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March 5, 2010

Mr. Douglas L. Jeavons Managing Director BBC Research and Consulting 3773 Cherry Creek North Drive Suite 850 Denver, CO 80209 RECEIVED

MAR 8 2010 PUBLIC SERVICE COMMISSION

ecoPower Generation, LLC Application No. 2009-00530

Dear Doug:

Attached to this letter are responses to inquiries set out in your initial information request dated February 24, 2010, concerning the Application by my client to the Kentucky State Board on Electric Generation and Transmission Siting referenced above. In our discussions with representatives of your company and the Public Service Commission in Hazard earlier this week, my client was requested to respond in an informal fashion to the requests you have made. You will also recall that we discussed our responses to these inquiries in detail, subject only to obtaining certain additional specific information which we have now included in this written response.

I would like to bring to your attention that while certain items in your information request fall outside the jurisdictional parameters of the Kentucky Siting Board, we have attempted to answer all of your inquiries to the best of our ability. However, my client does not waive, and specifically reserves, any and all of its objections to the propriety or relevance of those inquiries in any formal proceeding which may subsequently be held, nor by these responses does my client, in any way, acknowledge an expansion of the jurisdictional authority of the Board.

The attached responses to your inquiries have been compiled primarily by Sara Smith, Smith Management Group, in conjunction with my client's other consultants, including Sargent & Lundy.



Mr. Douglas L. Jeavons March 5, 2010 Page 2

We hope that these responses will assist your in your examination of our client's application. Please feel free to contact me if we can be of any additional assistance to you.

Sincerely, George L. Seay, Jr.

GLS/ekc

Enclosure

cc: John Rogness, Kentucky Public Service Commission Sara Smith, Smith Management Group Gary Crawford, ecoPower Generation, LLC

Response to Initial Informal Information Request

1) Has ecoPower, or any of its principals, engineers or management, been involved in the development of similar biomass fired power plants in other locations? If not, are you aware of other plants that are of similar scale and use similar technology and fuel sources?

Neither ecoPower Generation LLC, any of its principals or management have been involved in the development of similar biomass fired power plants in other locations. ecoPower management has been involved in power development and generation and in sustainable forestry and wood products projects. Additionally, Gary Crawford, ecoPower CEO, has participated in studies relating to the use of biomass co-fired with coal as a means of generating electricity.

ecoPower's consulting engineering firm, Sargent & Lundy (S&L) has extensive experience with all primary power generation technologies. S&L has served the global electric power industry since 1891 and has developed, designed and managed both procurement and construction of numerous power plants of all types. All of this experience is relevant to the development and implementation of this ecoPower Biomass Project.

S&L has participated in 26 projects and studies that involve Biomass fuel. Seven of these projects, including the ecoPower project, are currently on-going at S&L.

ecoPower has surveyed a wide array of wood-fired biomass generating facilities in numerous jurisdictions and is aware of several plants of similar scale, technology and fuel type. ecoPower has used information generated by and about these plants in the development of its design and permitting of the Perry County, Kentucky facility. The unit that was used as the primary reference plant for the permit work was: Public Service of New Hampshire Schiller Unit 5. This unit is a 50 MW biomass fired unit located near Portsmouth, NH. The unit was converted from coal to biomass firing in 2006 and uses fluidized bed combustion technology and SNCR for NOx control.

2) Are we correct in understanding that all technical reports and analyses supporting the siting assessment report (SAR) have been included as sections, exhibits or figures in your application? If there are any additional supporting studies or analyses (e.g. a separate visual impact study), we would like to review that information.

Yes. All technical reports and analysis supporting the application have been included in the application.

3) Figure 2, the conceptual site plan, appears to show a number of facilities that are not identified in the list provided in section 1.0 of the SAR (Description of Proposed Facility), such as a baghouse, ash silos, etc. Can we assume that figure 2 provides the most comprehensive list of anticipated facilities and components? Yes. Figure 2 is provided to supplement the text description of the proposed facility and provides the best conceptual arrangement of site facilities available at this time.

4) Based on the "Graphic Scale" in Figure 4, the yellow circle in that figure appears to be 2 miles in diameter, or a one mile radius from the stack. Is the graphic scale incorrect or is the circle actually depicting a one mile radius rather than 1 two mile radius?

Our review of Figure 4 and the graphic scale included on that drawing indicates that the yellow circle represents a 2 mile radius, 4 mile diameter as required by KRS 278.706 (2)(b). You are correct that the graphic scale is incorrect. We have submitted a revised drawing with the correct graphic scale with this response and will be filing the corrected drawing in the record of this matter.

5) Can you label additional features on Figure J2 – Line of Sight Profile and Location Map to assist the reader in interpreting this figure? For example, showing the site boundary, Highway 15, and existing development (homes and businesses) would be helpful.

The location of Highway 15 is labeled on the profile on Figure J2. We have added the location of the property boundary and a revised Figure is submitted with this response which will be filed in the pending matter. The only development is along Highway 15 and generally consists of small, 1-2 story residential structures located at the toe of the slope. We have not measured heights of any buildings along Highway 15 but we can provide photographs depicting these structures. The slope of the hill prevents any view of the project site or proposed structures.

6) Figure J2 shows approximate line of site in an east-northeasterly direction. Was a similar evaluation conducted in the south direction (or any other direction from the site)?

The line of sight plan and profile on Figure J2 is the only location where current topographic mapping created by the recent aerial survey can be integrated with topographic data from the USGS mapping, due to mining along the higher elevations. This is mentioned in the Site Assessment Report – Exhibit J, at page 12, as follows:

The majority of residential structures located within 2 miles of the Project will be unable to see the structures associated with the plant. These residences are generally located along Highways 15 and 28 and along Tenmile Creek. These roads are located at the base of the hill and the steep incline up to the Industrial Park eliminates any possible views of structures in the Park. A Line of Sight Profile has been prepared to illustrate the extent to which residents along Highway 15 may be able to see the Project structures (refer to **Figure J2 Line of Sight Profile and Location Map**). Residences along Tenmile Creek will similarly have no view of the Project.

Due to previous mining of surrounding areas, accurate topographic data is not available for the surrounding hilltops, limiting the use of profiles to illustrate line of sight potential.

In lieu of creating what would be inaccurate plan and profile visual impact drawings, we chose to describe and depict the areas where potential visual impact may be realized. We are glad to have the opportunity to clarify our approach.

7) Please indicate whether residential properties were reviewed as part of the Property Value Assessment (Section 3.0).

Adjacent properties to the project site were evaluated in accordance with KRS 278.708 (3) (c). There are no residences adjacent to the property site.

8) Section 1.2 indicates the nearest resident property is 3,000 feet from the Project. Does this represent the distance from the location of the stack, from the site boundary or from some other reference point?

The distance of 3,000-feet to the nearest residence was scaled from the proposed stack location in an effort to be consistent with other distance measurements.

9) Have you had any discussions to date with the management or owners of the Wendell H. Ford airport? Have they indicated any concerns regarding the proposed project?

ecoPower has met with and discussed the project with Mr. Jeffrey Hylton, Manager of the Wendell Ford Airport. Mr. Hylton has not expressed any reservations about the project.

10) Please supplement the description of utility service to the site (Section 1.7) by indicating whether ecoPower has reached an agreement (or a preliminary agreement) with American Electric Power to provide power to the site and purchase generation from the facility.

ecoPower has had numerous meetings and discussions with representatives of American Electric Power (AEP). No agreements have been entered into at this time. AEP will be obligated to supply electric power to ecoPower. Discussions regarding supply of generated power to AEP are underway but no agreement has been reached.

11) Please describe planned access control and security at the site during construction to handle the large volume of temporary workers and materials shipments.

ecoPower intends to utilize industry standards for site safety and security during construction, as well as during operations. EcoPower will confirm that it's approach to safety and security is reflected in its contract with the general contractor employed to construct the project, as well as any subcontractors or other providers of services on the construction project. These contractual provisions will require compliance with all applicable OSHA laws and standards related to construction safety. Specifically, we anticipate use of the following aspects of site safety and security. This list is not exhaustive and will be amended as circumstances require:

- A construction employee parking lot will be utilized which will be located outside the project area.
- Access to the project area by construction employees will be through a secure gate. Entry to the site will be controlled at all times and only individuals approved for work will be admitted.
- Contractors will be required to confirm that appropriate training and background checks have been completed for all employees and will be required to issue and monitor the use of employee passes.
- The project area will be fenced and perimeter lights will be installed to the extent necessary for safety.
- Storage areas and structures containing hazardous materials will be secured.
- Contracts with companies providing services or delivery to the site will include a requirement that all employees and vehicles may be searched at any time in the discretion of ecoPower.
- Companies charged with providing transportation will be required to confirm that all drivers are appropriately trained and licensed for the work they are performing.
- Site speed limits will not exceed 15 MPH.
- 12) Please clarify the basis or rationale for the proposed methods for controlling access to the site (Section 1.4). For example, do these reflect ecoPower's standard corporate policy, or a security assessment that the company may have conducted?

ecoPower's standard corporate policy is to utilize industry standards in establishing and maintaining site safety and security. This means we require our employees and all contracted companies and individuals to comply with all applicable OSHA standards and programs. Details of site security will include, without limitation, the following aspects.

- The perimeter of the plant will be fenced.
- Employee parking areas will be designated and access to the plant site will be through a security gate.
- Employees will be required to keep their security pass on their persons at all times.
- Employees will agree that a condition of their employment is a random search of their person, vehicle or personal items in the discretion of ecoPower
- Delivery personnel, vendors and visitors to the site will be required to check in and retain a security pass on their person at all times.
- Any vehicle entering the site is subject to search in the descretion of ecoPower.
- Storage buildings and areas with hazardous materials will be secure.
- Employees will not be permitted to work in an area without appropriate training for the work and the job hazards within that area.
- Appropriate lighting will be used at the plant in conformance with applicable regulation and safety standards.
- Site speed limits will not exceed 15 MPH.
- 13) Please indicate the rationale behind the locations selected for noise measurement and the propagated noise level locations.

The rational for selection of the locations for existing ambient noise measurements and the locations of the sites for noise propagation is described in the Environmental Noise Impact

Study which is attached to the Application as Exhibit J-2. This explanation includes the following information.

The two sampling locations were located along the southern boundary of the project site. Location #1 was located at the southwest corner of the property and Location #2 was located at the southeast corner of the property. Location #2 is positioned close to the nearest sound receptor. Location #1 was selected due to the proximity of the planned equipment anticipated to produce the highest levels of noise. Locations along other boundaries were not selected due to the lack of any potential receptors. The southern boundary of the site is adjacent to lots within the industrial park. As such, this area is more likely to be developed than the large tracts of previously mined and vacant property located adjacent to the remaining boundaries.

Propagated locations were selected to reflect expected noise levels at the northern and eastern boundaries of the site as well as at a point located closer to Highway 15.

The lack of nearby noise receptors, and the vast expanse of undeveloped property surrounding the site informed the choice of ambient monitoring and propagated locations.

14) Please provide a schedule indicating the projected construction workforce, by month, during project construction.

An exhibit showing the work force by month based on the current project cost estimate is included with this response. Construction labor costs were extracted from the estimate and distributed over the construction period using a typical distribution curve for this type project. This analysis shows that the craft labor force will peak at approximately 264 workers.

The current estimate is based on the labor force working 10 hour days, 5 days of the week as an incentive to attract labor to the project. If this incentive is not necessary and a working schedule of 8 hours per day, 5 days a week is used, the labor manpower peak is calculated at 330 workers per day.

In addition, construction management and commissioning personnel will overlap the labor force at the site. S&L estimates that construction management personnel will peak at 10 people and commissioning personnel will peak at 8 people during the project. There is some overlap of these activities, but to be conservative, a peak of 18 people can be assumed for these activities.

Allowing for these variations, the total work force at site can range from approximately 280 to 350 people.

We have also provided an exhibit that breaks down the labor man-hours and labor percentages by craft.

15) Please indicate, in general terms and to the best of your ability:

Do you anticipate that most of the workers will reside in Hazard during construction or commute from other areas?

We are unable to accurately predict whether most of the workers will reside in Hazard during construction. Certainly, it is normal in eastern Kentucky to commute long distances on a daily basis, especially for construction projects. The Kentucky Economic Development Cabinet website <u>www.thinkkentucky.com</u> depicts the labor market for Perry County as drawing from surrounding counties, and use a 60-mile radius as a guideline. In reality, we can anticipate that employees, especially during construction, may travel substantially farther on a daily basis. It is a normal experience, especially with large construction projects, to have numerous employees commute 70-100 miles on a daily basis. ecoPower has established a company policy that it will hire workers from the local area to the extent the required skills are available.

What proportion of the construction workforce will consist of highly specialized trades and skills and require workers from outside of the immediate region?

On page 23 of the application, we have estimated that approximately 30 of the average of 200 construction workers will be construction management including a project manager, project engineer with various support engineers, construction superintendents, and managers. Sargent & Lundy, the project engineers have provided a breakdown y craft of the anticipated construction workforce. We are not able a this time to estimate what portion of those skilled workers will not be available in the region. However, ecoPower has a stated policy that it will hire workers from the local area to the extent the required skills are available.

Section 1.1 indicates that "the site is located within a fuel supply area that will enable ecoPower to obtain adequate fuel for the project in accordance with sustainable forestry practices." In general terms, can you further describe the "fuel supply area and the types of fuel sources you plan to use?

ecoPower refers you to Exhibit K, Air Permit Application and within that Exhibit to the additional information submitted February 4, 2010. In that document, ecoPower responded to a similar question by stating that the fuel supply would include:

- Hardwood wood industry byproducts such as shavings, saw dust, bark and similar materials that do not contain preservatives, resins, or other additives.
- Low quality hardwood logs and hardwood blocks that are trimmed in the production of sawlogs.
- Hardwood tree stems removed during pre-commercial thinning operations.
- Storm and fire damaged hardwood trees and tree parts.
- Low quality hardwood logs and hardwood wood chips produced during right-of-way operations and during urban forestry operations.
- Unrecyclable hardwood pallets and dunnage.

Assessment of the availability of low quality trees (trees that will not yield grade lumber if sawn) that could be used as fuel for the ecoPower plant within a 55 mile driving radius

indicates that the standing low grade tree resource in the subject area is 67.7 million green tons. Annually the low grade tree resource increases by 1.01 million green tons and current annual removals of the low grade resource is 0.61 million green tons, resulting in an annual net increase of over 0.4 million green tons. Should the ecoPower project use only low grade resources already being removed, it would use less than 0.4 million green tons of low grade logs annually.

ecoPower also plans to leverage existing wood supplies (see explanation above) from its sister company, Pine Mountain Lumber and will use existing relationships with large landowners, timber harvesting and wood manufacturing suppliers to procure low-cost sources of mill byproducts and roundwood (see explanation above).

In addition to traditional sources of low quality wood fiber that are available in the area, ecoPower can use non-traditional sources of "opportunity wood" that become available through sources such as the Asplundh Tree Expert Company.

ecoPower supports sustainable forestry practices. ecoPower is taking its power plant to the resource. Its location is in an area that has a significant supply but lacks a significant demand for low quality wood fiber (note explanation above). The ecoPower project will use resources that are currently being discarded or transported out of the central eastern Kentucky, help strengthen the local tax base, create local jobs and provide a clean source of power.

16) Can you identify major facility components that will result in oversize loads during construction? From which direction, and along which routes, do you anticipate the major power plant components will be shipped? Would any temporary road closures be required? Would there be any anticipated bridge reinforcement requirements or temporary road construction/detour requirements during construction?

The extent to which major facility components will be conveyed to the site or constructed on site will be determined during final engineering for construction and as part of the procurement phase of the project. However, there may be several heavy hauls to the site. The equipment in this category includes the Turbine, Generator and Main and Auxiliary Transformers. Special permits and coordination may be required for these items. As the schedule and procurement proceed, any oversize loads will be subject to all applicable regulations and ecoPower will cooperate with the Kentucky Department of Transportation to comply with those requirements, including bridge reinforcement, temporary construction, etc., if necessary.

The project benefits from a location within the eastern Kentucky coalfields. The roads over which equipment is projected to travel are all rated for the heavy weight traffic created by the coal industry, identified as part of the Coal Haul Extended Weight System. It is anticipated that most construction components will be delivered from State Highway 15 which will be accessed from the Mountain Parkway or the Hal Rogers Parkway. Additional information about the capacity and limits of these two major regional roads has been attached to this response. Weight limits and bridge restrictions for the two local roads were identified within Exhibits J-8 through J-10.

17) Can you discuss anticipated design standards for the internal access roads?

Internal roads will be constructed according to any permit requirements and good engineering practice. The roads will be designed to support the truck and equipment traffic where appropriate.

18) Section 5.2 indicates that "construction will result in increased traffic for …periodic delivery of large equipment, machinery and building supplies." If possible, could you provide an estimate of the level of increase in traffic from these deliveries?

Until final construction design and procurement are complete, a construction delivery schedule will not be possible. However, it is assumed that the largest volume of deliveries would occur during concrete pours. There will be several large concrete pours during the project. The largest will be the steam generator foundation pour which will probably be a continuous pour that takes place over a 24 hour period. About 50 concrete trucks will be required to make this pour in the 24 hour period.

During the remaining construction period truck deliveries will be much less frequent. The nominal peak during the balance of construction would be about 10 trucks in a day.

19) Please indicate whether other materials (besides wood industry byproducts), will be regularly delivered to the site, what those materials might be, and the anticipated number of truckloads per day?

No significant deliveries of materials other than the fuel are anticipated during operations. At this time, insignificant deliveries are estimated to be as follows:

- The process will use sand that will be replaced or supplemented on a continuing basis. The daily make up is expected to be approximately 2.5 tons. The frequency of sand deliveries will depend on the size of the delivery truck.
- Diesel for on-site equipment will be delivered as needed. This schedule is likely to be a weekly delivery.
- Reagent for the process will be delivered on a schedule estimated to be once every onetwo weeks.
- Delivery of propane will be required, especially during startup of the unit. The there will be a maximum of 2 to 3 propane trucks per week during a startup of the unit.

20) Please provide information related to the disposal of byproducts including a description and approximate quantity of byproducts requiring disposal and the anticipated location of disposal.

The process planned for the ecoPower project is very efficient and results in a low volume of byproducts. The ash resulting from combustion is projected to equal approximately 30 tons per day. The ash will be mixed with a small amount of sand which will result in a total of approximately 32.5 tons of byproducts daily. This material is expected to be appropriate for use as a soil amendment. Due to the project's location in an area with extensive surface mining activity, ecoPower plans to contract to provide this material to coal operations for use in their reclamation. Additionally, wood ash is frequently used as a component in the manufacture of

cement and concrete blocks. EcoPower has initiated discussions with manufacturers to determine the potential for disposal of the ash through those channels.

21) Are you aware of any current concerns of local residents or businesses regarding visual, noise, traffic or property value effects?

ecoPower has conducted numerous face-to-face meetings with owners of the adjacent and nearby properties. They have held a public meeting to which the community has been invited. ecoPower met with the Perry County Fiscal Court to share its plans with the elected officials of Perry County. A long list of public communication and interface is included in the application at pages 15-18, and is further documented on the associated appendices. Comments shared during the public meeting have been included, comments posted in response to an on-line article have been included, and the minutes of the meeting held with the Perry County Fiscal Court have also been included. One adjacent property owner, when first contacted, asked whether there would be an impact on property values. The real estate appraisal report has concluded that the impact will be beneficial or neutral in all cases. No other comments expressing a question or concern about noise, visual impacts, traffic or property values have been received.

- 22) We would like to contact and interview appropriate individuals within the following organizations. Would you provide the names and telephone numbers of the individuals you may have spoken to at:
 - City of Hazard water and wastewater departments (or general utilities/public works)
 - > Wendell H. Ford Airport
 - > Coal Fields Regional Industrial Park management
 - > Kentucky Transportation Cabinet (local or state offices)

Following are contacts requested.

Wendell Ford Airport

1300 Wendell Ford Terminal Road Chavies, KY 41727 606-439-5140 Jeffrey Hylton, Manager

Hazard Utilities

Carlos Combs, City Manager (Water) 700 Main Street Hazard KY 41701 606-436-3171 Hank Spaulding (Sewer) City Engineer 606-436-2151

Coal Fields Regional Industrial Park

Annette Napier 917 Perry Park Road Hazard KY 40701

Kentucky Transportation Cabinet

District 10 473 Highway 15 South P.O. Box 621 Jackson KY 41339 606-666-8841 Willie Griffith Cell 606-568-8680 Willie.Griffith@ky.gov





ECO POWER 50 MW BIO MASS UNIT CRAFT MEN / MONTH



ECO POWER 50 MW BIO MASS UNIT CRAFT MANHOURS

CRAFT MANHOURS	% of TO1
758	
770	
1,107	
1,234	
1,979	
2,770	
4,468	
7,645	
9,067	
16,251	
18,339	
32,371	
34,443	
34,654	
46,960	
55,629	
61,132	
73,049	
74,494	
167,449	
168,270	
812,840	
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