

Jasper Power Plant Information

Citizens of Jasper and Surrounding Areas

Throughout the process of deciding the future of the Jasper Power Plant the emphasis has been on obtaining information that is factual and pertinent concerning the issues that have been presented both by concerned citizens and those that have submitted proposals for the utilization of the power plant.

In response to questions and concerns that have been voiced by those both in support of this process and against, the Jasper Utility Service Board is providing the following information.

Health and Environmental Issues

Regulations - The Indiana Department of Environmental Management (IDEM) sets limits on power plant emissions in order to protect public health. <http://www.in.gov/idem/5215.htm>. New EPA guidelines for power generating plants were released in February of 2011. <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>. The proposed Jasper Clean Energy Center will have environmental pollution controls designed to meet these guidelines.

Particulate emissions - The amount of particulate emissions is affected by the efficiency of combustion. A study done specifically on the combustion of miscanthus has shown that as temperatures in the boiler increase the amount of particulate matter created drops. The study indicates that at 2000°F (the temperature inside the boiler) the nanoparticles and aerosols are combusted and turned into non-hazardous ash. <http://www.springerlink.com/content/y64q345340727829/>. This high temperature combustion along with updated combustion controls, constant stack monitoring technology, and pollution control technology would keep emissions below the limits established by IDEM and the EPA.

Dioxins - Dioxin levels from the Jasper Clean Energy Center are expected to be in the non-detectable range based on studies of similar miscanthus operations in England. <http://webarchive.nationalarchives.gov.uk/+http://www.berr.gov.uk/files/file14953.pdf>.

Cancer and Asthma Rates - Dubois County cancer rates are below the State and national levels. Asthma rates for Dubois County were also below State levels. <http://www.duboiscountyin.org/stories/health.html>

Air Quality - Dubois County air quality has continued to improve over the last ten years from 40µg/m³ in 2000 down to 27µg/m³ in 2010. The air quality improved even during the time frame when the Jasper Power Plant was burning coal 24/7. <http://www.duboiscountyin.org/stories/health.html>

Greenhouse Gasses and Global Warming - Jasper Clean Energy Center will reduce greenhouse gasses, reduce mercury emissions, and reduce emissions that cause acid rain because it will offset coal fired electricity production in the region.

City Water and Wastewater - Jasper's water and wastewater capacities are more than adequate to handle the needs of the Jasper Clean Energy Center. The wastewater from the power plant **HAS NOT and WILL NOT** go directly into the Patoka River. It will go through the city's waste water treatment facility before flowing back into the river. In the event that water rationing would have to be enacted due to drought conditions, the Jasper Clean Energy Center would have to abide by the same restrictions as any other business that is supplied by the Jasper Water Department.

Truck Traffic - Truck traffic will be limited to only approved routes that have been engineered to handle the loads.

Overall Health – Dubois County was ranked second in the State by County Health Rankings. <http://www.countyhealthrankings.org/indiana/overall-rankings> . Burlington, Vermont has had a 50MW wood burning power plant located within its city limits for twenty seven years and was still voted one of the healthiest cities in the US by the CDC in 2008. <http://www.ci.burlington.vt.us/mayor/accolades/> .

Renewable Sustainable Energy Crops

Miscanthus - Miscanthus x giganteus grass will be used as the renewable sustainable energy crop for the Jasper Clean Energy Center. Miscanthus has been used as an energy crop in Europe for over 20 years and has been studied at the University of Illinois for 10 years. http://miscanthus.illinois.edu/wp-content/uploads/2008/Miscanthus_Yield/. Miscanthus is sterile and non-invasive. <http://www.extension.iastate.edu/Publications/AG201.pdf>.

Switchgrass - There are existing fields of switchgrass in the area that may be utilized as fuel on an interim basis until the miscanthus fields mature.

Western Corn Rootworm - There are some questions about the effects miscanthus has on the Western Corn Rootworm, which is presently being studied by the University of Illinois. The City is aware of this and is following up with the agricultural community to get answers. To-date, conversations with local agricultural representatives and professors at Purdue and Illinois indicate that Western Corn Rootworm already exists in the area and there are practices in place to address it.

Fertilizer, Herbicides and Pesticides - After the first growing season, miscanthus does not require fertilizer or herbicides. However, miscanthus fertilization is optional and like other crops will depend on the soil conditions on which it is grown. The added cost of adding fertilizer will have to be compared to the projected yield increase to see if fertilization is economical for a particular field. Herbicide use has been shown to be minimal and usually only in the first year of planting a new field. Once established the miscanthus will out compete weeds. http://miscanthus.illinois.edu/wp-content/uploads/2008/Miscanthus_Yield/ . Pesticide use is not required for miscanthus, but may be applied to help control insects, which may harm other crops. Local agricultural representatives advise that there are pesticides available that dissipate in 60 days after application and will not transfer to the part of the plant which will be used for fuel.

Land Use - Miscanthus grass can be grown on marginal land. Thus the planting of miscanthus will not reduce the acres available for food production crops such as corn, soybeans, etc. <http://www.extension.iastate.edu/Publications/AG201.pdf>.

Storage - Up to a three day supply of miscanthus bales will be stored in a new building located at the existing property. The Jasper Clean Energy Center will be unlike most biomass facilities that process tons of fuel in open yards with months of storage on-site. Most of the miscanthus bales will be stored adjacent to the growing fields and brought into the Jasper Clean Energy Center as needed. http://miscanthus.illinois.edu/wp-content/uploads/2008/Miscanthus_Yield/.

Pfaffenweiler - Jasper's sister city, Pfaffenweiler, is part of an energy cooperative that has been growing miscanthus grass since 2000. An existing field is located within 5 miles of Pfaffenweiler, Germany. (Per communications with ANNA representatives in Germany).

Government Incentives

Incentives - The proposed facility does not qualify for federal grants to help build the Jasper Clean Energy Center. The facility could qualify for production tax credits based on the actual/measured amount of renewable energy produced. It is estimated, if the proposed facility qualifies, that approximately one million dollars a year worth of production tax credits might be earned, but under current law these tax credits would end after 10 years. <http://www.energy.gov/additionaltaxbreaks.htm>.

Credits - Renewable energy credits will belong to the company that ends up buying the power from the Jasper Clean Energy Center.

Crop Assistance - The USDA's Biomass Crop Assistance Program (BCAP) currently provides assistance to aid farmers in establishing biomass crops. It is not anticipated that the facility will be ready in time for farmers to qualify for these funds. The success of the Jasper Clean Energy Center does not depend on BCAP assistance.

Financial Consequences - Incentives are designed to help get renewable energy projects like solar, wind, and sustainable energy crops off the ground. The fact that incentives will likely go away in time has been taken into account. The long term financial viability of the Jasper Clean Energy Center is not dependent upon government incentives.

Economic Impact

- 25-30 permanent jobs at the power plant.
- 30-50 permanent jobs involved in the transportation, handling, and processing of the miscanthus fuel.
- 80-100 construction jobs to renovate the power plant and build the fuel handling and storage facility.
- Increased revenue opportunities for area farmers and agribusinesses that could have a value of \$200 million.
- \$525,000 estimated annual gross revenues for Jasper water department.
- \$750,000 estimated annual savings when moving existing employee costs from utility's payroll to private payroll.
- Annual lease payments (still being negotiated).
- Property tax revenue.

According to the Ball State Economic Multiplier, the 55-80 permanent jobs could lead to an additional 100-150 jobs in areas not directly connected to the power plant or the growing of miscanthus. <http://cms.bsu.edu/Academics/CentersandInstitutes/BBR.aspx>.

General Issues

What is “Biomass”? - There are many types with different characteristics. Even old tires and city trash can be considered “biomass”. The type of biomass being proposed for Jasper is a sustainable renewable energy crop that is harvested annually.

Costs of Demolition – Although the amount is uncertain, the City, and therefore the rate payers, could likely incur major costs if the power plant is demolished.

Plant Capacity - The Jasper Clean Energy Center will expand the total capacity of the power plant from 15MW to 75MW. Up to 15MW (20%) of the capacity will be supplied by a sustainable renewable energy crop and 60MW (80%) will be supplied by natural gas.

Security – It may be possible for the Jasper Clean Energy Center to provide emergency power for the entire city in the event of a regional power failure.