

**Solar Generation Siting Filing Correction**

Bluebird Solar, LLC

KY State Board on Electric Generation and Transmission Siting

**Case #2021-00141**



In Wells Engineering's Previously filed report "WE22022137\_Bluebird\_Solar\_WE\_Final\_Report" Attachment E was misfiled. This filing is now being corrected by filing the correct attachment E.



# ATTACHMENT E

**Review and Evaluation of the Applicant  
Bluebird Solar LLC's Economic Impact Analyses  
90/100 Megawatt Merchant Electric Solar Generating  
Facility  
Harrison County, Kentucky  
Siting Board Case No. 2021-00141**

**Prepared for**

**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**

**Before the Kentucky State Board on Electric Generation and  
Transmission Siting  
Case No. 2021-00141  
Summary Findings**

**Executive Summary**

Based upon the representations of the Applicant through its Economic Impact Analysis and Responses to the Siting Board's Requests for Information, there is a significant, short-term initial economic to both the region and the Commonwealth of Kentucky. During the longer operational (generation) phase, there are lesser-but-positive economic regional impacts. Support, qualification and computation of the net economic impacts do not allow for a desired level of certainty for the asserted benefits or reasonably-certain quantification.

**Project Factual Summary**

Bluebird Solar LLC is making an application for authorization to construct and operate a 100-megawatt alternating current photovoltaic (solar) generating facility in Harrison County, Commonwealth of Kentucky, to be located in or around 38.299894° N 84.383489° W, to wit, an area roughly south of Highway 62 (Leesburg Pike) near Broadwell, KY (an unincorporated community 5.5 miles southwest of Cythiana, KY). The Project specifications involve both production and transmission tying into the existing electrical grid.

Bluebird Solar LLC is a Kentucky limited liability corporation with its principal offices at 18575 Jamboree Road, Suite 850, Irvine, California 92612. Bluebird Solar LLC is a wholly-owned subsidiary of BayWa AG, a German concern.

**Review Criteria and Methodology**

This review encompasses the entirety of Bluebird Solar LLC's Application, including its Exhibits, especially "Attachment J, Economic Report" a memorandum-styled report by Paul A. Coomes, Ph.D., Consulting Economist, using IMPLAN, and the Responses to the Siting Board Staff's First and Second Requests for Information made by Bluebird Solar LLC by Mr. Coomes.

**Methodology.** Both the construction and Operational Phases of the Project were evaluated to include:

- An understanding of the specific aspects of the Project, to include the specific tasks and activities; their chronology and timelines; and the geographic aspects of the Project and their effects;

- Quantification and/or estimation of the above criteria as they impact state, regional and local areas within the Commonwealth of Kentucky;
- Other civil, social and subjective (non-monetary) economic benefits within the community, region, and state; and
- Potential impacts, either positive or negative, to current use or other industries and businesses
- 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 propose facility’s economic impact on the affected region and the state.

**Criteria for analysis.** This review and evaluation of Applicant Bluebird Solar 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 Economic Impact Report and their Responses are analyzed for each Phase, using the following criteria:

Direct impacts. Wages paid to employed workers for construction and maintenance Phases.

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

Induced Impacts. Expenditures for goods and services by workers spending portions of their Project-related wages at local and regional third-party businesses

Kentucky Income and Franchise Taxes.

Local Occupational Taxes.

Kentucky State and Local Property Taxes.

- Real estate taxes
- Tangible Personal Property Taxes
- Fees in lieu of property taxes

Kentucky State Sales Taxes.

Electrical and other Outputs.

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

## **Applied Review and Analysis**

Overall it appears that the proposed Project will likely have some positive economic impact on the local, regional and commonwealth economy. Whether this is a limited or significant impact cannot be determined from the conclusions of the study.

**Deficiencies in Impact Study.** While the Study reflects a positive economic impact, it is incomplete or inconclusive of certain aspects of those results. The Study should reflect impact in three areas, encompassing the eight criteria above: The impact of the investment itself; the tax consequences of the Project; and the value of the electricity generated and contributed (sold) into the electrical grid. The combination of the three creates the economic picture upon which the relative overall benefits or burdens the project is expected to realize. While the Commonwealth certainly hopes for the success of the project, its impact on the region and commonwealth is its focus and concern. Incomplete analyses clouds the ability to measure this impact. Several of the deficiencies of the initial Impact Study have been remedied by the two question-and-response processes of the Siting Board, but several remain.

Gross verses net impact. Impact studies require an analysis of what the current property use contributes or takes from the region and Commonwealth; the known or projected contribution or dependency created by the proposed usage; and the net result of the proposed- verses current contribution or usage. The Impact Study narrative implies that certain criteria were not reviewed, or assumptions made of neutrality, or that current use was immaterial, without discussion of why these implications were made.

Analysis detail. For the purposes of the Siting Board’s review, the process of analysis and conclusions should include source materials, detail footnotes and calculations detailing intermediate findings. While these need not be exhaustive, the Impact Study also should not assume that certain factual information or derivative analysis are found elsewhere in the Application or otherwise presumed. In several instances they were not.

**Summary of Impact Study Results and Review.** The results of the Impact Study and its review indicate that the Project does overall offer a likelihood of economic benefit to the region and Commonwealth. Discussion of each criteria follows. All sums are in current dollars:

## Direct, Indirect and Induces Impacts

The applicant has outlined the basis for concluding the Project is projected to produce **direct impacts** during the Construction Phase of \$18.1 million. This includes actual payroll of circa \$15 million and employee benefits of approximately \$3 million over the one-year expected period. This represents a projection of 213 full-time jobs for the county and region. Augmented information verifies that there will be a diverse employment of skilled and construction labor during this period. Responses to questions also indicate that the current use of the property in agrarian pursuits results in an annual net farming loss for impacted real estate of (estimated) \$3,300 each (for 5.6 full-time farm workers). During the 30-year Operational Phase, three full-time employees will generate payroll of \$4.5 million (and \$6.543 million including benefits). Farm usage for the period may be projected to be some net loss amount<sup>1</sup>. The Applicant's solar project is projected to have a significant impact on the regional and state economy during the Construction Phase and a modest impact during Operational Phase.

**Indirect impacts** from purchases of goods and services have not been adequately segregated from the stated overall investment of \$110 million. These purchases of goods and services directly related to and necessary for completion of the construction are not segregated in the Study. We cannot quantify or qualify any specific indirect impact without knowing and segregating which portions and their values included are analyzed elsewhere in the Impact Report (e.g., like payroll included in direct and induced impact analyses), nor can we determine which portions, if any, include non-construction "investments" (e.g., rental payments during the life of the Project, or Operational Phase investments such as maintenance). Investments made outside of the Commonwealth and not contributing to the region or state do not result in benefits in the context of this study. Investments in the personal property, necessary for the operations of power generation, cannot be ascertained; nor can the purchase of services and personal properties be attributable to any impact for the region or commonwealth absent knowledge of where such services and properties have been purchased.

**Induced Impact** has been analyzed in a response to the Board's questions. The attribution of said impact is derivative from the purchasing activity of persons associated with the construction and operations of the Project. During the Construction Phase, the Induced impact has been projected as creating 69 jobs and \$3.12 million in benefits for the region and commonwealth. These compare favorably to induced impacts through farming or during the Operational Phase, for which such impacts might likely be negligible.

## Output

The generation of electricity by the Project (Output) will result in cash flow, asserted as a net

---

<sup>1</sup> Based upon Applicant's Response to First Request for information, Data Request SITING BOARD\_1\_6: Per that response, and based upon unsupported data sources from the US Bureau of Economic Analysis, farm proprietors in Harris county average a net income loss of \$3,300 per year.

profit, for the generation and sales activities.

The Applicant has asserted a projected output of \$30.8 million (presumably, electrical output) and a total output, including undefined “spinoff” activity, of \$40.3 million. The current yearly output is computed to be \$575,000, based upon 1,000 acres of tillable land of the 1,343 acres.<sup>2</sup> Over the 30-year life for the Operational Phase plus the one-year Construction Phase, the current output from agrarian activities for 31 years would be \$17.825 million. The net presumed electrical output would be \$13.0 million and total output, \$22.5 million.

Projected Annual Agrarian Output	Corn	Soybeans	Total
Project tillable acres 50/50 split of 1,000 tillable acres of 1,343	500	500	1,000
Expected yield per acre	180	53	
Total yields	90,000	26,500	116,500
Price per bushel	\$4	\$9	
Annual yield, computed	\$334,800	\$242,210	\$577,010
Annual output per Response _1_1			\$575,000
Projected output, agrarian usage, Project life			
Lesser of annual yield, computed above or per Response _1_1			\$575,000
Total Project Years, Construction and Operational Phases			31
<b>Projected total agrarian yield, if property used only for agrarian purposes, Project years</b>			<b>\$17,825,000</b>
Net economic output, Project net of Expected Agrarian yield			
Projected output, Project usage		30,800,000.00	\$40,300,000.00
Less: Projected output, agrarian usage		17,825,000.00	\$17,825,000.00
<b>Net agrarian output impact</b>		<b>12,975,000.00</b>	<b>22,475,000.00</b>

The Response further notes the possibility that the Project acreage could be used for concurrent farming operations, to wit, as goat pasturage; also for consideration, the Applicant wishes that the rents received by the current landowners would produce additional income.<sup>3</sup>

The Output discussion fails to discuss loss of solar generation/transmission efficiency or obsolescence in its review.

### Tax Impacts

<sup>2</sup> First Request for Information, SITING BOARD\_1\_1.

<sup>3</sup> Ibid.



Kentucky taxes for Impact Studies are further grouped as business taxes, employment taxes, sales and use taxes, and property taxes for the purposes of this review.

**Business taxes** include Commonwealth income, franchise and like 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.

The Applicant has made no projection of state business taxes with supporting information, data or calculations.

**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. The Applicant has computed projected local occupational taxes of \$305,500 for the region (7 counties) for the Construction Phase and \$67,000 during the 30-year operational phase.<sup>4</sup> As farming is generally conducted at a loss, these projected amount may be representative of the economic impact of this tax. Note also that the Applicant's payment of rental income to landowners may also generate additional income and other business taxes.

**Sales and use taxes** are taxes paid for purchasing goods and services within the state, 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. The Impact Report and 2<sup>nd</sup> Response to the Siting Board's Requests for Information are silent concerning sales and use tax for purchases of goods and services unused or consumed in the construction or maintenance of the Project.<sup>5</sup>

**Property taxes** included programs for real and personal property and includes tax alternatives such as IRB and PILOT.

Current real estate property taxes generate annual tax income of \$16,000 annually (or \$380,000 over the 30-year production phase).<sup>6</sup> Generally the subject real estate parcels have no personal property taxes associated with them. During the Construction Phase the property

---

<sup>4</sup> See Impact Report. The Report projects annual occupational taxes of \$273,000 in Harrison County and circa \$32,000 from 6 regional counties during the Construction Phase. During the 30-year Operational Phase, assuming 3 employees working at the Project site and making \$50,000 each, an additional \$67,500 in taxes would be generated: 3 employees x \$50,000 annual wages x 1.5% tax rate x 30 years.

<sup>5</sup> See Responses to Siting Board's Second Request for Information, Data Request SITING BOARD-1\_1.

<sup>6</sup> Impact Report, p. 6, annual current landowners' taxes of \$16,000. \$16,000 annually x 30 years.

would continue to be taxed based upon farming usage.

The Impact Report does not venture to compute the real estate or personal property taxes attributable to the real estate, its valuation once removed from agrarian usage, or the taxes thereon; nor are annual personal property taxes computed. Rather, the Applicant has already negotiated for Industrial Revenue Bonds (IRB) and a PILOT (Payment in lieu of Taxes) averaging \$50,000 annually or \$1.5 million over the production phase of 30 years.

## **Conclusions and Recommendations**

The construction and operation of the Bluebird Solar project facility in Harrison County, Kentucky will provide economic benefits to the region and Commonwealth.

Overall, the Project will provide significant positive economic effects to the region and Commonwealth during the short Construction Phase. Measurable payroll and associated occupational taxes, together with indirect impacts through secondary payroll in the local economy will realize both payroll and occupational tax increases.

During the Operational Phase, the economic impact is expected to be smaller for the region and state. A modest payroll, over the county average, will provide employment for a projected 3 individuals with an equally modest local occupancy tax. With IRB and PILOT agreements in place, over the 30-year life of the Operational Phase, the Applicant represents that property taxes and equivalents will generate net taxes of \$1 million.

The Output net of current agrarian use over the 30-year operational life will generate a net \$13.55 million to \$23.00 million in sold electrical generation.

## **Selected Project Experience**

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

**In Re: Sebree Solar, LLC, Case No 2021-00072, Application for Certificate to Construct an Approximately 60 Megawatt Merchant Solar Electric Generating Facility in Meade County, Kentucky (circa November 2020)**

**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)**

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.