
**Review and Evaluation
Of
the Electronic Application of Lost City Renewables LLC
for a Certificate of Construction for an Approximately
250 Megawatt Merchant Electric Solar Generating
Facility in Muhlenberg County, Kentucky Pursuant to
KRS 278.700 et seq. and 807 KAR 5:110**

Siting Board Case No. 2024-00406

**Review of *Economic Impact & Land Use Analysis*
Application Exhibit G**

Prepared for

**David H. Elliot Company (Elliot Engineering)
Wells Engineering PSC
6900 Houston Road, Suite 38
Florence, Kentucky 41042**

By

**Mark M. Watters
Watters Unclaimed Property Consulting LLC
2519 Ashton Court
Cincinnati, Ohio 45244**

Executive Summary

Attachment G, The *Economic Analysis* [for the Lost City Renewables LLC], as revised and re-issued and incorporated as part of the Applicant's First Response to the Sitting Board's First Request for Information (the "revised Report"), is an effective advocacy supporting the economic benefits arising from the Project. The report is thorough, organized, and complete, and its narrative and findings supported.

Based upon the representations of the Applicant through its revised Report, there is a positive, significant, short-term initial economic during the Construction Phase for the Commonwealth of Kentucky, Muhlenberg County, and the region. During the longer Operational (generation) phase, there are positive sustained economic benefits for the state and Project area.

Project Factual Summary

Lost City Renewables LLC is requesting authorization to construct and operate a 250-megawatt alternating current (MWac) electric solar generating facility in Muhlenberg County, Kentucky, on 1,413 acres of mixed-use agrarian and timberland. Production and transmission will occur on a portion of the land contained within a buffer zone and fence line around the properties. The project looks to employ approximately 400,000 photovoltaic solar panels and racking, overhead and underground electrical conveyance lines, a utility substation transformer, and 10.8 miles of overhead gen tie line connecting to a Tennessee Valley Authority (TVA) substation.

Lost City Renewables LLC is a Delaware LLC (a limited liability company) is a wholly-owned subsidiary of Copenhagen Infrastructure Partners (CIP) venture capital fund entity CI V Master DevCo LLC. CIP is headquartered in Copenhagen, Denmark.

The revised Report is divided into an introduction and sections titled Location, Regional Economy, Modeling the Economic Impacts, Construction Payroll and Local Economic Impacts, Local Tax Revenues, and appendices for a table for Demographic and Economic Characteristics for the county and a narrative discussing the revised Report's economic analysis and findings.

The expected useful life of the Project has been established to be 30 years.

The following table outlines the quantitative findings economic impact in the Report:

SUMMARY OF NET ECONOMIC BENEFITS/(DETRIMENTS)		
Lost City Renewables LLC		
	Kentucky Commonwealth	Muhlenberg County/Region
Total Economic Investment (in Millions)	\$300	\$300
Construction Phase (Phase Total)		
Jobs -		
Direct	600	600
Indirect, Incidental	139	139
Total	739	739
Wages and Benefits -		
Direct (in Millions)	\$35.4	\$35.4
Indirect, Incidental (in Millions)	\$5.6	\$5.6
Total (in Millions)	\$41.0	\$41.0
Operational Phase (Annual)		
Jobs -		
Direct	8	8
Indirect, Incidental	14	14
Total	22	22
Wages and Benefits -		
Total (in Millions)	\$1.34	\$1.34
Tax Benefits (over Project Life)		
Property Taxes (in Millions)	\$7.70	\$8.80
IRB, PILOT in lieu of Taxes (in Millions)	\$0.199	\$0.199
Sales, Use, Excise Taxes	Not Reviewed	Not Reviewed
Commonwealth Income and Franchise Taxes	Not Reviewed	Not Reviewed
Local Occupational Taxes	N/A	No Tax
Note: IMPLAN analyses for Commonwealth and regional impacts resulted in no large differences between results for Muhlenberg County. Federal and state statistical models and agencies consider all employment to be in Muhlenberg County, where activity occurred.		

Review Criteria and Methodology

This review encompasses the entirety of Lost City Renewables LLC's Application, including its revised *Economic Analysis* and *Responses to ... Requests for Information*.

Methodology. The *Economic Analysis* and its analyses of both Construction and Operational Phases of the Project were reviewed to consider:

- Specific aspects of the Project-specific tasks and activities; their chronology and timelines; and the geographic aspects of the Project and their effects;
- The quantification and/or estimation of the above-listed criteria for impact upon the Commonwealth, region and Muhlenberg County;

- Other civil, social and subjective (non-monetary) economic effects within the community, region, and state;
- Potential impacts, either positive or negative, to current use or other industries and businesses; and
- Electrical output compared to current agrarian production.

Basis for Analysis. KRS 278.706 states that any person seeking to obtain a construction certificate to construct a merchant generating facility must file:

KRS 278.706

* * * *

(2) A completed application [including] the following:

(j) An analysis of the proposed facility's economic impact on the affected region and the state.

Criteria for analysis. This review and evaluation of Applicant Lost City Renewables LLC's proposed Solar Energy Project ("Project") is based upon projected short-term Construction- and long-term Operational Phases, as described by the Applicant and detailed by responses to questions posed to that Applicant. The Applicant's Report and their Responses are analyzed for each Phase, using the following criteria:

Direct impacts. Wages paid to employed workers for Construction and Operational Phases.

Indirect Impacts. Purchases of goods, materials and services necessary for the construction and maintenance of the Project facilities.

Induced Impacts. These are socioeconomic changes arising as a result of increases in local spending as a result of the Project.

Taxes.

Kentucky Income and Franchise Taxes.

Local Occupational Taxes.

Kentucky Commonwealth and Local Property Taxes.

- Real estate taxes
- Tangible Personal Property Taxes
- Fees in lieu of property taxes (IRB and PILOT)

Kentucky Commonwealth Sales Taxes.

Other Benefits. Outlining other contributions to the Commonwealth, county and the region.

Electrical and other Outputs. This criterion is a measure of the value of goods and services produced. Stated differently, “output” is the value of production by the industry or producer in a calendar year or, in the present case, for the period of production.

By definition, each criterion is reviewed in the context of net economic impact: the very terminology demands that in each instance there is an existing “baseline” from which positive or negative economic results may arise.

The analyses were conducted on a statewide- and regional/county basis. The benefits are locally centered on Muhlenberg County, with statewide and regional impacts arising mostly from the local development.

Applied Review and Analysis

Review Summary

The Report proposes that the Project will have positive economic impacts on Muhlenberg County and its region and the Commonwealth economy, particularly during the Construction Phase. Total expenditures are anticipated to be around \$300 million. All sums are in current dollar values:

Direct, Indirect and Induced Impacts

Direct, Indirect and Induced impacts. The applicant has outlined the basis for concluding the Project is projected to produce direct state impact during the one-year Construction Phase (1 year) of \$41 million in wages for 739 new job holders in the state, region and county for employment directly in construction or indirectly resulting from the Project. There are 600 anticipated direct jobs with remaining jobs incidental to construction activity. These numbers presumably may include labor temporarily re-locating to Muhlenberg County. This is a blitz of capital expended that will have a significant short-term impact.

For the Operations Phase, employment of 26.9 (27) full-time equivalent persons with annual earnings of \$1.8 million are projected. Output of \$7.7 million annually is projected.

These numbers are in line with similar projects.

Output

The generation of electricity by the Project (Output), is measured by positive cash flow, for the generation and sales of produced electricity. For this Project, the annual value of said output is projected to be 150 MWac. The monetary value of said output is expected to greatly exceed the value from current (agrarian) property use.

Tax Impacts

Kentucky taxes for the Report review are grouped as property taxes, sales, use and excise taxes, income/franchise-based taxes, and employment taxes for the purposes of this review.

Property taxes include both real estate and personal property taxes:

Property taxes, currently based upon farm usage, should not change drastically during the short Construction Phase. Total property taxes, as outlined in the table above, are projected to be \$16.5 million over the life of the project. The Applicant is expected to pursue both an Industrial Revenue Bond (IRB) agreement and Payments in Lieu of Taxes (PILOT) agreement that will result in local payments of expected \$199,000 per year.

Sales and use taxes are taxes paid for purchasing goods and services within the Commonwealth, or with the complementary use tax, for property and services not taxable or undertaxed at the point of origin for which the commonwealth imposes their own tax. There is no projection of any use taxes upon the use, storage or consumption of supplies and materials purchased outside Kentucky.

State income and franchise taxes. The Applicant taxpayer is a limited liability company (LLC). LLC's are not directly taxed for income purposes by the Commonwealth, but their ownership may be. LLC members may be taxed as single-member LLC (sole proprietorship which files federal and/or state income taxes); as a partnership whose partners file taxes (liable for self-employment taxes and income taxes); as C corporations, taxed as such; or S Corporations who pay corporate income taxes. In addition, LLC's file an Annual Report with the Secretary of State with a \$15 fee.

Employment taxes would include primarily local occupational taxes. These are sometimes grouped with business taxes as they are local income-based taxes but paid by the employer from withholding of the employees' wages. Muhlenberg County does not impose such taxes.

Conclusions and Recommendations

The construction and operation of the Lost City Renewables LLC electric solar energy generation project facility in Muhlenberg County, Kentucky will provide significant positive economic benefits to that county, region and Commonwealth.

The Project will provide significant positive economic effects to the region and Commonwealth during the short Construction Phase. Measurable property investment, employment, including indirect and induced impacts, will result in a large influx of capital and human investment that will benefit the county and state.

During the Operational Phase, there will be less annual investment but over a longer period of time. Property taxes and IRB and PILOT program payments will increase capital for local governments.

Remediation following the conclusion of the Project, will generate relatively modest employment and wage incomes, resulting in short-term economic benefits. Labor and material costs, plus any incidental taxes, would be expected to be minimal. Project lands will be returned to prior use following remediation.

Electric Generation and Transmission Siting Studies and Analyses – Economic Impact - Solar – Before the Kentucky Board on Electric Generation and Transmission Siting

In Re: Weirs Creek Solar, LLC, Case No. 2024-00009, Application for a Certificate to Construct an Approximately 150 Megawatt Merchant Solar Electric Generating Facility in Webster County and Hopkins County, Kentucky (September 2024)

In Re: FRON bn, LLC (Frontier Solar), Case No. 2023-00360, Application for a Certificate of Construction for an Approximately 120 Megawatt Electric Generating Facility and Nonregulated Electric Transmission Line in Marion and Washington Counties, Kentucky (March 2024)

In Re: Banjo Creek solar LLC, Case No. 2020-00263, Application for Certificate of Construction for an Approximately 120 Megawatt Electric Solar Generating Facility in Graves County, Kentucky (December 2023)

In Re: Bluebird Solar LLC, Case No. 2021-00141, Application for Certificate to Construct an Approximately 90 Megawatt Merchant Electric Solar Generating Facility in Harrison County, Kentucky (September 2022)

In Re: Blue Moon Energy LLC, Case No. 2021-00414, Application for Certificate to Construct an Approximately 70 Megawatt Merchant Electric Solar Generating Facility and Nonregulated Electric Transmission Line in Harrison County, Kentucky (May 2022)

In Re: Sebree Solar II, LLC, Case No. 2022-00131, Application for a Certificate to Construct an Approximately 150 Megawatt Merchant Solar Electric Generating Facility in Henderson County, Kentucky (circa July 2022)

In Re: Sebree Solar, LLC I, Case No 2021-00072, Application for Certificate to Construct an Approximately 60 Megawatt Merchant Solar Electric Generating Facility in Meade County, Kentucky (circa November 2021)

In Re: McCracken County Solar LLC, Case No 2020-00392, Application for Certificate to Construct an Approximately 60 Megawatt Merchant Solar Electric Generating Facility in Meade County, Kentucky (circa September 2020)

In Re: Meade County Solar LLC, Case No 2020-00390, Application for Certificate to Construct an Approximately 40 Megawatt Merchant Solar Electric Generating Facility in Meade County, Kentucky (circa September 2020)

In Re: Golden Solar, LLC, Case No. 2020-00243, [Application] for Certificate of Construction for an approximately 100 Megawatt Merchant Electric Solar Generating Facility in Caldwell County, Kentucky (circa November 2022)

As a subcontractor to the primary contractor for such study, reviewed the Applicant project reports of direct, indirect and induced economic impacts on the state and community; state corporate income, personal income, and occupational taxes; real and person property taxes; sales and use taxes; and net output value of goods and services produced.

Tax Studies – Real & Personal Property, Sales and Use, and Local Taxation Including Available Incentives, Deductions and Exemptions

Planning, Design and Analysis of Electrical Power System Upgrades – Tennessee

Performed construction contract review for the purposes of making a proposal for electronic system upgrades, to determine application of major taxes – Income, property sales and use taxes, rates, exemptions, exceptions, and available incentives applicable to Michigan.

Tax Studies – Kentucky Occupational Taxes

Research to identify local occupational taxes for proposed job sites

Prior to initiation and execution of contractor work projects, researched local occupation taxes for applicability, rates, registration and returns.

Tax Studies – Sales and Use Taxation

Planning, Design and Analysis of Electrical Power System Upgrades – Michigan

Performed construction contract review for the purposes of making a proposal for electronic system upgrades, to determine application of sales and use – and state tax exemptions deductions and incentives available.

Taxes - Corporate Registration to Do Business and Pay Taxes and Fees

Registration of a Business and For Taxation - Pennsylvania

Made applications with the Pennsylvania Secretary of State for state registration and with the state Department of Revenue for all state and local applicable taxes.

Registration and Management of State Personal and Gross Receipts Taxes

Registration for Taxation – New Mexico

Determine applicable taxes and means of registration for payment of New Mexico personal and gross receipts taxes.