates of return for
17 just such reasons. This is still the case for the transmission and distribution system. However,
18 electricity restructuring and wholesale regional power markets eliminated long-term, guaranteed
19 rates of return for generation and introduced "electricity competition" at both the wholesale and
20 retail levels. This fundamental change has not created a problem so long as new generation
21 investments were not required and energy prices were high. However, the dearth of
22 opportunities for long-term contracts and falling energy prices has created a lack of incentives
23 both for new generation and concerns with revenue adequacy for existing generation. The latter

1 problem is referred to as the “Missing Money” problem and has been attempted to be partly
2 remedied by the creation of a wholesale capacity market by PJM.¹ The “Missing Money”
3 problem arises, in short, because prices in energy markets reflect short-term variable costs,
4 however, power generators must recover not only short-term variable costs, but long-term capital
5 costs in order to achieve revenue adequacy. As a result, short-term energy prices can fail to
6 ensure revenue adequacy for power generators. Long-term power purchase agreements are a
7 mechanism which enables project finance for large capital investments and which can help
8 mitigate revenue adequacy challenges facing existing power generators.

9 **Q. Can you explain how long-term power purchase agreements provide a hedge against**
10 **energy price volatility?**

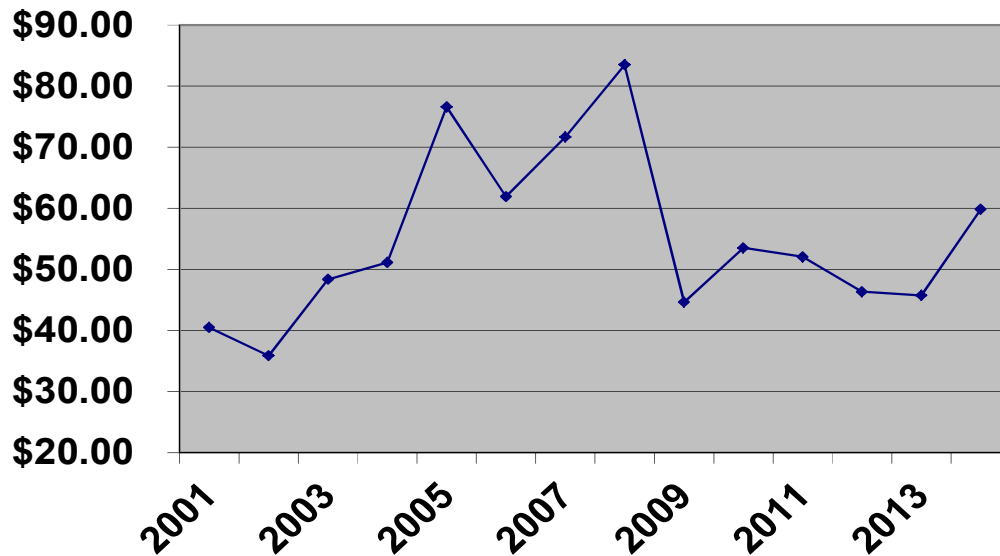
11 **A.** The following chart demonstrates wholesale power prices from 2001 until the middle of
12 July 2014. The graph line represents the average annual price at the PJM West trading hub, the
13 predominant wholesale trading hub for Ohio and other parts of PJM.²

¹ Resource Adequacy Mandates and Scarcity Pricing (“Belts and Suspenders”)(Feb. 23, 2006), Comments to the Federal Energy Regulatory Commission, Docket Nos. ER05-1410-000 and EL05-148-000.

² Data from the Energy Information Administration. <http://www.eia.gov/electricity/wholesale/index.cfm>

1

**PJM West Average Annual
Locational Marginal Pricing
2001-2014**



2

3 As the graph demonstrates, wholesale energy prices are exceedingly volatile from year to year.
4 Relying on short-term wholesale prices to set retail electricity rates will subject electricity
5 consumers to significant price volatility. Long-term power purchase agreements are an effective
6 mechanism to protect electricity consumers from this phenomenon. As a matter of public policy,
7 it seems prudent that some part of the energy portfolio should be based on stable, fixed rates to
8 mitigate potential energy price shocks.

9 **Q. Do you consider long-term contracts to be a “market-mechanism?”**

10 **A.** Yes. In my experience, it appears that some electricity sector regulators and policy-
11 makers have associated “market prices” with short-term or spot market energy prices only.
12 However, this thinking belies the reality that the long-term cost of capital investments, plus the
13 marginal cost of fuel, set energy prices over the long-run. As a result, some electricity sector

1 regulators and policy-makers do a potential disservice to electricity customers by focusing only
2 on short-term or spot market mechanisms in setting prices.

3 Short-term and spot market energy prices result from the short-term or spot market
4 supply and demand balance for the marginal fuel. This price completely ignores the long-term
5 cost of a capital investment (as discussed above) and the risks inherent in marginal fuel price
6 volatility in long-term electricity price formation. Undoubtedly, short-term and spot market
7 prices can send a “false” signal to electricity sector regulators and policy-makers leading them to
8 promote market structures which may select energy resources and fuels that, while cost effective
9 today, will not be so in the future.

10 The best ways to mitigate this risk it to include some competitively sourced, fixed-price,
11 long-term contracts in the energy portfolio. Comparing fixed, long-term prices over a given term
12 is the only true apples-to-apples comparison of the true long-term costs of energy. A market
13 mechanism for comparing the long-term costs of electricity associated both with the cost of
14 capital investments and fuel price volatility risk does not truly exist in any restructured electricity
15 market to my knowledge. A competitively sourced, fixed-priced, long-term market mechanism
16 would be a major market innovation which could offer significant price protection for Ohio’s
17 electricity consumers.

18 **Q. Are there other benefits of including the 900 MWs of renewable energy in the RGR**
19 **as proposed by AEP Ohio in its Application?**

20 **A.** Yes. Including the 900 MWs of Ohio renewable energy in the RGR would have the same
21 significant local economic benefits as such inclusion has under the current PPA Rider, including
22 approximately the following for rural host communities:

- 1 • \$8 million in annual local tax payments (\$120 million to \$160 million over the projects’
2 15- to 20-year lifetime)
- 3 • \$6 million in local landowner payments (\$90 million to \$120 million over the projects’
4 15- to 20-year lifetime)
- 5 • 1,500 temporary construction jobs
- 6 • 45 to 60 permanent jobs³
- 7 **Does this conclude your testimony?**
- 8 **A.** Yes.

³ See Attachment A, Iberdrola Renewables, Blue Creek Wind Farm, Fact Sheet.

CERTIFICATE OF SERVICE

The Public Utilities Commission of Ohio's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below via electronic mail this 2nd day of May, 2017.

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BLUE CREEK Wind Farm

Project Location: Tully, Union, and Hoaglin Townships of Van Wert County, Ohio and Benton, Blue Creek, and Latty Townships of Paulding County, Ohio

Project Status: Expected on-line in early 2012

Project Capacity: 304 Megawatts (MW)

Number of Wind Turbines: 152 Gamesa G90, 2.0 MW wind turbines on 100m towers, primarily made in Pennsylvania

Households Served: Each turbine can produce up to two megawatts or 2,700 horsepower, which is enough to power about 500 average Ohio houses. The total project will power approximately 76,000 homes annually. According to the 2000 census, there are 11,600 households in Van Wert County and 7,700 households in Paulding County.

Technology: The turbines are on a 328 foot (100 meter) tower for a total height of 476 feet. Each nacelle weighs 85 tons. Each foundation uses about 60 truck-loads of concrete and 60 tons of steel rebar.

Local Economic Benefits: Approximately \$2 million in annual lease payments to local landowners, \$2.7 million in annual PILOT payments to local taxing bodies, 15-20 new permanent jobs, over 500 construction jobs at peak, and local spending during construction of about \$25 million.

Energy and Environmental Benefits: Relative to the rest of Ohio's generation fleet, Blue Creek offsets carbon dioxide emissions by approximately 1.6 billion pounds per year. That is the equivalent to the volume of 158 Ohio Stadiums and the equivalent to planting an estimated 138,000 acres of trees, taking 114,000 cars off the road, or not consuming over 2.1 million barrels of oil. If electric cars were widely available, this project would produce enough electricity to power 479,000 electric cars for a year. It also avoids the consumption of 408 million gallons of water per year.



For more information visit
www.iberdrolarenewables.us



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