

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of FirstEnergy	)	
Solutions Corp. for Certification of R.E. Burger	)	
Units 4 and 5 as an Eligible Ohio Renewable	)	Case No. 09-1940-EL-REN
Energy Resource Generating Facilities.	)	

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**COMMENTS OF THE AMERICAN WIND ENERGY ASSOCIATION ON  
CALCULATING THE MARKET VALUE OF RENEWABLE ENERGY CREDITS**

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**I. INTRODUCTION**

The American Wind Energy Association ("AWEA") is a national trade association representing wind power project developers, equipment suppliers, service providers, parts manufacturers, utilities, researchers, and others involved in the wind industry. AWEA currently serves approximately 2,500 members across the country. AWEA was a vocal advocate for the renewable portfolio standard ("RPS") set forth in Ohio Senate Bill 221 ("SB 221"),<sup>1</sup> and in the wake of its passage, has advocated extensively for the implementation of the RPS.

AWEA initially intervened in this case because of the potentially devastating effect that FirstEnergy Solution's proposed calculation of renewable energy credits ("RECs") at the R.E. Burger power plant (the "Burger Plant") could have on Ohio's renewable energy marketplace. At this time, however, and in recognition of the limited nature of the Commission's request for comments, AWEA submits the following comments regarding the calculation of the market value of RECs based upon the longstanding utility law principle of avoided cost.

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<sup>1</sup> More generally, SB 221 created an alternative energy portfolio standard for the State of Ohio, which included separate benchmarks for renewable energy (e.g. wind, solar, biomass) and advanced energy (e.g. clean coal, nuclear). For purposes of these Comments, AWEA focuses on the renewable energy benchmarks, which will be referred to as the renewable portfolio standard or RPS.

## **II. PROCEDURAL HISTORY**

On December 11, 2009, FirstEnergy filed an application for the certification of Units 4 and 5 of the Burger Plant as a renewable energy generating facility. The Commission issued an entry on February 3, 2010, granting AWEA's intervention and suspending the automatic approval process for the Burger Plant. On March 10, 2010, FirstEnergy filed an amended application. AWEA and other interested parties filed comments on April 12, 2010. On August 11, 2010, the Commission approved the amended application, but left open the question of how to calculate the market value of RECs—a vital component of the Burger multiplier codified in Ohio Revised Code Section ("R.C.") 4928.65 (the "Burger Statute"). The Commission opened a 60-day comment period on the question of how to calculate the market value of RECs.

## **III. COMMENTS**

### **A. The Burger Statute and "Weighted" RECs.**

To understand the fundamental importance of calculating the market value of RECs, one first must put this calculation in context. As enacted by the General Assembly, SB 221 contains a provision consistent with the national REC marketplace that defines a renewable energy credit as equal to one megawatt-hour of electricity.<sup>2</sup> The General Assembly subsequently amended this statute to give greater weight to certain RECs from qualifying biomass facilities. More specifically, the General Assembly created a multiplier that allows "each megawatt hour of electricity generated principally from that biomass energy" at the Burger Plant to equal the "product obtained by multiplying the actual percentage of biomass feedstock by heat input [in btu's] used to generate such megawatt hour by the quotient obtained by dividing the then

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<sup>2</sup> See R.C. 4928.65 and Ohio Administrative Code ("OAC") Rule 4901:1-40-01(BB)

existing unit dollar amount used to determine a renewable energy compliance payment [for the non-solar benchmarks] by the then existing market value of one renewable energy credit” (the “Burger Multiplier”).<sup>3</sup> In essence, each MWh of biomass energy generated at the Burger Plant will be weighted based on the Burger Multiplier as set forth below:<sup>4</sup>

$$\frac{\text{The amount of the alternative compliance payment}}{\text{Market value of 1 REC}}$$

## **B. Calculating the Market Value of a REC**

SB 221’s purpose (and the purpose of any renewable energy mandate) is to encourage the development of new renewable energy resources. To effectively and efficiently accomplish such development over the long-term, the market value of a REC must reflect the long-term development costs of bringing the next marginal renewable energy unit online to meet SB 221’s requirements. Because the capital costs associated with renewable energy investments are significant, it is essential that REC markets be predictable, stable and not subject to undue volatility. This is the only way to create a REC market that both achieves the goal of SB 221 to encourage investments in new renewable energy resources, while guaranteeing the ability of FirstEnergy Solutions to receive significant revenue from RECs generated at the Burger Plant (which would be in addition to whatever other wholesale energy, capacity, and ancillary services revenues it may receive). Just like the Burger Plant, other renewable energy investments in Ohio will be well-served by consistent, stable streams of revenue through the REC market created under SB 221.

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<sup>3</sup> R.C. 4928.65

<sup>4</sup> The \$45 the price for RECs at the Burger Plant is derived from the language in the Burger Statute stating that the Burger Multiplier cannot be less than one (1), even if the alternative compliance payment is less than the market value of a REC. Because the minimum alternative compliance payment is \$45 for renewable energy resources, the market price of a REC is unlikely to be greater than that.

**i. The market value of RECs should be based solely on in-state RECs.**

In setting forth the Burger Multiplier, R.C. 4928.65 does not specifically define the type of REC from which the market value must be calculated. The RPS, however, creates four different REC products, each of which will have entirely different marketplaces in which the REC prices will be tied to the individual characteristics of that marketplace. These four REC products include:

- In-state, non-solar RECs;
- Out-of-state,<sup>5</sup> non-solar RECs;
- In-state, solar RECs; and
- Out-of-state, solar RECs.

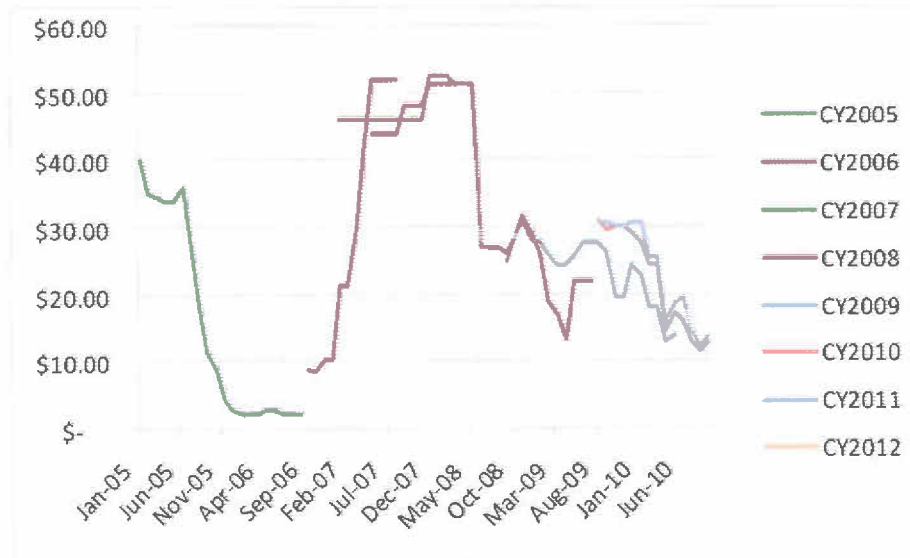
Because each of these products have different markets, supply-demand curves, and long-term capital costs associated with the facilities necessary to produce them, it is necessary that the market value of a REC relative to the Burger Plant focus only on the REC product produced by the Burger Plant: in-state, non-solar RECs. In particular, the Burger Multiplier only applies to a biomass “generating facility of seventy-five megawatts or greater that is situated within this state” (specifically only the Burger Plant). This statement makes it clear that neither solar RECs nor out-of-state RECs are appropriate for inclusion in the calculation of the Burger Multiplier. For this reason, only in-state, non-solar RECs should be used to calculate the market value of RECs in the Burger Multiplier.

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<sup>5</sup> For purposes of these Comments, the term “out-of-state” RECs refers to RECs generated outside of Ohio but that remain deliverable into the state.

**ii. The market value of a REC should not be related to the volatile and fluctuating short-term or spot REC markets.**

Like the stock market, short-term and spot REC markets can fluctuate greatly. For example, in the State of Connecticut, REC prices have proven to be extremely volatile over the past five (5) years, ranging anywhere from \$2.25 to \$51.50:



Trying to pinpoint REC prices at specific moments in time through the use of short term pricing mechanisms (e.g. the spot market) to establish the weight of a Burger REC unnecessarily introduces tremendous volatility and uncertainty into the calculation.<sup>6</sup> This volatility and uncertainty would be further perpetuated by the creation of a flood of heavily-weighted Burger RECs into the Ohio marketplace. The flood of heavily-weighted Burger RECs into the Ohio marketplace further depresses REC prices and increases the Burger Multiplier, which only serves to produce even more Burger “weighted RECs” that in turn would further depress REC prices. This type of market environment is antithetical to the long-term planning and large capital investments needed by renewable energy facilities – especially large scale commercial on-shore

<sup>6</sup> The Burger Statute recognizes the importance of providing long-term stable pricing to encourage the capital investments necessary for the Burger Plant’s conversion. This same long-term price stability is also critical to all other segments of the renewable energy generation marketplace.

and off-shore wind farms. Such volatility and uncertainty triggers a series of unfortunate consequences, the most important of which are: 1) the inability to obtain long-term financing for renewable energy projects in Ohio; and 2) the self-perpetuating “death spiral” for the renewable energy marketplace in Ohio through the failure to satisfy SB 221’s primary objective of encouraging new renewable energy investments in Ohio.

**iii. The market value of RECs should equal the avoided cost of bringing IMW of new renewable energy generation online.**

Instead, and to add certainty to the calculation, the determination of the market value of a REC must favor the consistent and definite REC prices offered by calculating the avoided cost of developing the next marginal resource necessary to meet SB 221’s requirements.

The market value of RECs is reflective of the length of time for which they are procured. In an ideal world, REC prices should always reflect the incremental cost of building a new generation facility, plus a rate of return, minus wholesale energy revenues and federal tax benefits. In simpler terms, the market value of RECs would reflect “avoided cost” based on REC prices over the long term—or the cost “avoided” by purchasing power from another existing renewable generation source. See also *Adrian Energy Assoc. v. Mich. PSC*, 481 F.3d 414, 417 (6<sup>th</sup> Cir. 2007) (defining avoided cost as “the amount it would have cost the utility to generate, or to construct facilities to generate, the same power itself or to purchase the power from a facility using non-alternative fuel sources.”<sup>7</sup>

In this case, the market price of a REC over the long-term, which reflects the true incremental cost of building a new renewable generation source, would serve as a reasonable proxy for the avoided cost to FirstEnergy Solutions of constructing and generating its own units

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<sup>7</sup> In the context of determining the cost of electricity from qualifying facilities under the Public Utilities Regulatory Policies Act (“PURPA”), avoided costs are defined as the “incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source.” 18 CFR 292.101(C)(6).

of qualifying renewable energy. Proper calculation of this avoided cost requires an analysis of long-term capital investments and long-term renewable energy purchase contracts. Because there currently is not an established long-term, forward-pricing market for RECs in Ohio, the best available methods for ascertaining avoided cost for the purpose of determining the market value of a REC are:

1. Through an analysis of the results of the most recently available request for proposals ("RFP"), or other competitive solicitation, for the long-term purchase of in-state renewable energy RECs. The market price of a REC would be calculated based on the results of these competitive solicitations.
2. Using a neutral, third-party consultant to calculate the long-term avoided cost of marginal renewable energy resources. This would be an exercise in which the third-party consultant establishes a long-term supply curve based on specific assumptions regarding the capital and fuel costs of certain renewable resource classifications in Ohio. This establishes a projected, long-term forecast for REC prices that would be necessary to encourage investment in new renewable resources. The New York State Energy Research Development Authority ("NYSERDA") uses such a process to establish benchmark REC prices for its central procurement REC auctions.<sup>8</sup>
3. In the event the Commission could not obtain the RFP results from the utility or another party, or find a qualified third-party consultant, the market value of a REC would be equal to the alternative compliance payment.

### III. CONCLUSION

These Comments offer a practical approach to the calculation of the market value of a REC that not only satisfies the Burger Statute and allows FirstEnergy Solutions to remain whole, but also provides the best possible opportunity for the continued development of new renewable energy investments in Ohio. Adopting AWEA's Comments will lead to the creation of an orderly REC market, which assuredly is in the best interests of Ohio ratepayers.

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<sup>8</sup> While reliant on projections and estimates, and therefore less accurate than the analysis based on the results of RFPs noted above, this approach is a potentially viable way to calculate the long-term avoided cost for in-state renewable energy facilities.

WHEREFORE, the American Wind Energy Association respectfully requests that the Commission adopt the avoided cost calculation of the market value of RECs proposed by AWEA.

Respectfully submitted on behalf of  
AMERICAN WIND ENERGY ASSOCIATION



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## CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Comments was served upon the parties of record listed below this 12<sup>th</sup> day of October 2010 *via* electronic mail.



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