

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter Of The Application Of)	
FirstEnergy Generation Corp. For)	Case No. 09-1940-EL-REN
Certification Of R.E. Burger Units 4)	
And 5 As An Eligible Ohio Renewable)	
Energy Resource Facility.)	

COMMENTS BY THE OHIO CONSUMER AND ENVIRONMENTAL ADVOCATES

/s/ Will Reisinger

Will Reisinger, Counsel of Record
Nolan Moser
Trent A. Dougherty

Ohio Environmental Council
1207 Grandview Avenue, Suite 201
Columbus, Ohio 43212-3449
(614) 487-7506 – Telephone
(614) 487-7510 – Fax
will@theoec.org
nolan@theoec.org
trent@theoec.org

JANINE L. MIGDEN-OSTRANDER
CONSUMERS' COUNSEL

/s/ Christopher J. Allwein (WR)

Joseph P. Serio, Counsel of Record
Christopher J. Allwein
Assistant Consumers' Counsel

**Office of The Ohio Consumers'
Counsel**

10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485
Telephone: 614-466-8574
serio@occ.state.oh.us
allwein@occ.state.oh.us

/s/ Michael E. Heintz (WR)

Michael E. Heintz
Staff Attorney
Environmental Law & Policy Center
1207 Grandview Ave.
Suite 201
Columbus, Ohio 43212
614-488-3301 – telephone
614-487-7510 – fax
mheintz@elpc.org

Table of Contents

I.	INTRODUCTION	6
II.	Burden of Proof	7
III.	The Current Application Does Not Demonstrate That The Burger Modifications Should Qualify As An Eligible Renewable Energy Resource Facility.....	8
A.	The Rules And Code Require FirstEnergy Solutions To Demonstrate That Its “Biomass Energy” Is Renewable, Carbon-Neutral, And Produced From Organic Waste Products.....	8
B.	The Company’s Application And Discovery Responses Do Not Demonstrate that the Biomass Material And Procurement Process Will Satisfy The Definition Of Renewable Resource.....	11
1.	FirstEnergy Solutions’s Application Provides Little Substantive Information Regarding Source.	11
2.	FirstEnergy Solutions Has Failed to Provide Meaningful Responses To Staff And Intervenor Discovery Regarding Source.....	11
3.	FirstEnergy Solutions Has Not Described the Region(s) From Which Biomass Material Will Be Procured, Or How The Transportation Of The Material Will Impact Net Carbon Emissions.....	13
4.	Carbon Emissions And Sustainability Will Likely Be Factors In A Federal REC Trading Market.....	14
IV.	Prior to Certification, The PUCO Must Obtain Specific Information About Long-term Biomass Fuel Procurement From FirstEnergy Solutions Demonstrating That Sufficient Biomass Fuel Supply Is Available And Sustainable Before Costly Plant Retrofits Are Undertaken And Potentially Passed Along To Consumers.....	15
A.	Applications For Certification Of Biomass Facilities Should Be Held To the Same Standards As Other Applicants.	15
B.	Burger Generating Units 4 And 5 Require A Tremendous Number Of Green Tons Of Wood – An Amount Which May Not Be Readily Available To FirstEnergy Solutions.	16
C.	The PUCO Must Acknowledge That There May Not Be A Sufficient Supply Of Woody Biomass In Ohio To Support And Sustain The Burger Proposal.....	18
D.	The Aggregate Amount Of Large Biomass Proposals Require The PUCO To Conduct A Thorough Review Of Each Proposal, Which Must Include Each Applicant’s Plan For A Sustainable Source Of Fuel.....	20

E.	Forest Residues Available In Ohio And Other Parts Of The Country Appear Insufficient To Maintain A Consistent Supply Of Fuel For Burger And The Other Proposals.	21
1.	Ohio Forest Residues Can Sustain A Total Of 38.5 MW Of Power.	21
2.	Forest Residues In The North Central Region Of The United States Can Support A Total Of Only 1116 MW.	22
3.	Forest Residues In The Southeastern Region Of The United States May Be Able To Support A Maximum Of 2300MW, But Competition Exists For These Resources.	23
F.	Mill Residues May Be Cost Prohibitive Due to Transportation Issues.	24
G.	The PUCO Must Consider The Impact That The Increase In Demand Generated By Burger Will Have On The Price Of Fuel.	24
H.	The Commission Should Fully Consider The Impacts That A Large, New Competitor For Forest Resources Could Have On Existing Jobs And Industry In Ohio.	26
V.	Approval of The Application Without A Showing of Sustainability Could Seriously Weaken Ohio's Renewable Energy Standard And Obviate The Need For FirstEnergy Solutions To Make Any Additional Investments In Renewable Technologies.	27
VI.	FirstEnergy Solutions Has Provided Significantly Less Information Regarding Source Than Another Applicant For Renewable Certification, South Point Biomass, LLC.	28
VII.	In The Alternative, The Commission Should Only Grant Temporary Certification.	29
	CONCLUSION	29

The undersigned members of the Ohio Consumer and Environmental Advocates, the Ohio Environmental Council, the Office of the Ohio Consumers' Counsel, and the Environmental Law & Policy Center (collectively "OCEA"), submit the following Comments to the Public Utilities Commission of Ohio ("PUCO" or "the Commission") on the above-captioned Application by FirstEnergy Solutions Corporation ("FES" or "Company"). FES is seeking certification of its Burger facility, Units 4 and 5, as an Eligible Renewable Energy Resource Facility. FES is an affiliate of the FirstEnergy electric utilities and provides electric generation services.

Commission approval of FES's Application would allow the Company to use the energy generated at the facility to meet a portion of the Company's renewable energy benchmarks required by R.C. 4928.64(B)(2) and to bank and sell renewable energy credits ("RECs") based on the energy produced. As explained more fully below, the current Application does not contain sufficient information to justify Commission approval and should be rejected by the PUCO. To comply with the Revised Code and the Commission's rules, and thus be eligible for certification,¹ FES must provide additional information regarding the source and location of the biomass material to be utilized; the sustainability protocol that will be used; the method and distance of transportation; the net carbon emissions that will be generated; the projected costs that will be incurred by the Company; and the implications for FES's compliance with Ohio's renewable energy standard. Premature approval of this massive project could adversely impact Ohio's air quality, natural resources, economy—and the viability of Ohio's renewable energy standard.

¹The Alternative, Advanced, and Renewable Energy requirements are codified in R.C. 4928.64, and O.A.C. §§ 4901:1-40-01, 09.

Prior to any certification, OCEA requests that the Commission require FES to provide more information regarding the issues described above before approving this Application. In the alternative, OCEA requests that the Commission approve temporary certification only. Such a limited certification would allow FES to begin its proposed test burn phase.

I. INTRODUCTION

On December 11, 2009, FES filed the present Application to receive renewable certification for its Burger facility. On January 12, 2010, the Ohio Environmental Council (“OEC”) filed a Motion to Suspend the automatic approval of the Application pursuant to O.A.C. 4901:1-40(F)(2). The Commission granted OEC’s Motion to Suspend on February 3, 2010, finding that “additional information is required to satisfy the requirements for certification.”² The Commission’s Entry originally set a deadline of March 29, 2010, for the filing of intervenor comments. The comment period was subsequently extended to April 12, 2010, to give intervenors adequate time to consider the amendments to the Application.³

FES’s Burger facility, at over 300 MW, would represent the largest biomass-based generation facility in Ohio, and one of the largest in the world. Accordingly, it is critically important that the Commission consider the ability of FES to ensure the sustainability of the project. Furthermore, pursuant to 4928.65, the energy generated at the Burger facility will be eligible for a higher REC unit rate—i.e. a “super-REC”—making electricity produced at the plant more valuable than all other renewable generation.⁴ The electricity produced at FES’s facility *in one year alone* could satisfy a majority of the Company’s renewable benchmark

² February 3 Entry at 2.

³ March 26 Entry at 2.

⁴ See Part IV and note 71, *infra*, for further discussion of the legality of the super-REC provision. 4928.65 provides a special, favorable REC calculation for a biomass-based generation facility operating within Ohio, that exceeds 75 MW, and that has committed to operate using “principally” biomass by 2013. The provision provides a formula for calculating the super-RECs. It appears certain that this provision was intended to apply only to FirstEnergy’s Burger facility, as no other facility in Ohio appears capable of satisfying the criteria.

obligations through the year 2025, and a significant portion of the renewable energy generated in Ohio.⁵ Therefore, if the PUCO were to award renewable energy credit for a non-sustainable project, it could weaken or eviscerate the renewable energy standard enacted by Substitute Senate Bill 221 (S.B. 221) and codified in R.C. 4928.64. Finally, due to its size, the project could place an unsustainable and unreasonable burden on Ohio's and the region's biomass resources.

The PUCO should recognize the magnitude of this unprecedented facility and its bearing on Ohio's renewable energy standard, its natural resources, and its economy. Prior to certification, the Commission should require FES to produce additional information before approving this Application.

II. Burden Of Proof

There is no doubt that FES bears the burden of proof in this Application. The Company seeks to have its Burger facility certified as an eligible renewable energy resource facility, allowing the company to use the energy generated to meet its lawful renewable benchmark obligations and to bank and sell RECs. Consequently, FirstEnergy Solutions must demonstrate that its Application satisfies the criteria outlined in R.C. 4928.64 and in the Administrative Code §§ 4901:1-40-01 through 4901:1-40-09 for renewable generation. As described in the following sections, to meet this burden FES must demonstrate that its facility will generate renewable energy from biomass resources in a sustainable, renewable fashion.

⁵ If the Burger plant is approved, FirstEnergy will be able to achieve the bulk of its renewable energy requirements from the Burger facility in one year. Using the super-REC formula found in R.C. 4928.65, it appears that Burger, operating at a 90 percent capacity factor, could satisfy its renewable generation obligations pursuant to R.C. 4928.64 through the year 2018 *in only one year of operation*. $312.4 \text{ MW} \times \text{total hours per year, at a 90 percent capacity factor} = 2,053,468 \text{ RECs}$. Applying the super-REC formula, at a 4.5 multiplier = $11,083,327 \text{ RECs}$ in one year of generation. FirstEnergy would need to achieve approximately 8, 200,000 RECs through 2018 and 17,000,000 RECs by 2025 to satisfy its benchmarks.

III. The Current Application Does Not Demonstrate That The Burger Modifications Should Qualify As An Eligible Renewable Energy Resource Facility.

FES's Application does not demonstrate that the Burger facility should receive certification as an eligible renewable energy resource facility. A central, undeniable purpose of S.B. 221's Alternative, Advanced, and Renewable Energy Standard, codified R.C. 4928.64, is to promote the development of cleaner energy sources and reduced air pollution. In accordance with these policy goals, the Ohio Revised Code and Ohio Administrative Code provide criteria that the Commission must consider when approving an application for renewable certification of a facility utilizing biomass fuel.

A. The Rules And Code Require FirstEnergy Solutions To Demonstrate That Its "Biomass Energy" Is Renewable, Carbon-Neutral, And Produced From Organic Waste Products.

FES must demonstrate that its Burger facility will utilize renewable biomass resources, the use of which will result in carbon-dioxide ("CO₂") emissions reductions. R.C. 4928.64 provides that utilities must generate at least 12.5 percent of annual power sales from renewable energy resources. R.C. 4928(A)(35) includes "biomass energy" as an eligible renewable resource. O.A.C. 4901:1-40-01 (E), effective on the date of FES's initial Application, further defines "biomass energy" for purposes of compliance with 4928.64:

'Biomass energy' means energy produced from organic material derived from plants or animals and available on a renewable basis, including but not limited to: agricultural crops, tree crops, crop by-products and residues; wood and paper manufacturing waste, including nontreated by-products of the wood manufacturing or pulping process, such as bark, wood chips, sawdust, and lignin in spent pulping liquors; forestry waste and residues; other vegetation waste, including landscape or right-of-way trimmings; algae; food waste; animal wastes and by-products (including fats, oils, greases and manure); biodegradable solid waste; and biologically derived methane gas. (emphasis added.)

O.A.C. 4901:1-40-01(E) makes specific reference to the renewable characteristics of eligible biomass. Qualifying biomass energy must be “produced from” and “available on a renewable basis.” “Renewable” is defined as “capable of being replaced by natural ecological cycles.”⁶ Considering this definition, it is obvious that a naturally occurring resource such as wind or the sun’s energy meets the definition of renewable resource. Likewise, biomass fuel from growing plants or crops, that have the ability to regenerate and re-sequester CO₂, could be renewable under certain circumstances. The Commission’s definition of biomass, however, emphasizes “waste” as a predominant characteristic of renewable biomass energy sources. According to the rules, biomass energy should be produced from “by-products and residues,” “manufacturing waste,” “forestry waste and residues,” and “landscape and right-of-way trimmings.”⁷

In light of the common definition of “renewable” and the O.A.C.’s definition of renewable biomass energy, it is clear that “renewable biomass” can mean only those sources that are obtained in a sustainable process and that will be naturally replaced, including forest waste products that otherwise would have been discarded. Unlike wind or solar energy, which are almost constantly regenerated, biomass from forest residue is only renewable so long as its use does not outpace its accumulation. When consumption of biomass residue outpaces its growth, the process is no longer renewable. In other words, the consumption of biomass resources, unlike wind energy, must be limited in order to be sustainable and “renewable.” Therefore, to certify biomass-based generation as a renewable facility, the Commission must undertake a more thorough review of the characteristics and availability of biomass resources.

⁶ Merriam-Webster English Dictionary.

⁷ O.A.C. 4901:1-40-01 (E).

Renewable biomass energy should also result in meaningful reductions in carbon dioxide (“CO2”) emissions. CO2, the primary driver of climate change, is released when non-renewable, fossil energy resources such as coal and oil are burned. By contrast, CO2 reductions are an inherent byproduct of renewable, non-fossil-fuel-based energy sources. The Commission’s rules also make clear that reduced air emissions, specifically reductions in CO2 emissions, are an essential element of eligible renewable and advanced energy resources. First, carbon-neutrality is implicit in the common understanding of renewable energy, including emissions-free solar, wind, and hydroelectric power. Second, the Commission’s rules reference CO2 and/or greenhouse gas (“GHG”) emissions at least four times when defining various advanced and renewable resource criteria:

‘Clean coal technology’ means any technology that removes or has the design capability to remove criteria pollutants and carbon dioxide from an electric generating facility that uses coal as a fuel or feedstock... O.A.C. 4901:1-40-01(F) (emphasis added.)

Further, the rules state that “The following resources or technologies [may be] qualified resources for meeting the advanced energy resource benchmarks”:

- (1) **Any modification to an electric generating facility that increases its generation output without increasing the facility's carbon dioxide emissions** (tons per year) in comparison to its actual annual carbon dioxide emissions preceding the modification.”
- (6) Advanced solid waste or construction and demolition debris conversion **technology that results in measurable greenhouse gas emission reductions**. O.A.C. 4901:1-40-04(B)(1), (6) (emphasis added.)

A facility that does not obtain biomass fuel through a sustainable, carbon-neutral process cannot comply with the emissions reduction goals outlined above. Prior to certification, FES has the burden of demonstrating in its Application that the Burger facility

satisfies the Commission's criteria for an eligible renewable generating facility. Consequently, the Commission may not certify FES's Burger facility unless and until the Company provides information demonstrating that it satisfies the Commission's rules regarding sustainability, GHG reductions, and carbon neutrality.

B. The Company's Application And Discovery Responses Do Not Demonstrate that the Biomass Material And Procurement Process Will Satisfy The Definition Of Renewable Resource.

1. FirstEnergy Solutions' Application Provides Little Substantive Information Regarding Source.

FES's Application does not demonstrate that its Burger facility will utilize renewable biomass as required by statute and the Commission's rules outlined above. Most importantly, the Company's Application and responses to discovery do not indicate that the biomass material will be obtained in a sustainable manner. FirstEnergy Solutions has not described with any specificity the source of the biomass fuel in the Application. From the Application, it is impossible to know whether the material will consist of agricultural products, wood manufacturing waste, or forest waste. It is also impossible to know whether the Company will have to contract with logging companies to actively harvest enough fuel. FES has not described any contracts that it has entered into to obtain fuel, nor has it described any sustainability certifications or protocol that it will use to ensure that its fuel is procured through renewable processes. Finally, the Company's Application does not demonstrate that it will consider net carbon outputs from the full biomass energy cycle, including the sourcing, transportation, and combustion of the fuel.

2. FirstEnergy Solutions Has Failed to Provide Meaningful Responses To Staff And Intervenor Discovery Regarding Source.

For the foregoing reasons, FES's Application is facially deficient. Moreover, FES has also refused to provide meaningful responses to discovery requests from Staff and the Ohio Environmental Council on each of these points outlined above.⁸ Staff's discovery requests included requests regarding the amount, type, and source of fuel to be used. When requested by Staff to describe "the projected annual generation from each fuel type," FES responded by stating that "The projected annual generation from each fuel type has not yet been determined" and that biomass material will eventually constitute "greater than 51% of the fuel types used."⁹ These responses suggest that the Company knows very little about its fuel sources. The lack of certainty regarding *when* the biomass material will constitute greater than 51 percent of the total fuel types used is a related concern. Certification should not be permitted until the prescribed percentage of biomass fuel is achieved.

The Company also failed to respond to similar requests by the OEC to describe the type of biomass fuel to be used and to describe any contracts that had been entered into. When requested to describe "the source and method of obtaining the wood pellets or other biomass product...including a description of any contracts to obtain biomass resources," the Company gave the following answer:

ANSWER: Objection. In addition to the General Objections, FirstEnergy objects to this Interrogatory on the grounds that it is vague and ambiguous, is overly broad, and seeks information that is not reasonable calculated to lead to the discovery of relevant information. Without waiving its objections, **FirstEnergy states that it intends to procure wood, as well as agricultural products, in raw form or engineered product form such as pellets and/or briquettes.**

⁸ We note for comparison that FirstEnergy, in its application and in subsequent filings, has provided significantly less information than another applicant for renewable certification, South Point Biomass, which has yet to be approved by the Commission in Case No. 09-1043-EL-REN. The OEC filed Comments stating that the South Point Application contains information sufficient to allow Commission approval. The Commission should not approve the significantly larger Burger facility unless and until FirstEnergy provides at least as much information regarding source, transportation, and contracts as South Point has. See Part VI, *infra*, for further discussion of the South Point Application.

⁹ Answers to Staff Interrogatories, at 2.

FirstEnergy has not entered into any contracts to obtain biomass resources.”¹⁰ (emphasis added.)

This answer provides little substantive information. It does not identify the type of biomass that will be used—whether from mature trees, scrap wood waste or from a myriad of agricultural practices—or from where those resources will be obtained.

3. FirstEnergy Solutions Has Not Described the Region(s) From Which Biomass Material Will Be Procured, Or How The Transportation Of The Material Will Impact Net Carbon Emissions.

FirstEnergy Solutions has also not explained how the biomass material will be transported to the facility. Fuel transport must be considered when reviewing an application for renewable certification.¹¹ Transportation of biomass resources will impact the total emissions resulting from the biomass energy cycle. The mode of transport and the distance are both critical. For example, if biomass is transported from Florida via diesel tractor-trailers or diesel barges, the emissions profile of the biomass generation will be significantly greater than if the fuel was transported via barge from southern Ohio. The Application states that “Biomass will be transported using barge, rail and semi-tractor covered trailers.”¹² FES responded to OEC’s discovery on this point by stating that “Most forms of transportation are currently anticipated to utilize diesel fuel.”¹³

The Application also fails to identify the states or regions from which the biomass will be obtained. The location of the biomass that will be utilized determines the distance that the material must travel and, consequently, the amount of air pollutants that will be emitted

¹⁰ Answers to OEC Interrogatory No. 1, Exhibit 1. (emphasis added.)

¹¹ O.A.C. 4901:1-40-01 (E) requires that biomass material be available on a “renewable basis.” The consequences, including air emissions, of transport should be factored into a renewable calculus.

¹² Amended Application, Attachment 4.

¹³ Answers to OEC Interrogatory No. 6, Exhibit 1.

during its transport. When requested to describe the source location in a discovery request by the OEC, FES failed to identify the regions with any specificity:

INTERROGATORY No. 5: Describe those geographic regions or forests, including the state, that will provide the source of biomass to be utilized.

ANSWER: See response to Interrogatory No. 1. [objecting to question regarding source and stating that FirstEnergy has not entered into any contracts to obtain biomass]. **FirstEnergy further states that it currently intends to utilize biomass obtained from the United States and/or Canada.**¹⁴ (emphasis added.)

The foregoing answer is unacceptable. FES has not described the region(s) from which the fuel will be obtained. It is therefore impossible to know the amount of CO₂ emissions that will be generated in the fuel procurement cycle. If biomass material has to be transported long distances via diesel trucks, the CO₂ generated could outweigh the renewable characteristics of the biomass energy.

4. Carbon Emissions And Sustainability Will Likely Be Factors In A Federal REC Trading Market.

Finally, the PUCO should consider that future federal and state REC markets will likely require a sustainability demonstration before any RECs are eligible for interstate trading.¹⁵ If and when a federal REC trading market is established by federal law or regulation, participating generators will have to demonstrate that their renewable generation satisfies certain criteria, likely including carbon neutrality and sustainability. A REC generated through a process in Ohio that does not meet the renewable standard of a federal RPS or another state's legislation would be ineligible to be sold interstate. If the Commission

¹⁴ Answers to OEC Interrogatory No. 5, Exhibit 1. (emphasis added.) Because FirstEnergy is under a continuing legal duty to supplement its discovery responses, this answer must necessarily represent the current state of FirstEnergy's plans to obtain biomass material.

¹⁵ For example the federal RPS contained within the American Clean Energy and Security Act, H.R. 2454 (2009), passed by the House of Representatives in June of 2009, defines qualifying biomass energy as "renewable biomass" that is "harvested in environmentally sustainable quantities" and "available on a renewable basis." H.R. 2454, Sec. 101(a)(15).

certifies FES's Burger facility without requiring a similar demonstration, it would be doing a disservice to consumers and generators in the long-term. The Commission should not miss this opportunity to ensure that Ohio's RECs meet basic tests for sustainability and carbon neutrality.

In sum, FirstEnergy Solutions' Application fails to provide any meaningful information describing the resources it intends to obtain to fire its 312 MW facility. The Company's Application does not describe the type of biomass that will be used, where it will come from, how it will be transported, or the sustainability certifications that it will use. The Company's responses to Staff's and the OEC's discovery requests fail again to answer these questions. Either FES does not want to tell Commission and interested parties how it will fuel its facility, or the company itself does not know. Either scenario should preclude approval of the present Application. The Application should not be approved without information demonstrating that the biomass fuel can be obtained in a sustainable manner through a process that satisfies the renewable energy criteria established by the Commission's rules.

IV. Prior to Certification, The PUCO Must Obtain Specific Information About Long-term Biomass Fuel Procurement From FirstEnergy Solutions Demonstrating That Sufficient Biomass Fuel Supply Is Available And Sustainable Before Costly Plant Retrofits Are Undertaken And Potentially Passed Along To Consumers.

A. Applications For Certification Of Biomass Facilities Should Be Held To the Same Standards As Other Applicants.

One of the criteria an applicant is required to demonstrate before certification as a renewable energy generating facility is that the "resource to be utilized in the generating facility is recognized as a renewable energy resource."¹⁶ However, the duty of the Commission must extend beyond mere recognition of the resource as renewable because it is

¹⁶ R.C. §§4928.01(A)(35) and 4928.64(A)(1)

stated in an application. It is reasonable and necessary for the Commission to require an applicant to demonstrate that it is capable of obtaining the resource on a consistent and renewable basis. When a residential solar application is submitted, the photographs accompanying the application demonstrate that the applicant has procured the necessary equipment to generate a consistent amount of electricity from the sun. It is fair to assume that if a residential solar application, submitted to the PUCO, contained nothing more than a picture of an empty rooftop of a home, and the applicant stated that the solar panels would be installed at a future date, the PUCO would not grant certification merely because it is known that solar panels and the other necessary equipment are generally available. Rather, the residential applicant must reasonably show, through photographs and descriptions, that the necessary elements to generate electricity have already been obtained.¹⁷

The Commission must require a similar showing by FES. Thus far, the only items submitted by FES to the PUCO for certification of the Burger facility amount to nothing more than an aerial photo of a coal plant and vague descriptions of the fuel it may possibly obtain at a later date. The Commission's certification process must require more than the façade of an answer filled in on a blank application. It must require a demonstration that the Applicant has procured the necessary elements to generate electricity from a renewable source in order to be recognized as a renewable resource. In the case of a biomass plant, that means a sustainable source of fuel. Without this demonstration, this Application, and similar applications pending before the Commission should not be certified because they fail to meet the burden of proof.

B. Burger Generating Units 4 And 5 Require A Tremendous Number Of Green Tons Of Wood – An Amount Which May Not Be Readily Available To FirstEnergy Solutions.

¹⁷ See the required information on the PUCO form, *Application for Certification as an Ohio Renewable Energy Resource Generating Facility*:
<http://www.puco.ohio.gov/emplibrary/files/util/EnergyEnvironment/SB221/Application%20Form.doc>

The amount of biomass fuel needed to supply the Burger plant at the proposed capacity is staggering. It may be unsustainable through local (Ohio) timber operations, and will compete for resources with other large projects within Ohio, throughout the country, and also compete with an established overseas demand. The Commission should require a demonstration by the Applicant that the facility has a sustainable supply of fuel before certification is granted and customers are asked, in subsequent proceedings, to pay the costs resulting from an uncertain experiment.

As stated in the corrected Amended Application, the nameplate capacity of each of the two units is 156 megawatts (“MW”),¹⁸ for a total combined capacity of 312MW. The Application further states that the two units will fire at up to ninety percent (90%) capacity.¹⁹ This would be a total of 280.8MW.²⁰

The *Order Modifying Consent Decree* obtained by Ohio Edison allows Burger units 4 and 5 to co-fire biomass material with up to twenty percent of low-sulfur western coal.²¹ Based on the *Decree*, PUCO Staff further noted that units 4 and 5 will principally generate electricity with an 80/20 biomass to coal ratio.²² In fact, the facility must obtain prior approval from the Federal EPA before employing a mixture containing more than twenty percent coal.²³ Further, the amount of RECs created by the 80/20 fuel mixture could result in the production of more than four times the number of RECs generated by a mixture

¹⁸ Application at I.1, *Facility Information*, p. 10 (March 10, 2010).

¹⁹ *Id.*

²⁰ 312MW (x) .90 capacity = 280.8MW.

²¹ *United States of America, et al v. Ohio Edison Company, et al*, Case No. 2:99-cv-1181, U.S. District Court, (Southern District of Ohio, Eastern Division) at 5 (August 11, 2009); Attached to the corrected Amended Application (March 10, 2010). This proceeding granted the plant an environmental waiver in order to convert units 4 and 5 from coal-fired to primarily biomass fired.

²² *In the Matter of the Application of FirstEnergy Solutions For Certification of R.E. Burger Units 4 and 5 As An Eligible Ohio Renewable Energy Resource Facility*, Case No. 09-1940-EL-REN, PUCO Staff Comments at 8 (March 15, 2010).

²³ *Id.*

containing less than eighty percent biomass material,²⁴ providing the Company a compelling incentive to employ this particular fuel mixture. Thus, co-firing eighty percent biomass and twenty percent coal at ninety percent of combined unit capacity means the Burger facility will generate 224.6MW from the biomass portion of the fuel mixture.²⁵

C. The PUCO Must Acknowledge That There May Not Be A Sufficient Supply Of Woody Biomass In Ohio To Support And Sustain The Burger Proposal.

To understand the amount of biomass material required for the proposed Burger operation, some examples of the different types of biomass and their current availability will be discussed separately, beginning with woody biomass.²⁶ Woody biomass means raw wood from trees without bark attached.²⁷ Woody biomass, in pellet form, is advantageous for an electric power plant because it requires little equipment retrofitting, “minimizes slagging, fouling, and corrosion in boilers” and does not cause problems with fuel-handling equipment.²⁸ This type of biomass is specifically listed as one of the fuels that will be burned at the Burger facility.²⁹ In order to generate a consistent supply of electricity, an overwhelming 2.9 million green tons of wood annually will be required to supply Burger at the capacity and fuel mixture stated above.

In order to maintain a 224.6MW output from Burger units 4 and 5, the plant will need to obtain a large and steady amount of wood fuel. The calculation is as follows. According to the U.S. Dept. of Agriculture Forest Service and the Forest Products Laboratory,

²⁴ Application at Attachment 1 shows 92 RECs being created; Attachment 3, using the same numbers for the base calculation, shows 415 RECs being created. See also Staff Comments at 8 (March 15, 2010).

²⁵ $312\text{MW} \times .90 \text{ capacity} = 280.8\text{MW}$; $280.8\text{MW} \times .80 \text{ biomass} = 224.6\text{MW}$.

²⁶ FirstEnergy officials stated at a recent Ohio Solid Biomass Workgroup meeting that initial firings will consume woody biomass only, with a 10-20% agricultural biomass portion phased in over several years (Held March 12, 2010 at Belmont Technical College).

²⁷ Spelter, Henry, et al: *North America's Wood Pellet Sector*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 5 (Corrected September 2009).

²⁸ Id.

²⁹ Application at G.10, page 7.

approximately 1.5 green tons³⁰ of wood per hour are needed to consistently maintain the generation of 1MW of electricity.³¹ Therefore, each megawatt of capacity requires approximately 13,000 green tons of wood annually.³² Thus, the Burger plant would require 2,919,800 green tons of wood annually, potentially over 10 million trees, to maintain the 224.6MW output contemplated in Application.³³ This is a stunning amount of wood required for one power plant.

To offer some perspective, if the supply of woody biomass was culled exclusively from Ohio forests, timber harvesting operations would have to increase almost three times the size of current operations. In 2006, an estimated 92 million cubic ft of wood was harvested in Ohio for timber products.³⁴ A conversion to tons is required for comparison. There are 2.3 tons in one stacked cord of wood.³⁵ One cord is equivalent to 128 cubic feet.³⁶ Therefore, the 92 million cubic feet harvested in 2006 is approximately 718,750 stacked cords of wood, or

³⁰ "Green" refers to wood with a 45% moisture content.

³¹ Bergman, Richard, et al: *Primer on Wood Biomass for Energy*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 1 (January 2008); http://www.fpl.fs.fed.us/documnts/tmu/biomass_energy/primer_on_wood_biomass_for_energy.pdf.

³² 1MW = 1.5 green tons (x) 24 hours (x) 365days = 13,140, or approximately 13,000 green tons per MW.

³³ The following rough conversion from "green tons of wood" to number of trees is meant only to demonstrate that the plant will consume a large amount of fuel. The green weight of a tree will vary by size (i.e. diameter & height) and species (e.g. oaks are heavier than yellow poplar), and thus we must make several assumptions in order to get to a weight per tree. The forest products industry often groups all the denser hardwood species together (i.e. oaks, hickory, etc.) and refers to them as hard "hardwoods." The soft hardwood species include yellow poplar, red maple, and black gum. Assuming that an average sized hard hardwood tree is 10" DBH ("diameter at breast height") and 60 feet in height, then the total tree weight = 1151 pounds (or 0.58 green tons), and an average soft hardwood tree (of the same size) = 921 pounds (0.46 green tons). Therefore, using the calculation described above, "3 million tons of green wood" would convert to 5,172,414 average sized hard hardwood trees or 6,521,739 average sized soft hardwood. However, if the Burger facility intends to utilize trees smaller than 10" in diameter and less than 60 feet in height, which is likely, the number of necessary trees could certainly exceed 10 million.

³⁴ Ridmann, Richard H., et al: *Ohio Forests 2006*, produced by the US Dept. of Agriculture Forest Service (September 2009); http://www.nrs.fs.fed.us/pubs/rb/rb_nrs36.pdf.

³⁵ US forest Service Directive –*Timber Management, R2 SUPPLEMENT 2400-96-2*, page 7 of 7 (Effective Date December 16, 1996); <http://www.fs.fed.us/im/directives/field/r2/fsm/2400/2430-2431.doc>.

³⁶ Id.

1,653,125 tons currently harvested for Ohio's timber products industry.³⁷ It is unclear whether increasing the timber harvest in Ohio by nearly three hundred percent is feasible or sustainable for an extended period without having a cumulative and negative impact on Ohio's forest ecosystem. It is unlikely that the amount of wood needed to supply the Burger proposal is available through an increase in local (Ohio) timber operations.

D. The Aggregate Amount Of Large Biomass Proposals Require The PUCO To Conduct A Thorough Review Of Each Proposal, Which Must Include Each Applicant's Plan For A Sustainable Source Of Fuel.

Even if the Commission were to determine that Ohio could support the Burger proposal, the Commission must acknowledge that the present Application represents but one of several potential certification requests proposing to use biomass fuel. Burger represents only 312 MW of approximately 2000 MW currently pending or recently approved by the PUCO. The other proposals are equally daunting in their individual fuel requirements:

- First Energy Bayshore 1, 136 MW ten percent biomass = 13.6 MW³⁸
- Duke Energy Beckjord, Unit 1, 94 MW 100% biomass = 94 MW³⁹
- Duke Energy Beckjord, Unit 2, 94 MW 100% biomass = 94 MW⁴⁰
- Duke Energy Beckjord, Unit 3, 94 MW 100% biomass = 128 MW⁴¹
- Duke Energy Beckjord, Unit 4, 94 MW 100% biomass = 150 MW⁴²
- Duke Energy Beckjord, Unit 5, 94 MW 100% biomass = 238 MW
- Duke Energy Beckjord, Unit 6, 94 MW 100% biomass = 421 MW⁴³

³⁷ 92,000,000 ft³ (/) 128 ft³ per cord = 718,750 cords of wood, (x) 2.3 tons per cord = 1,653,165 tons of wood harvested in 2006.

³⁸ *In the matter of the application of FirstEnergy Solutions for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility*, Case No. 09-1042-EL-REN (November 3, 2009).

³⁹ *In the matter of the application of FirstEnergy Solutions for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility*, Case No. 09-1023-EL-REN (October 30, 2009).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

- Duke Zimmer, 1300 MW 10% biomass = 130 MW⁴⁴
- Duke Miami Fort Unit 7, 510 MW 10% biomass = 51MW⁴⁵
- Duke Miami Fort Unit 8, 510 MW 10% biomass= 51 MW⁴⁶
- American Electric Power Conesville, 165 MW 100% biomass = 165 MW⁴⁷
- South Point Biomass, 200MW 100% biomass = 200 MW⁴⁸

The PUCO must consider the substance of these applications individually and collectively to determine their viability.

E. Forest Residues Available In Ohio And Other Parts Of The Country Appear Insufficient To Maintain A Consistent Supply Of Fuel For Burger And The Other Proposals.

1. Ohio Forest Residues Can Sustain A Total Of 38.5 MW Of Power.

Ohio's forest residues are limited sources of biomass feedstock. Forest residues are defined as "logging residues from conventional harvest operations, forest management and land clearing."⁴⁹ It also includes wood materials removed from timberlands and other forest lands as a result of fuel treatments (removal of excess biomass) and cutting of trees directly for fuel wood."⁵⁰ Information obtained from the United States Department of Energy

⁴³ Id.

⁴⁴ *In the matter of the application for certification as an eligible Ohio renewable energy resource generating facility*, Case No. 09-1877-EL-REN (October 1, 2009).

⁴⁵ *In the matter of the application for certification as an eligible Ohio renewable energy resource generating facility*, Case No. 09-1878-EL-REN (December 1, 2009).

⁴⁶ *In the matter of the application for certification as an eligible Ohio renewable energy resource generating facility*, Case No. 09-1877-EL-REN (December 1, 2009).

⁴⁷ *In the matter of the application of Conesville Generating Station Unit 3 for certification as an eligible Ohio Renewable Energy Resource Generating Facility*, Case No. 09-1860-EL-REN (November 30, 2009).

⁴⁸ *In the matter of the application for certification as an eligible Ohio renewable energy resource generating facility*, Case No. 09-1043-EL-REN 9 (November 6, 2009).

⁴⁹ Bioenergy Feedstock Information Network, *Forestry Residue – Harvesting*, Oak Ridge National Laboratory; <http://bioenergy.ornl.gov/main.aspx>.

⁵⁰ Bioenergy Feedstock Information Network, *Forestry Residue – Harvesting*, Oak Ridge National Laboratory; <http://bioenergy.ornl.gov/main.aspx>.

indicates that Ohio forests alone may be able to provide little more than 32.4MW of fuel total.

⁵¹ Conversion of the total material stated in the 2007 Forest Inventory for Ohio indicates that 500,067 green tons are available.⁵² Using the 13,000 green tons required to produce 1MW as stated above, Ohio Forest Residues are capable of sustaining the generation of only 38.5MW of electricity, and not the 200 to 300 MW proposed by FES, and certainly not the biomass generation represented by the collective biomass applications.

2. Forest Residues In The North Central Region Of The United States Can Support A Total Of Only 1116 MW.

The North Central region of United States, which includes Indiana, Iowa, Illinois, Michigan, Minnesota, Ohio and Wisconsin, contains an estimated total of 638,540 thousand cubic feet of forest residues.⁵³ Conversion from cubic feet results in a total of 14,512,272 green tons of forest residues available in this region.⁵⁴ Even this seemingly large amount of residue would support the sustained generation of only 1,116 MW total. This amount is approximately half of the MW total of the certification projects currently proposed in Ohio, as presented above. Therefore, Ohio biomass projects may be unsustainable through local and regional forest residue. The PUCO must require specific information as to the sustainable source of biomass material before renewable certification of the Burger facility and the other facilities are approved.

⁵¹ Estimated Annual Cumulative Biomass Resources Available by State and Price, Oakridge National Laboratory March, 1999 <http://bioenergy.ornl.gov/main.aspx#BiomassResources>

⁵² <http://fiatools.fs.fed.us/fido/index.html> (500,074 bone dry tons forest residue) Half of which is available for use $(/) 0.5 = 250,037 / (1 - 45\% \text{ moisture}) = \text{green tons of residue } (/) 13,000 \text{ tons per MW} = 38.5\text{MW}$.

⁵³ *International Forest Industries*, December/January 2009 issue, page 15-16, International Forest Industries Ltd; http://corporate.internationalforestindustries.com/PDFs/Issues/2009_12.pdf.

⁵⁴ Calculation from the National Renewable Resources Laboratory: $1,000 \text{ ft}^3 \text{ of wood} = 0.0125 \text{ MBDT (thousand bone dry tons)}$. $638,540 \text{ thousand ft}^3 (x) 0.0125 \text{ MBDT} = 7,981,700 \text{ bone dry tons of forest residue, } (/) 0.55 = 14,512,272 \text{ green tons}$. $14,512,272 \text{ green tons} / 13,000 \text{ tons per MW} = 1116 \text{ MW total sustained generation capacity from forest residues in the entire North Central US}$.

3. Forest Residues In The Southeastern Region Of The United States May Be Able To Support A Maximum Of 2300MW, But Competition Exists For These Resources.

Estimates indicate that even the forest-rich southeastern United States may only be able to generate thirty million tons of residues.⁵⁵ Using calculations similar to those employed above, forest residues from this part of the country would be enough to sustain the generation of an estimated 2300MW, or roughly the amount needed to sustain all of the current Ohio biomass proposals to the exclusion of other existing U.S. projects. As a result of the lack of forest residues to supply feedstock and the confirmation by First Energy that it will be burning primarily woody biomass without burning leaves, branches and bark, this “white wood” that is preferred for fuel stock will likely come from whole trees.

However, there are numerous projects in other states competing for biomass resources discussed in these comments. International Forest Industries noted that during the three months leading up to the publication of their December/January issue, permits for biomass fuel to energy generating facilities nearly doubled in the Southeastern region.⁵⁶ As of 2009, eighty facilities located in 16 states currently use biomass as fuel for generating electricity.⁵⁷ Unlike the massive projects being proposed in Ohio, the average size of these plants is 20MW.⁵⁸ Thus, the size of Burger compared to facilities in other states is extreme. The Commission must require the Applicant to demonstrate specifics as to fuel source and delivery methods prior to approval of certification of the Burger facility prior to certification.

⁵⁵ *International Forest Industries*, December/January 2009 issue, page 15-16, International Forest Industries Ltd; http://corporate.internationalforestindustries.com/PDFs/Issues/2009_12.pdf

⁵⁶ *International Forest Industries*, December/January 2009 issue, page 15-16, International Forest Industries Ltd; http://corporate.internationalforestindustries.com/PDFs/Issues/2009_12.pdf

⁵⁷ Spelter, Henry, et al: *North America's Wood Pellet Sector*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 6 (Corrected September 2009).

⁵⁸ Bergman, Richard, et al: *Primer on Wood Biomass for Energy*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 1 (January 2008).

In addition, the PUCO should consider the aggregate impact of the Burger proposal combined with other pending and approved Ohio biomass projects.

F. Mill Residues May Be Cost Prohibitive Due to Transportation Issues.

As an alternative to woody biomass and forest residues, mill residues, in either pelletized or non-pelletized forms, and wood waste generated from sawmills or other wood processing plants provided little additional material for biomass feed stocks. International Forest Industries notes that, “Cellulosic ethanol companies, wood pellet plants, independent power companies, public utilities, corn ethanol producers, universities and paper companies are all sourcing wood fiber for energy production.”⁵⁹ Wood pellet facilities dependent on mill residues are typically located within 50 miles of sawmills or wood processing plants because of the high moisture content and low bulk density (light weight, taking up a lot of space) of mill residues, making transportation over long distances cost prohibitive. Thus, mill residues are not a significant source of material for Burger or the other proposals in Ohio.

G. The PUCO Must Consider The Impact That The Increase In Demand Generated By Burger Will Have On The Price Of Fuel.

An additional 8 million tons of biomass will be needed to meet current demands for biomass-to-energy production in 2010. The U.S. Forest Service acknowledges the need to increase harvesting of trees to supply wood pellet productions: “Future growth of pellet manufacturing will inevitably have to spread to alternative fibers, chiefly roundwood.”⁶⁰ Wood Pellet Production in the United States totaled 1.8 million tons in 2007.⁶¹ In use

⁵⁹ *International Forest Industries*, December/January 2009 issue, page 15-16, International Forest Industries Ltd; http://corporate.internationalforestindustries.com/PDFs/Issues/2009_12.pdf

⁶⁰ Spelter, Henry, et al: *North America's Wood Pellet Sector*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 6 (Corrected September 2009). “Roundwood” refers to the main trunk of the tree.

⁶¹ *Id.* at 3.

primarily for the home heating market, this total would support an estimated 297MW.⁶² In 2008, production of wood pellets outpaced demands, “reflect[ing] the start up of a handful of larger plants focused primarily on the bulk European export market.”⁶³ Thus, the wood pellet market has an established customer base, making it unclear whether new facilities, built to process chipped round wood or whole trees,⁶⁴ will be able to produce the sustained and staggering supply required by the Burger plant. Based on 1.8 million tons of pellets generating 296.92 MW in 2008 an estimated 1.4⁶⁵ tons of pellets would be required to supply the Burger plant.

It is reasonable for the PUCO to expect specific and substantive information on the source of the biomass fuel for each proposal. Other applicants, such as residential customers and other small distributed generation owners, are required to make a much more exacting demonstration than the Applicant has provided in this case. Prior to certification, the Commission must demand the presentation of additional information in order to conduct a serious and thorough review. The certification for a project of this magnitude should require more than a few photographs showing a fossil-fuel generating facility and vague, generalized answers to important questions regarding the source of the Applicant’s biomass fuel⁶⁶ and the methods for delivery proposed for any fuel source.⁶⁷

⁶² Btu figures from the US Forest Service Fuel Value Calculator www.fpl.fs.fed.us/documnts/techline/fuel-value-calculator.pdf: 1,800,000 tons (x) 13600000 BTU/ton at 10% moisture= 2.448×10^{13} Btu(x) 0.33 plant efficiency/3414 kWh = 2,366,949.90 plant MWhr/8760 (x) 0.91 online time = 296.92 total MW from 1.8 tons of pellets

⁶³ Spelter, Henry, et al: *North America’s Wood Pellet Sector*, produced by the U.S. Department of Agriculture Forest Service and the Forest Products Laboratory, page 2-3_ (Corrected September 2009).

⁶⁴ Id. at 8.

⁶⁵ $1,800,000 \text{ tons} / 296.92 \text{ MW} = 6062.24 \text{ tons per MW}$ (x) 224.6 MW Burger = 1,361,579 tons of pellets to fire Burger.

⁶⁶ *Answers to Staff Interrogatories*, First Set at Question 5 (February 8, 2010).

⁶⁷ Application at Attachment 4 (March 10, 2010).

Without this information, the Commission is offering a blank check, to be filled in by the Companies and paid by customers, for a series of costly experiments for which the PUCO is receiving, through the Application, very few details.⁶⁸ At the very least, estimated costs of the items generally mentioned in Application Attachment 4 (enclosing conveyors, a digital fuel tracking system, storage facilities, etc.) should be submitted, and the plans for recovery of these costs should be presented now, rather than in some future, unspecified case. The legislation contemplated a diverse supply of electricity that would be beneficial to the citizens of Ohio.⁶⁹ A huge plant that could likely undermine the development of other kinds of renewable energy should be carefully scrutinized prior to being certified. This has not happened here. The Commission must demand and expect more detail to be provided about the underlying circumstances surrounding the proposals, in particular the ability of the facility to procure the fuel necessary to sustain a large power plant. The public is entitled to verification and transparency.

H. The Commission Should Fully Consider The Impacts That A Large, New Competitor For Forest Resources Could Have On Existing Jobs And Industry In Ohio.

Finally, the Commission should consider the effects that a large, new participant in Ohio's forest resources market will have on the state's existing forest products industry. We all hope that, if approved, the Burger facility will provide hundreds of stable jobs for Ohioans. Nonetheless, if the fuel for the Burger facility is procured from Ohio or the surrounding region, it will result in a new market competitor for the region's forest resources. Burger

⁶⁸ It should be noted that if FE wants its RECs valued as super-RECs, it will have to sell all its RECs in Ohio as no other state will recognize the super-REC status. Therefore, Ohioans, one way or another could end up paying the full cost, especially if FirstEnergy conveniently enter into a bilateral contract with its affiliate FirstEnergy Solutions for the purchase of the RECs. This may well occur if the RFP process outlined in the FirstEnergy ESP stipulation fails—as one would expect—to result in any contracts for RECs. One would expect the RFP process to fail because it has in the past and because its three year contract terms in an RFP is insufficient for any independent renewable energy facility to obtain the requisite financing.

⁶⁹ R.C. 4928.02(C)

would represent one of the largest consumers of these resources, affecting existing industries that employ hundreds of Ohioans, in unknown ways. For example, it appears likely that FES's Burger plant will be the largest consumer of the same type woody material used to produce paper in mills in southern Ohio and contiguous states. New competition could drive up the price of this material, with unknown consequences for Ohioans working in the paper industry. The Commission is within its right to consider the potential economic impacts of the Burger facility.

V. Approval of The Application Without A Showing of Sustainability Could Seriously Weaken Ohio's Renewable Energy Standard And Obviate The Need For FirstEnergy Solutions To Make Any Additional Investments In Renewable Technologies.

In light of the concerns regarding sustainability and fuel supply described above, Commission approval of this Application could have the effect of significantly weakening Ohio's Renewable Energy Resource Standard and the environmental and economic benefits it will provide. R.C. 4928.64 contains Ohio's Advanced and Renewable Energy Standard, which mandates that utilities must provide 12.5 percent of their power sales from renewable sources by the year 2025. Based on its size in MWs, RECs generated from the Burger facility could provide FES with all of the renewable energy investment necessary pursuant to R.C. 4928.64.⁷⁰ Moreover, when applying the "super-REC" unit rate outlined in R.C. 4928.65, FES could conceivably meet its 2025 renewable benchmark in only one year of operation. (The super-REC statute is potentially problematic for several other reasons that should be considered by the Commission.⁷¹)

⁷⁰ See notes 3 and 4, *supra*. Applying the super-REC calculation to FirstEnergy's generation could obviate the need for the Company to do any other renewable generation, or procure any other RECs, to meet its 2025 benchmark.

⁷¹ The Commission should carefully consider the policy and legal implications of R.C. 4928.65. As described above, the super-REC provision could obviate the need for FirstEnergy to undertake new renewable generation

In more direct terms, this means that the energy generated from one facility, could obviate the need for FES to make any additional investments in other renewable technologies or facilities. It is unlikely that the General Assembly intended for Ohio's renewable energy standard, enacted by the passage of S.B. 221, to be satisfied by one biomass energy project. But certainly, because the Burger facility will provide such a large portion of renewable energy in Ohio, the Commission should make sure that the process is truly renewable and sustainable.

VI. FirstEnergy Solutions Has Provided Significantly Less Information Regarding Source Than Another Applicant For Renewable Certification, South Point Biomass, LLC.

While FES's Application and responses to Staff and intervenor discovery contain non-answers on important questions regarding sustainability, the Application for renewable certification filed by South Point Biomass, LLC provides comprehensive, meaningful answers.⁷² South Point's proposed facility, at 200 MW, would represent one of the largest biomass generators in the state. Among other pieces of information, South Point's Application and subsequent discovery responses describe with specificity the type of fuel that will be used; how it qualifies as sustainable and renewable; the geographic location from

beyond the Burger facility. There is also reason to question whether the super-REC provision within R.C. 4928.65 could withstand constitutional scrutiny under a negative commerce clause analysis. The negative commerce clause limits the power of states to discriminate against interstate commerce by enacting regulatory measures designed to benefit in-state economic interests and burdening out-of-state competitors. *New Energy Co. of Indiana v. Limbach*, 486 U.S. 269 (1998). In *Limbach*, Ohio's regulations providing favorable tax regulations for in-state biofuel producers were challenged on commerce clause grounds. In a unanimous opinion drafted by Justice Scalia, the U.S. Supreme Court held that the disparate economic treatment was unconstitutional. According to Justice Scalia, the Ohio law deprived "certain products of generally available beneficial tax treatment because they are made in certain other States" and was thus unconstitutional. The scenario established by R.C. 4928.65 could be similarly challenged. By allowing in-state biomass generators a favorable calculation of RECs, out-of-state competitors are put at an economic advantage. In-state generation receives an economic advantage that is unavailable to similar facilities located out of the state. Just as the Ohio statute in *Limbach* gave a favorable tax treatment for biofuels that were produced in Ohio, the R.C. 4928.65 only gives favorable economic treatment for biomass generation located in Ohio.

⁷² Case No. 09-1043-EL-REN. The OEC has filed comments indicating its support for the project based on the comprehensive information provided by South Point. See OEC's Amended Comments, attached as Exhibit 2.

which the biomass will be obtained and how it will be transported; and the relevant contracts that have been or will be entered into. South Point was able to provide most of this information on the Commission's public docket. Although South Point determined that certain proprietary information should not be publically disclosed, that information was promptly made available under protective seal to Staff and intervenors for review.

South Point's Application, subsequent filings, and responses to discovery stand in sharp contrast to those offered by FES. The Commission should look to the South Point filing as an example of what constitutes an acceptable application process for renewable certification of a large biomass facility.

VII. In The Alternative, The Commission Should Only Grant Temporary Certification.

In light of the foregoing discussion, FES's Application is deficient and requires further consideration before approval. In the event that the Commission does intend to approve this Application in the short term, the Commission should grant certification on a temporary basis. Temporary certification would allow FES to begin its proposed test burn, but require the Company to come back to the Commission with more information before receiving full approval.

CONCLUSION

In conclusion, OCEA states that the Application filed by FES for renewable certification of its Burger Facility should not be approved by the Commission without further information. FES has not demonstrated how its facility will comply with the Commission's rules, nor has it provided information about how it will obtain a supply of biomass material on a renewable, sustainable basis. A facility this large should not be approved based on a perfunctory basis. The Commission should require the Company to provide answers on these

points before granting certification. In the alternative, the Commission should grant approval on temporary basis only, which would allow FirstEnergy Solutions to undertake its proposed six month test burn.

Respectfully Submitted,

/s/ Will Reisinger

Will Reisinger, Counsel of Record
Nolan Moser
Trent A. Dougherty

Ohio Environmental Council
1207 Grandview Avenue, Suite 201
Columbus, Ohio 43212-3449
(614) 487-7506 – Telephone
(614) 487-7510 – Fax
will@theoec.org
nolan@theoec.org
trent@theoec.org

JANINE L. MIGDEN-OSTRANDER
CONSUMERS' COUNSEL

/s/ Christopher J. Allwein (WR)

Joseph P. Serio, Counsel of Record
Christopher J. Allwein
Assistant Consumers' Counsel

**Office of The Ohio Consumers'
Counsel**

10 West Broad Street, Suite 1800
Columbus, Ohio 43215-3485
Telephone: 614-466-8574
serio@occ.state.oh.us
allwein@occ.state.oh.us

/s/ Michael E. Heintz (WR)

Michael E. Heintz
Staff Attorney
Environmental Law & Policy Center
1207 Grandview Ave.
Suite 201

Columbus, Ohio 43212
614-488-3301 – telephone
614-487-7510 – fax
mheintz@elpc.org

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing has been served upon the following parties by first class or electronic mail this 12th day of April, 2010.

/s/ Will Reisinger

David Plusquellic
Manager of Renewable Energy Portfolio
FirstEnergy Solutions
341 White Pond Drive
Akron, Ohio 44320

Daniel R. Conway
Porter Wright, Morris & Arthur, LLP
41 South High Street
Columbus, Ohio 43215

Jim Lang
Kevin P. Shannon
Trevor Alexander
Calfee, Halter & Griswold LLP
1400 KeyBank Center 800 Superior
Avenue
Cleveland OH 44114-2688

Mark Hayden
FirstEnergy Corp.
76 South Main Street
Akron, Ohio 44308

EXHIBIT 1



talalexander@calfee.com
614.621.7774 Direct

January 26, 2010

Calfee, Halter & Griswold LLP
Attorneys at Law

1100 Fifth Third Center
21 East State Street
Columbus, Ohio 43215-4243
614.621.1500 Phone
614.621.0910 Fax
www.calfee.com

VIA REGULAR U.S. MAIL

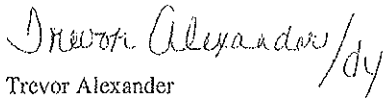
Nolan Moser
Will Reisinger
The Ohio Environmental Council
1207 Grandview Ave., Suite 201
Columbus, Ohio 43212-3449

Re: In the Matter of the Application Of FirstEnergy Generation Corp. For Certification
Of R.E. Burger Units 4 And 5 As An Eligible Ohio Renewable Energy Resource
Facility, Case No. 09-1940-EL-REN

Dear Counselor:

Enclosed please find *FirstEnergy Generation Corp.'s Responses To The Ohio Environmental
Council's First Set Of Interrogatories And Requests For Production Of Documents.*

Sincerely,


Trevor Alexander

TA:dy

Enclosure

cc: Henry W. Ekhart (w/enc.)
Michael Heintz (w/enc.)
Joseph P. Serio (w/enc.)
Terrence O'Donnell (w/enc.)

{00726451.DOC;1 }

Cleveland | Columbus

EXHIBIT 1

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter Of The Application Of)	
FirstEnergy Generation Corp. For)	Case No. 09-1940-EL-REN
Certification Of R.E. Burger Units 4)	
And 5 As An Eligible Ohio Renewable)	
Energy Resource Facility)	
)	

FIRSTENERGY GENERATION CORP.'S RESPONSES TO THE OHIO ENVIRONMENTAL COUNSEL'S FIRST SET OF INTERROGATORIES AND REQUESTS FOR THE PRODUCTION OF DOCUMENTS

Pursuant to O.A.C. 4901-1-16 through O.A.C. 4901-1-20, and in accordance with Ohio Rules of Civil Procedure 26, 33 and 34, FirstEnergy Generation Corp. ("FirstEnergy") states its responses and objections to the Ohio Environmental Council ("OEC") First Set of Interrogatories and Requests for Production of Documents ("Requests").

GENERAL OBJECTIONS

A. These general objections are hereby incorporated by reference into the responses made with respect to each separate Request. The inclusion of any specific objection to any Request in a response below is not intended, nor shall in any way be deemed, as a waiver of any general objection or any specific objection made herein or that may be asserted at another date.

B. FirstEnergy objects to each Request to the extent that it seeks information protected from disclosure by the attorney-client privilege, the attorney work product doctrine, trade secret privilege, and any other applicable statutory or common law privilege, prohibition, limitation or immunity from disclosure. Nothing contained in these answers is intended as a

EXHIBIT 1

waiver of the attorney-client privilege, work product doctrine, trade secret privilege or any other applicable privilege, immunity, prohibition, or limitation, and FirstEnergy reserves the right to assert objections based on such privileges, immunities, prohibitions, and limitations to the greatest extent permitted by law.

C. FirstEnergy objects to each Request to the extent that it seeks production of information that is confidential business, commercial, and/or proprietary information belonging to FirstEnergy in the absence of a protective order.

D. FirstEnergy objects to each Request to the extent that it seeks production of information that is neither relevant to the claims or defenses of any party to this action nor reasonably calculated to lead to the discovery of admissible evidence.

E. FirstEnergy's disclosure of information in any response to any Request is not intended to waive, nor does it constitute a waiver of, any objection that FirstEnergy may have to the admissibility, authenticity, competency, or relevance of the information produced. For all information produced in response to each Request, FirstEnergy reserves all objections or other questions regarding the competency, relevance, materiality, privilege, or admissibility of such information as evidence in this suit or any other proceeding, action, or trial.

F. FirstEnergy objects to the OEC's instructions and definitions to the extent they purport to impose upon FirstEnergy obligations greater than those contained in the Ohio Administrative Code or the Ohio Rules of Civil Procedure.

G. In responding to these Requests, FirstEnergy does not admit the truth, validity, completeness, or merit of any definition set forth in the Requests.

EXHIBIT 1

RESPONSES TO INTERROGATORIES

INTERROGATORY No. 1: Describe in detail the source and method of obtaining the wood pellets or other biomass product procured to create the energy asserted, including a description of any contracts to obtain biomass resources.

ANSWER: Objection. In addition to the General Objections, FirstEnergy objects to this Interrogatory on the grounds that it is vague and ambiguous, is overly broad, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving its objections, FirstEnergy states that it intends to procure wood, as well as agricultural products, in raw form or engineered product form such as pellets and/or briquettes. FirstEnergy has not entered into any contracts to obtain biomass resources.

INTERROGATORY No. 2: Describe any sustainability certifications, sourcing standards, or other protocol that will be used in conjunction with the production and transport of the wood pellets or other biomass product to be utilized.

ANSWER: Objection. In addition to the General Objections, FirstEnergy objects to this Interrogatory on the grounds that it is vague and ambiguous. Without waiving its objections, FirstEnergy states that since it has not entered into any contracts for the supply of biomass product, it has not yet determined the protocols which may be in place relating to sustainability certifications or sourcing standards. However, FirstEnergy intends to consider standards such as the Sustainable Forest Initiative during the evaluation of potential suppliers.

INTERROGATORY No. 3: Describe the anticipated net carbon output of the biomass-fueled energy cycle at the facility, taking into account harvesting or production, transportation, and combustion. In answering, describe the method of calculation used.

ANSWER: Objection. In addition to the General Objections, FirstEnergy objects to this Interrogatory on the grounds that it is vague, ambiguous, and seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving its objections, FirstEnergy states that it has not determined the anticipated net carbon output for the Burger facility. However, FirstEnergy Solutions (FES) is a member of the Electric Power Research Institute (EPRI) and will be working with the EPRI and the National Renewable Energy Laboratories (NREL) to evaluate net carbon output. FES

EXHIBIT 1

currently intends to use this information and apply site specific details (once the biomass supplier locations are identified) to complete the net carbon output calculation at a later date.

INTERROGATORY No. 4: Based on the answer to Interrogatory No. 3, explain whether the biomass based generation cycle contemplated by this application will result in a net reduction in carbon emissions when compared to a coal-fired power generation producing the same heat output?

ANSWER: See response to Interrogatory No. 3.

INTERROGATORY No. 5: Describe those geographic regions(s) or forests, including the state, that will provide the source of biomass to be utilized.

ANSWER: See response to Interrogatory No. 1. FirstEnergy further states that it currently intends to utilize biomass obtained from the United States and/or Canada.

INTERROGATORY No. 6: Describe in detail how the biomass material will be transferred or shipped to the facility, including the mode of transport and the type of fuel to be used in transport.

ANSWER: Objection. In addition to the General Objections, FirstEnergy objects to this Interrogatory on the grounds that it seeks information that is not reasonably calculated to lead to the discovery of relevant information. Without waiving its objections, FirstEnergy states that since it has not yet entered into any contracts with suppliers, it has not yet determined how the biomass material will be shipped to the facility. FirstEnergy is currently considering shipment options including, but not limited to, barge, rail and/or truck. Most forms of transportation are currently anticipated to utilize diesel fuel. The actual mix of transportation modes will be dependent upon the location of the biomass suppliers, which at this time has not been identified.

INTERROGATORY No. 7: Describe in detail how the biomass material will be combusted.

EXHIBIT 1

ANSWER: FirstEnergy has not yet conclusively determined how the biomass material will be combusted. FirstEnergy is evaluating different methods of combustion which may include suspension firing and stoker grate fired.

INTERROGATORY No. 8: Describe the percentage of anticipated annual generation that will come from each fuel type used at the facility, including biomass resources, at start-up and when the facility is at fully functioning capacity.

ANSWER: Please see the Application filed in Case No. 09-1940-EL-REN - *In the Matter of R E Burger Units 4 & 5 for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility*. The project will combust principally biomass fuels and potentially some low sulfur western coal. The project is currently evaluating various design alternatives and forecasts for the delivered cost of fuel. The actual mix of various types of biomass fuels (wood, agricultural) to be used will not be determined until these studies are completed (approximately 3rd quarter of 2010).

INTERROGATORY No. 9: Describe in detail the modifications that have been made, or will be made, to the facility in order to allow it to qualify as an eligible renewable energy resource.

ANSWER: Please see the Application filed in Case No. 09-1940-EL-REN - *In the Matter of R E Burger Units 4 & 5 for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility* – for an explanation of the modifications that have been made, or will be made, to the facility in order to allow it to qualify as an eligible renewable energy resource.

INTERROGATORY No. 10: Describe the annual amount, in tonnage, of biomass material anticipated to be used for of each biomass fuel type to be used at the facility.

ANSWER: FirstEnergy estimates the consumption to be between 750 ktons/yr to 1,400 ktons/yr total on a dry biomass basis. It does not have estimates for each biomass fuel type to be used at the facility.

EXHIBIT 1

RESPONSES TO REQUESTS FOR PRODUCTION OF DOCUMENTS

1. Provide all documents, contracts, and calculations referred to or used in answering the above interrogatories.

RESPONSE: N/A

As to objections,



Mark A. Hayden, Counsel of Record
FIRSTENERGY SERVICE COMPANY
76 South Main Street
Akron, OH 44308
(330) 761-7735
(330) 384-3875 (fax)
haydenm@firstenergycorp.com

James F. Lang
N. Trevor Alexander
CALFEE, HALTER & GRISWOLD LLP
1100 Fifth Third Center
21 East State Street
Columbus, OH 43215-4243
(614) 621-1500
(614) 621-0010 (fax)
jlang@calfec.com
talexander@calfec.com

Attorneys for FirstEnergy Generation Corp.

EXHIBIT 1

CERTIFICATE OF SERVICE

A copy of the foregoing FirstEnergy Generation Corp.'s Responses To The Ohio Environmental Counsel's First Set Of Interrogatories And Requests For The Production Of Documents has been served this 26th day of January, 2010, by first class United States mail, postage prepaid, upon:


Nolan Moser
Will Reisinger
The Ohio Environmental Council
1207 Grandview Ave., Suite 201
Columbus, Ohio 43212-3449
Attorneys for the Ohio Environmental Council

Henry W. Ekhart
Ekhart Law Office
50 West Broad St., Suite 2117
Columbus, Ohio 43215
Attorney for Sierra Club of Ohio

Michael Heintz
Environmental Law & Policy Center
1207 Grandview Ave., Suite 201
Columbus, Ohio 43204
Attorney for Environmental Law & Policy Center

Joseph P. Serio
Office of the Ohio Consumer's Counsel
10 W. Broad St., Suite 1800
Columbus, Ohio 43215-3485

Terrence O'Donnell
Sally W. Bloomfield
Matthew W. Warnock
Bricker & Eckler, LLP
100 South Third St.
Columbus, Ohio 43215-4291



One of the Attorneys for FirstEnergy
Generation Corp.

EXHIBIT 2

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of South)	Case No. 09-1043-EL-REN
Point Biomass, LLC For Certification as an)	
Eligible Ohio Renewable Energy Resource)	
Generating Facility)	

AMENDED COMMENTS REGARDING THE APPLICATION OF SOUTH POINT BIOMASS BY THE OHIO ENVIRONMENTAL COUNCIL

On November 6, 2009, South Point Biomass Generation, LLC (“South Point”) filed an Application for certification as an eligible Ohio renewable energy resource generating facility. Certification of the facility will allow South Point to generate and sell renewable energy credits (“RECs”) for the electricity generated. On January, 7, 2010, the Ohio Environmental Council (“OEC”) filed a motion to intervene. The OEC has a policy of carefully scrutinizing projects that may potentially receive renewable energy credit. Most importantly, the OEC seeks to ensure that RECs are only awarded for projects that are sustainably sourced, truly “renewable” generation. On February 19, 2010, the OEC filed comments. Through these comments, the OEC indicated its satisfaction with the responses of the Applicant to Staff’s Interrogatories and in its Reply to the Office of the Ohio Consumers’ Counsel. The OEC stated its support for certification.

Subsequent to the submission of the initial comments of the OEC, the Applicant provided to parties and staff confidential material responsive to Staff’s Interrogatories. The OEC was provided the opportunity, after assenting to a protective agreement, to review this material. Upon review of all the material provided by the Applicant, the OEC would like to reaffirm its

EXHIBIT 2

support for the South Point project. The OEC believes that the Applicant has satisfied of the legal requirements for biomass certification, according to O.A.C. 4901: 1-40-4 (F), 4901: 1-40-01 (I), and 4901: 1-40-01 (E).

I. Applicant's Response Regarding Information Required As A Perquisite for Certification Associated with 4901: 1-40-01 (E).

In relevant part, O.A.C. 4901: 1-40-01 (E) defines "Biomass Energy" as energy "produced from organic material derived from plants or animals and available on a renewable basis." The "renewable basis" component of the definition should include life-cycle impact of the source, the sustainability of the production of the material, its transportation, and considerations of the environmental impacts of the use of the material at energy production facilities. The Applicant has provided essential information regarding these components of the statutory analysis. Importantly, to date the Applicant has provided extensive information in the following areas:

1. Detailed descriptions of the type of biomass to be utilized, including the source regions
2. Independent confirmation of plan viability
3. Annual use requirements within key transportation radius
4. Logistic capacity
5. Reasonableness of delivered cost
6. Quality standards and screening mechanisms, including on-site management for quality and off-site collection and storage
7. Long-term procurement plans, including information addressing sustainability concerns regarding procurement and information regarding the transportation of biomass

This essential information allowed the OEC to assess the project's compliance with the Commission's rules. This sort of information should be submitted and reviewed by the

EXHIBIT 2

Commission before an application is approved. Such information is central to the “renewable basis” analysis required by the Commission’s rules. Applications must demonstrate the renewable nature and the life-cycle impact of the source, the sustainability of the production of the material, its transportation, and considerations of the environmental impacts of the use of the material at energy production facilities. Without such information, an application would fail to prove that the biomass to be utilized was produced on a “renewable basis.”

II. Conclusion

The Applicant has made a full showing before the Commission that the South Point project is eligible for certification. The Applicant has sufficiently demonstrated that the facility is a biomass facility, as required by 4901: 1-40-01 (E), and that the biomass material is produced on a renewable basis. Accordingly, the OEC respectfully requests that the Commission approve certification for the South Point Project.

Respectfully Submitted,

/s/ Will Reisinger

Will Reisinger, Counsel of Record

Nolan Moser

Trent A. Dougherty

Ohio Environmental Council

1207 Grandview Avenue, Suite 201

Columbus, Ohio 43212-3449

(614) 487-7506 – Telephone

(614) 487-7510 – Fax

will@theoec.org

nolan@theoec.org

trent@theoec.org

**Attorneys for the Ohio
Environmental Council**

EXHIBIT 2

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing has been served upon the following parties by first class or electronic mail this 9th day of April, 2010.

/s/ Will Reisinger

Ann M. Hotz, Counsel of Record
Christopher J. Allwein
Assistant Consumers' Counsel
Office of the Ohio Consumers' Counsel
10 West Broad Street, Suite 1800
Columbus, OH 43215-3485
hotz@occ.state.oh.us
allwein@occ.state.oh.us

Howard Petricoff
Vorys, Sater, Seymour and Pease, LLP
52 E. Gay Street
Columbus, OH 43215
mhpetricoff@vorys.com

Henry Eckhart
50 W. Broad Street, Suite 2117
Columbus, OH 43215

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/12/2010 4:42:23 PM

in

Case No(s). 09-1940-EL-REN

Summary: Comments Comments of the Ohio Environmental Council, the Ohio Consumers' Counsel, and the Environmental Law & Policy Center electronically filed by Mr. Will Reisinger on behalf of Ohio Environmental Council