

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF MARTIN)	
COUNTY SOLAR PROJECT, LLC FOR A)	
CERTIFICATE OF CONSTRUCTION FOR)	
AN APPROXIMATELY 200 MEGAWATT)	Case No. 2021-00029
MERCHANT ELECTRIC SOLAR GENERATING)	
FACILITY IN MARTIN COUNTY, KENTUCKY)	
PURSUANT TO KRS 278.700 AND)	
807 KAR 5:110.)	

Application for Certificate of Construction

Martin County Solar Project, LLC (“the Applicant” or "Martin County Solar”) files this application requesting from the Kentucky State Board on Electric Generation and Transmission Siting (“the Board”) a certificate of construction for an approximately 200 megawatt (MW) merchant electric solar generating facility pursuant to KRS 278.704. The generating facility for which the certificate is sought will be located in Martin County, Kentucky.

In support of this Application, the Applicant submits herewith Exhibits A–F. To assist the Board and interested persons in locating information required by various statutes and regulations, the Applicant also submits herewith the Table of Contents required by 807 KAR 5:110 §3(2)(b) and attaches hereto an Indexes of Regulation Requirements, listing respectively the requirements for a generation application, and the principal place(s) each requirement is addressed in these Application materials. The facts on which the Application is based are contained in the concurrently filed exhibits, reports, and other information and the statements further made by the Applicant as follows:

I. Applicant Information

1. Pursuant to KRS 278.706(2)(a), the name, address, and telephone number of the person proposing to construct and own the merchant electric generating facility is as follows: Martin County Solar Project, LLC; 422 Admiral Blvd, Kansas City, MO 64106; 913-568-0331. Communications should be directed to the attention of Erich Miarka.

II. Description of Proposed Site

2. The proposed Martin County Solar Project (the Project) is a 200 MW solar facility capable of providing enough clean, renewable electricity to power 30,900 Kentucky homes. Photovoltaic (PV) solar modules are used to convert sunlight into direct current (DC) electricity which is then converted to alternating (AC) electricity through inverters. Transformers step up AC electricity to a higher voltage so that it can connect to the regional transmission grid. The Project is located on a 2,541-acre site located near Pilgrim, Kentucky, in Martin County (Exhibit A). The Project footprint, generally the area within the fence line where Project infrastructure will be located, includes approximately 1,053 acres within the larger Project site.

3. The Project is located on a reclaimed coal mine that has been highly impacted by historical mining operations. Mining began sometime between the mid-1960s and 1970s and ceased by the early 1990s, and primarily included surface mining methods whereby overburden is removed from the summit or ridge crest and largely placed back in adjacent valleys. U.S Department of Agriculture (USDA) soil mapping data indicates most areas within the property boundary are situated on mine spoil consisting of rock fragments and fines created from the physical break down of rocks along with natural soil material incorporated during mining.

4. The Project has been responsibly sited on a reclaimed coal mine to minimize its environmental impact and to repurpose land that might not otherwise be suitable for other types of development. Furthermore, the Project will bring much needed economic benefit to a region that has been impacted by declining demands for fossil fuel-based energy generation.

5. Pursuant to KRS 278.706(2)(b), The proposed Project is a 2,541-acre site located near Pilgrim, Kentucky, in Martin County (Exhibit A). The site consists mainly of reclaimed mine land with small areas of intact forested land on the periphery. As such, vegetation is sparse, and the natural hydrology has been significantly altered. Soils within the Project are shallow, approx. 3-8 inches in depth, and are underlain by mine spoil (crushed up rock and coal residuals).

6. Project components will include PV solar modules mounted on either single axis tracker or fixed-tilt racking systems supported by steel posts. Other components of the PV system include combiner boxes, inverters, high voltage transformers, junction boxes, DC and AC electrical collection systems, a Project substation, and gen-tie lines. In addition, the Project will include an operation and maintenance (O&M) trailer, meteorological (MET) structures, access roads, and fencing. During construction, the Project will include temporary laydown yards, temporary construction management trailers, and stormwater management features. The Project will also include a 100MW (up to 6 hours) AC-coupled battery energy storage system (BESS).

7. Approximately 128,500 linear feet of private access roads will be utilized within the facility and will be constructed of all-weather gravel. The majority of these roads are existing. Roads will not exceed 16 feet (4.9 meters) in width, except for turning radii, which will not exceed 50 feet (15.2 meters) in radius. The Project solar arrays will be secured with approximately 153,000 linear feet of perimeter fence, which will not exceed 7 feet (2.1 meters) in height.

8. The PV solar modules will be supported by racking systems and oriented in rows running from east to west for fixed tilt systems and north to south for single access trackers, angled at a degree that maximizes solar resource efficiency in the case of fixed tilt systems. The racking system will be supported by approximately 105,000 steel posts installed with a combination of pile-driving machines and augers. The center height of the racking structures will be approximately 4 feet (1.2 meters) to 6.8 feet (2.1 meters) above the ground. The highest point of each module will be approximately 8 feet (2.4 meters) to 14 feet (4.3 meters) above the ground. The modules will be connected using DC cables that can either be buried in a trench or attached to the racking system. The DC cables gather at the end of racking systems to combiner boxes which are connected to cables routing to an inverter.

9. Approximately 69 inverters will be installed throughout the Project to convert the DC power from the 1,500volt DC collection system to AC power, which will then be transmitted to a Project substation via the 34.5-kilovolt (kV) AC collection system. The AC collection system will include underground and/or overhead segments. Underground segments of the AC collection system will be buried a minimum of 3 feet (0.9 meters) below grade; and overhead portions will not exceed a maximum height of 45 feet (13.7 meters) above grade. The AC collection system will be comprised of medium voltage (MV) cable that will transfer electricity to the Project substation. Approximately 1,800,000 linear feet of DC collection system cables and 450,000 linear feet of AC collection cables would be installed throughout the Project. Collection cables are congregated into common trenches and run adjacent to one another.

10. The Project will require one substation that will include one 140-mega volt ampere (MVA) transformer and all necessary equipment to step up incoming MV electricity to the high voltage electricity necessary to interconnect into the existing 138kV Inez substation onsite owned

and operated by Kentucky Power Company, an American Electric Power (AEP) Company. The gen-tie line will be no more than 300 feet (91.4 meters) in length, will be located entirely within the project footprint, and will be constructed by the Applicant. Kentucky Power Company will be responsible for any additional transmission equipment located within the switchyard for the Project. It is anticipated that the gen-tie poles and substation components will not exceed 110 feet (33.5 meters) above grade.

III. Public Notice Evidence

11. Pursuant to KRS 278.706(2)(c), a sample letter that was sent out to landowners whose property borders the proposed site, followed by the list of addresses and names of those landowners who were sent notices on January 27, 2021, is contained in Exhibit B. Two copies of this notice were mailed to each landowner, one via regular US Mail and one via Certified mail; see Exhibit B for certified mail receipts. Additional letters were mailed to the same landowners using the same methods on May 12, 2021, to provide notice of the pending application. An example can be found in Exhibit B.

12. Also contained in Exhibit B is the affidavit of publication of the notice published in The Mountain Citizen on January 27, 2021, which is the newspaper of general circulation in Martin County, as well as a scanned copy of that notice. Exhibit B also contains a scanned copy of the notice of application that was published in The Mountain Citizen on May 19, 2021.

IV. Compliance with Local Ordinance and Regulations

13. Pursuant to KRS 278.706(2)(d), the Project lies in Martin County, which has not enacted any zoning ordinances or setback requirements pertaining to the location of the Project. There is no planning and zoning commission with jurisdiction over the location of the Project and,

therefore, no setback requirements set by such a planning commission exist. The Applicant certifies that the Project will comply with all local ordinances and regulations concerning noise control and with any applicable local planning and zoning ordinances. A statement certifying these facts is submitted as Exhibit C.

V. Setback Requirements

14. Pursuant to KRS 278.706(2)(e), the Project is located on a site that includes the former Martiki prep plant (Permit No. 880-8023); however, the Project will not use any waste coal as a fuel source. The Project site does not have any existing electricity generating facilities. Martin County has not established setback requirements for this location, nor has a planning unit enacted any setback requirements for this location, per the information provided in Section IV.

15. The Project will not include any exhaust stacks or wind turbines as part of the facility; the Project will not be required to follow setback requirements set forth in KRS 278.704(3), from the property boundary of any adjoining property owner to the energy generating facilities.

16. There is one residential neighborhood (as defined by KRS 278.700(6)) within two thousand (2,000) feet of the Project's facilities. However, the project sits approximately 240 feet in elevation above and 1,000 feet away from the site. Pursuant to KRS 278.704(4), a motion to deviate from the setback requirements is forthcoming.

VI. Public Notice Report

17. Pursuant to KRS 278.706(2)(f), the Applicant has made a substantial effort to engage the public in numerous ways regarding the Project. Martin County Solar has held in-person public meetings, online public meetings, in-person meetings with media, county officials, and

neighboring residents. In all communications, Martin County Solar has endeavored to be transparent regarding the specifics of the proposed project.

18. A virtual public meeting was held at 6:00pm on February 10, 2021 to inform the public about the Project and receive comments from the public. A notice announcing the public meeting was published in The Mountain Citizen on January 27, 2021. Additionally, notice was mailed to adjacent property owners via certified mail on January 27, 2021 (Exhibit B).

19. During the public meeting, attendees were shown enlarged satellite images showing the exact location of the proposed solar array and the proposed Project layout. A formal presentation was given on other topics including environmental health and safety of PV, specifics regarding the BESS, and the impact of solar projects on property values. Experts who were present at the public meeting, and available to answer questions from attendees included:

- Erich Miarka, Development Lead for Martin County Solar, Savion
- Jason Funk, Director Permitting and Environmental for Martin County Solar, Savion
- Joshua Crumpler, Senior Renewables Civil Engineer, Martin County Solar, Savion
- Joshua Adams, Environmental Services, Principal, Stantec Consulting Services
- Allan Hug, KAOH Media
- Adam Edelen, Edelen Strategic Ventures, LLC
- Johnna Guinty, Vice President Marketing & Public Relations, Martin County Solar, Savion
- Emily Truebner, Vice President Permitting & Environmental, Martin County Solar, Savion
- Drew Gibbons, Senior Development Director, Savion

Members of the general public that attended the meeting include:

- Karen Rignall
- Kayla Jude
- Larry (no last name provided)
- Nina McCoy
- The following attendees joined the meeting via the internet and did not provide Names or contact information, only their IP addresses are available.
 - 73.202.250.59
 - 74.133.227.216
 - 50.25.55.175
 - 50.25.76.115
 - 174.202.70.227

- 50.25.73.131
- 50.25.60.169
- 192.181.157.61
- 174.203.139.208
- 74.139.79.41
- 50.25.68.6
- 50.25.50.75

20. The following is a brief description of other public involvement activities, in addition to the public meeting and various outreach activities/meetings with local stakeholders, undertaken prior to the submission of this Application. Martin County Solar will continue these efforts and will participate in any public notice, comment, and hearings which may be initiated as part of ongoing permitting activities.

[page intentionally left blank]

Table 1. Public Involvement Activities

Date	Event	Audience	Notes
11/13/2019	Meeting with Judge Executive and Economic Development Authority		Meeting with County Judge Executive and economic development authority, introducing them to the project.
3/10/2020	Public Fiscal Court Meeting	Fiscal Court and public.	General presentation on the project.
12/2/2020	Public Fiscal Court meeting; Industrial Revenue Bond (IRB) passage	Fiscal Court and public.	Passed the IRB and form Payment in Lieu of Taxes (PILOT) through inducement resolution.
12/8/2020	Meeting and Site Visit with Judge Executive, Deputy Judge, and reporters on site.	Public	Met two reporters on site, one from Lexington Herald, and the other from WSAZ
12/8/2020	WSAZ News Report	Public, tv broadcast on CBS affiliate	https://www.wsaz.com/2020/12/09/solar-power-farm-bringing-nearly-300-jobs-to-martin-county/
12/11/2021	Martin County Board of Education meeting	Board of Education and public	No public attendees showed up. The project was on the agenda. Gave a general project overview and detailed the PILOT.
12/22/2020	Lexington Herald Leader article	Public, newspaper article	https://www.kentucky.com/news/state/article247670115.html
01/27/2021	Mountain Citizen Newspaper	Public, Newspaper Advertisement	Public Notice of Intent to File an Application.
05/19/2021	Mountain Citizen Newspaper	Public, Newspaper Advertisement	Public Notice of Application Filing.

VII. Efforts to Locate Near Existing Electric Generation

21. It is rare for utility-scale solar projects to be co-located with existing electricity generating infrastructure, such as a coal or natural gas fired power plant. However, pursuant to KRS 278.706(2)(g), efforts were made to locate the Project where there is existing electricity

transmission infrastructure. Due to the developer's efforts, this Project is located on reclaimed coal mine land with an existing substation and transmission lines.

22. The Project will interconnect to an on-site, existing 138 kV substation and transmission lines owned by Kentucky Power, an AEP Company. At the project's expense, Kentucky Power will expand the existing breaker-and-half substation to include the addition of a new string and installation of two (2) 138 kV circuit breakers. Information on Kentucky Power's studies of the interconnection cost and infrastructure are included in the System Impact Study included in Exhibit D.

VIII. Proof of Service to County and Municipality Officials

23. Pursuant to KRS 278.706(2)(h), a copy of the Siting Board application for Martin County Solar Project, LLC was electronically transmitted to the Judge-Executive of Martin County, Victor Slone on the date of electronic filing of this application (May 19,2021) and a hard copy mailed by United States Postal Service (USPS).

IX. Effect on Kentucky Electricity Generation System

24. Pursuant to KRS 278.706(2)(i), the Project is within the AEP service territory, and therefore, the interconnection of the project will be on the Kentucky Power system. AEP is the Independent Transmission Organization (ITO) that manages requests for interconnection with AEP's transmission system.

25. The interconnection study process for the Pennsylvania, Jersey, Maryland Power Pool (PJM) involves three study phases; Feasibility Study, System Impact Study, and Facilities Study.

26. Attached as Exhibit D is the Independent System Operator's (ISO) System Impact Report dated August 2020.

X. Effect on Local and Regional Economies

27. Pursuant to KRS 278.706(2)(j), an Economic Impact Study was completed for the Project by Strategic Economic Research included in Exhibit E. As the report demonstrates, utility-scale solar energy projects have numerous economic benefits. Solar installations create job opportunities in the local area during both the short-term construction phase and the long-term operational phase. In addition to the workers directly involved in the construction and maintenance of the solar energy project, numerous other jobs are supported through indirect supply chain purchases and the higher spending that is induced by these workers. Solar projects strengthen the local tax base and help improve county services, and local infrastructure, such as public roads.

28. According to the Economic Impact Study, the Project is projected to create 251 local (Martin County) jobs during construction and the equivalent of 16.2 full time local, long term jobs during operation. To the extent feasible, jobs will be sourced locally and will create over \$20,000,000 in new local earnings during construction and another \$754,000 in new local long-term earnings; and a local output of more than \$28,000,000 during construction and \$1,476,000 during operation. In addition, the Project is projected to raise the local tax base by \$9,000,000 over the life of the Project. See Exhibit E for a full report on the impact of the Project on local and regional economies.

XI. Record of Environmental Violations

29. Pursuant to KRS 278.706(2)(k), neither the Applicant, nor any entity with ownership interest in the Project, has violated any state or federal environmental laws or

regulations. There are no pending actions, judicial or administrative, against the Applicant nor any entity with ownership interest in the Project.

XII. Site Assessment Report

30. Pursuant to KRS 278.706(2)(1), the site assessment report is being contemporaneously filed herewith; please see the separate document titled “Martin County Solar Project, LLC, Kentucky State Board on Electric Generation and Transmission Application, Site Assessment Report, Case No. 2021-00029”, May 2021 and labeled as Exhibit F.

Dated this 19th day of May 2021.

Respectfully submitted,

FROST BROWN TODD LLC



Gregory T. Dutton
FROST BROWN TODD LLC
400 W. Market Street, 32nd Floor
Louisville, KY 40202
(502) 589-5400
(502) 581-1087 (fax)
gdupton@fibtllaw.com
Counsel for Martin County Solar Project, LLC

Statutory/Regulation Requirements
General ESB Certificate

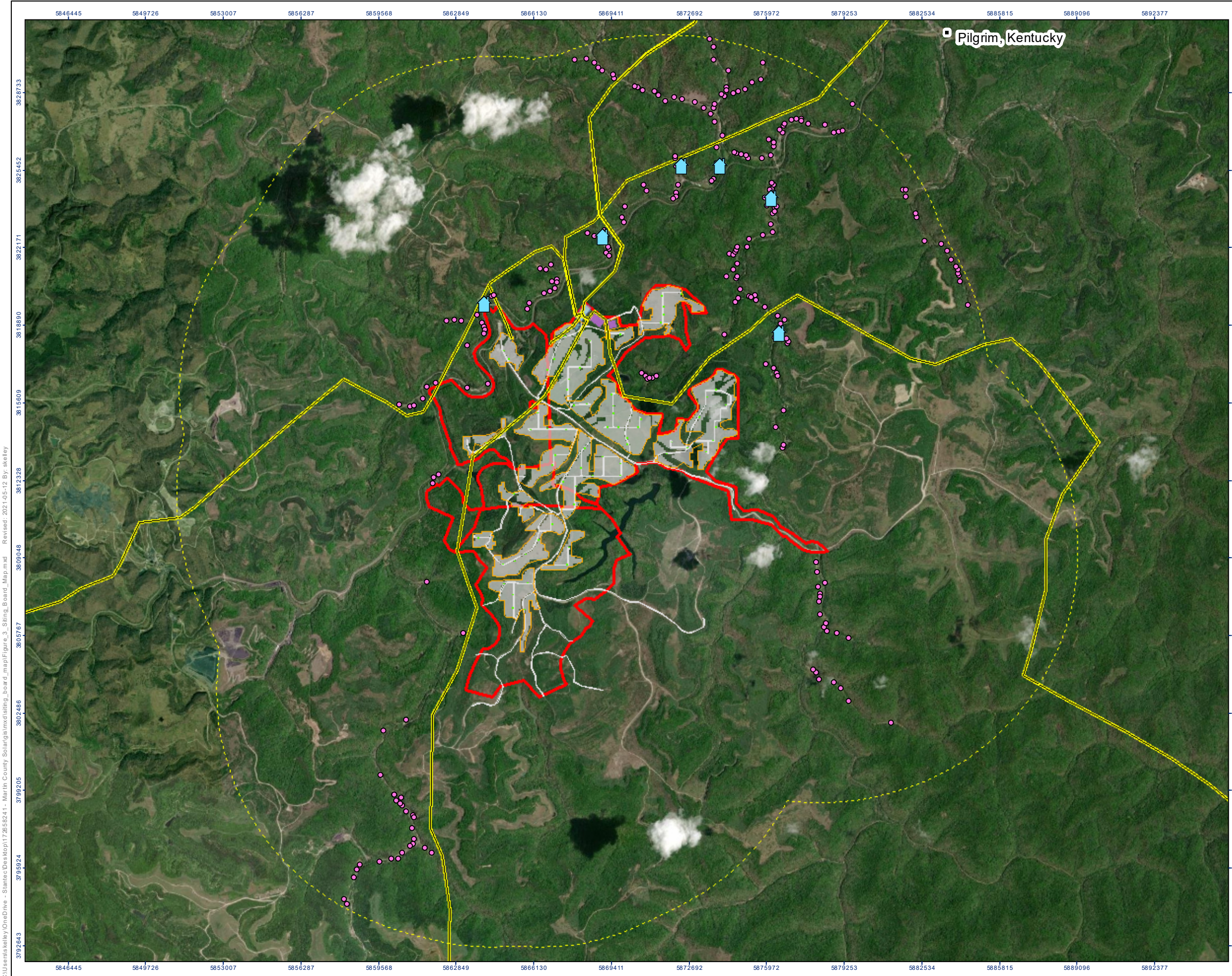
KRS 278.____	Description	Filing
<u>278.706(2)(a)</u>	The name, address, and telephone number of the person proposing to construct and own the merchant generating facility	Application ¶ 1
<u>(2)(b)</u>	A full description of the proposed site, including a map showing the distance of the proposed site from residential neighborhoods, the nearest residential structures, schools, and public and private parks that are located within a two (2) mile radius of the proposed facility	Application ¶ 5; Exh. A
<u>(2)(c)</u>	Evidence of public notice that shall include the location of the proposed site and a general description of the project, state that the proposed line is subject to approval by the board, and provide the telephone number and address of the Public Service Commission. Public notice shall be given within thirty (30) days immediately preceding the application filing to: 1. Landowners whose property borders the proposed site; and 2. The general public in a newspaper of general circulation in the county or municipality in which the facility is proposed to be located	Application ¶¶ 11-12; Exh. B
<u>(2)(d)</u>	A statement certifying that the proposed plant will be in compliance with all local ordinances and regulations concerning noise control and with any local planning and zoning ordinances. The statement shall also disclose set back requirements established by the planning and zoning Commission as provided under KRS 278.704(3)	Application ¶ 13; Exh. C
<u>(2)(e) [1st]</u>	If the facility is not proposed to be located on a site ... in an area where a planning and zoning commission has established a setback requirement pursuant to KRS 278.704(3), a statement that ... all proposed structures or facilities used for generation of electricity are two thousand (2,000) feet from any residential neighborhood, school, hospital, or nursing home facility....	<i>Motion to Deviate forthcoming</i> ; Application ¶ 16
<u>(2)(e) [2nd]</u>	If the facility is proposed to be located on a site of a former coal processing plant and the facility will use on-site waste coal as a fuel source, a statement that the proposed site is compatible with the setback requirements provided under KRS 278.704(5)	N/A

<u>[3rd]</u>	If the facility is proposed to be located in a jurisdiction that has established setback requirements pursuant to KRS 278.704(3), a statement that the proposed site is in compliance with those established setback requirements	<i>Martin County has no established setback requirements; N/A</i>
<u>(2)(f)(1)</u>	A complete report of the applicant's public involvement program activities undertaken prior to the filing of the application, including: The scheduling and conducting of a public meeting in the county or counties in which the proposed facility will be constructed at least ninety (90) days prior to the filing of an application, for the purpose of informing the public of the project being considered and receiving comment on it	Application ¶¶ 17-20; Exh. B
<u>(2)</u>	Evidence that notice of the time, subject, and location of the meeting was published in the newspaper of general circulation in the county, and that individual notice was mailed to all owners of property adjoining the proposed project at least two (2) weeks prior to the meeting	Application ¶ 18; Exh. B
<u>(3)</u>	Any use of media coverage, direct mailing, fliers, newsletters, additional public meetings, establishment of a community advisory group, and any other efforts to obtain local involvement in the siting process	Exh. D
<u>(2)(g)</u>	A summary of the efforts made by the applicant to locate the proposed facility on a site where existing electric generating facilities are located	Application ¶ 21
<u>(h)</u>	Proof of service of a copy of the application upon the chief executive officer of each county and municipal corporation in which the proposed line is to be located, and upon the chief officer of each public agency charged with the duty of planning land use in the general area in which the line is proposed to be located.	Application ¶ 23
<u>(i)</u>	An analysis of the proposed facility's projected effect on the electricity transmission system in Kentucky	Exh. D
<u>(2)(j)</u>	An analysis of the proposed facility's economic impact on the affected region and the state	Exh. E
<u>(k)</u>	A detailed listing of all violations by it, or any person with an ownership interest, of federal or state environmental laws, rules, or administrative regulations, whether judicial or administrative, where violations have resulted in criminal convictions or civil or administrative fines exceeding five thousand dollars (\$5,000). The status of any pending action, whether judicial or administrative, shall also be submitted.	Application ¶ 29
<u>(l)</u>	A site assessment report as specified in KRS 278.708.	Exh. F

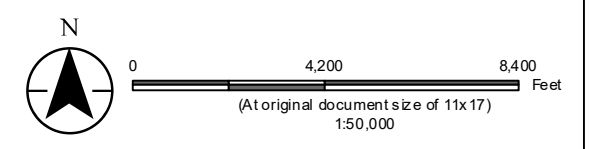
<u>278.704(2)</u>	Except as provided [by locally-established setback requirements or through a deviation granted pursuant to KRS 278.704(4)] ... all proposed structures or facilities used for generation of electricity are two thousand (2,000) feet from any residential neighborhood, school, hospital, or nursing home facility.	<i>Motion to Deviate forthcoming; Application ¶ 16</i>
<u>.704(3)</u>	If the merchant electric generating facility is proposed to be located in a county or a municipality with planning and zoning, then setback requirements from a property boundary, residential neighborhood, school, hospital, or nursing home facility may be established by the planning and zoning commission.	<i>Martin County has no established setback requirements; N/A</i>
<u>278.708(1)</u>	A site assessment report ... as required under KRS 278.706(2)(1)	Exh. F
(2)	A site assessment report ... prepared by the applicant or its designee.	Exh. F
<u>.708(3)(a)</u>	A description of the proposed facility that shall include a proposed site development plan that describes: 1. Surrounding land uses for residential, commercial, agricultural, and recreational purposes; 2. The legal boundaries of the proposed site; 3. Proposed access control to the site; 4. The location of facility buildings, transmission lines, and other structures; 5. Location and use of access ways, internal roads, and railways; 6. Existing or proposed utilities to service the facility; 7. Compliance with applicable setback requirements as provided under KRS 278.704(2), (3), (4), or (5); and 8. Evaluation of the noise levels expected to be produced by the facility	Exh. F, Section 1; Exh. F, Exh. A-E
<u>(3)(b)</u>	An evaluation of the compatibility of the facility with scenic surroundings;	Exh. F, Section 2
<u>(c)</u>	The potential changes in property values and land use resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility	Exh. F, Section 3; Exh. F, Exh. B
<u>(d)</u>	Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary; and	Exh. F, Section 4; Exh. F, Exh. D

<u>(e)</u>	The impact of the facility's operation on road and rail traffic to and within the facility, including anticipated levels of fugitive dust created by the traffic and any anticipated degradation of roads and lands in the vicinity of the facility	Exh. F, Section 5; Exh. F, Exh. E
<u>(4)</u>	The site assessment report shall also suggest any mitigating measures to be implemented by the applicant to minimize or avoid adverse effects identified in the site assessment report	Exh. F, Section 6

EXHIBIT A

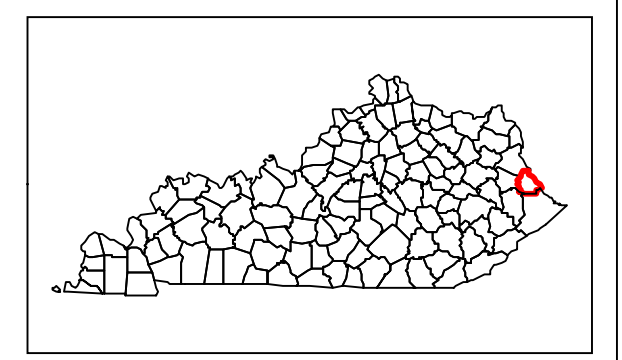


- Legend**
- Project Site
 - 2-Mile Buffer
 - BESS Sites
 - Substation
 - Electrical Transmission Line
 - Fenceline
 - Inverters
 - Racks
 - Access Roads
 - House Locations
 - Neighborhood



Notes

1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet
2. Data Sources: Imagery Date (5/8/2018)
3. Background: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Project Location
 Wolf Creek Road (CR-1439)
 hez (Threeforks), Martin County, Kentucky

Prepared by SPK on 2021-04-16
 TR by LC on 2021-04-16
 R Review by JJA on 2020-04-16

Client/Project
 Martin County Solar Project, LLC
 Siting Board Application

172658261 REVA

Title
 Exhibit A Project Site

C:\Users\skelley\OneDrive - Stantec\Desktop\172658261 - Martin County Solar\img\sliding_board_map\Figure_3_Sliding_Board_Map.mxd Revised: 2021-05-12 By: skelley

EXHIBIT B

MARTIN COUNTY SOLAR PROJECT

January 26, 2021

[NAME]
[Address]
[CITY, STATE, ZIP]

Dear Name,

We are writing again to inform you of an approximate 200-megawatt solar energy project we are developing on the old Martiki mine site adjacent to your property located in Pilgrim, KY. We have been working for the past year to develop the Martin County Solar Project and are formally submitting our project to the Kentucky Electric Generation and Transmission Siting Board for review and approval to begin construction in the next 12-18 months.

Savion LLC, the owner of Martin County Solar, LLC, is one of the largest, most technologically advanced utility-scale solar and energy storage project development companies in the U.S. We have been developing over 130 utility-scale photovoltaic (PV) and energy storage projects in more than 25 states. We uphold the highest standard of safety and competency required for long-term and day-to-day operations.

We are excited to be working in partnership with the Martin County community on an opportunity to host a renewable energy generation facility, located on a previously disturbed reclaimed mine. We feel the reuse of this area for the development and operation of renewable energy is the perfect opportunity for the state of Kentucky to lead in the effort to bringing our country to a future that will allow for energy independence. We look forward to addressing any questions and/or concerns the local community may have when it comes to siting a solar facility on this previously mined site. In general, communities receive numerous economic and environmental benefits from hosting a solar facility. This includes providing potentially hundreds of jobs during construction. In these cases, Martin County Solar will make all efforts to utilize local labor, where available. Tax revenue generated by solar facilities also provide positive benefits to the local economy through increased revenues to local governments and other services, including helping fund improvements to schools, roads, and social services. When the project has reached the end of its life span, the land will be restored to its original use using best practices.

We have set up a project website to provide additional information and help keep you informed of project updates. You can visit it at www.martincountysolarproject.com. Additionally, we are pleased to invite you to a virtual meeting Wednesday February 10, 2021 at 6pm where more information will be provided. You can access this meeting using the following information:

Dial-in Number: 877-229-8493
Access ID Code: 119551#

Thank You,



Erich Miarka
Senior Development Manager
913-568-0331
Emiarka@savionenergy.com

OWNER	ADDRESS	TOWN	STATE	ZIP
BLEVINS,TIMOTHY	513 CASSIUS MOORE RD	PILGRIM	KY	41250
DILLON,MELISSA	RT. 1714 BEFORE LAURA FKS	PILGRIM	KY	41250
FARLEY,BERT	PIGEON ROOST	PILGRIM	KY	41250
FARLEY,BERT	PIGEON ROOST	INEZ	KY	41224
HALE,BOBBY	469 BIG PETER CAVE ROAD	PILGRIM	KY	41250
HALE,BOBBY	2909 PIGEON ROOST RD	PILGRIM	KY	41250
HALE,BOBBY	469 BIG PETER CAVE ROAD	PILGRIM	KY	41250
HARDIN,T J	S WOLF CREEK	PILGRIM	KY	41250
HARDIN,T J	S WOLF CREEK	PILGRIM	KY	41250
HOWARD, GLEN & ORGIE	5162 S WOLF CREEK	PILGRIM	KY	41250
HOWARD,GLEN	5162 S WOLF CREEK	PILGRIM	KY	41250
HOWARD,GLEN	5162 S WOLF CREEK	PILGRIM	KY	41250
HOWARD,LACY	RT 1714 BFR FALL ROCK HL	PILGRIM	KY	41250
JONES,RALPH D	RT 1439	INEZ	KY	41224
JUDE,CHRISTOPHER	2592 PIGEON ROOST RD	PILGRIM	KY	41250
JUDE,CHRISTOPHER	2592 PIGEON ROOST RD	PILGRIM	KY	41250
JUDE,DAVE	127 DANS BR	PILGRIM	KY	41250
JUDE,JOHN E	DANS BRANCH PIGEON ROOST	PILGRIM	KY	41250
JUDE,PHILLIP	2254 S WOLF CREEK	PILGRIM	KY	41250
LAUREN LAND COMPANY,	POPULAR THICKET	INEZ	KY	41224
LEXINGTON COAL COMPANY LLC,	S WOLF CREEK	INEZ	KY	41224
LOWE,JAMES	10 MILES UP WOLF CREEK	PILGRIM	KY	41250
MILLS,BRENDA BUTCH	128 POPLAR THICKET RD	PILGRIM	KY	41250
MOORE,PAUL	MEATHOUSE RD	PILGRIM	KY	41250
MOORE,SAM	S WOLF CREEK	INEZ	KY	41224
MOORE,SHELBY	163 ASHLOG BR	INEZ	KY	41224
MUNCY,GRACE	2 MILES PAST MARTIKI	PILGRIM	KY	41250
MUNCY,T A	MEATHOUSE RD	PILGRIM	KY	41250
PAULEY,WILLIAM	672 S WOLF CRK	PILGRIM	KY	41250
POCAHONTAS SURFACE INTERESTS INC	46-MR-02	PILGRIM	KY	41250
POCAHONTAS SURFACE INTERESTS INC,	46-MR-02	PILGRIM	KY	41250
POCAHONTAS SURFACE INTERESTS INC,	46-MR-02	PILGRIM	KY	41250
POCAHONTAS SURFACE INTERESTS INC,	46-MR-02	PILGRIM	KY	41250
POCAHONTAS SURFACE INTERESTS INC,	46-MR-02	PILGRIM	KY	41250
PREECE,ANDREW	RT 1439 AC FR JUDE GULF	PILGRIM	KY	41250
PREECE,BILLY RAY	RT 1439	PILGRIM	KY	41250
REVELATION ENERGY LLC,	CARCASS BRANCH	PILGRIM	KY	41250
STATON,EMZY	2817 PIGEON ROOST RD	PILGRIM	KY	41250
STATON,HOWARD EUGENE	PIGEON ROOST	PILGRIM	KY	41250
STATON,RUTH ELLEN	2648 PIGEON ROOST RD	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	MEATHOUSE RD	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	MEATHOUSE RD	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	MILL BR PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PETER CAVE ROAD	PILGRIM	KY	41250

TRIPLE H REAL ESTATE LLC,	PETER CAVE ROAD	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PETERCAVE ROAD	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	PIGEON ROOST	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	ROCKHOUSE BR THREEFORKS	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1214 PAST FALLROCK BR	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 ABOVE MILL BRANCH	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 BEFROE MILL BR	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 BEFROE MILL BR	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 MILL BRANCH	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 PAST PETER CAVE	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	S WOLF CREEK	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	SCHOOL HOUSE BR PIGEON RT	PILGRIM	KY	41250
TRIPLE H REAL ESTATE LLC,	RT 1714 FALL ROCK BRANCH	PILGRIM	KY	41250
YOUNG,DONNY	1934 PIGEON ROOST RD	PILGRIM	KY	41250

7016 1970 0000 6670 8398

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Emzy Staton

2817 PIGEON ROOST RD

PILGRIM, KY 41250

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8404

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: William Pauley

672 S WOLF CRK

PILGRIM, KY 41250

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8428

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Brenda Butch Mills

128 POPLAR THICKET RD

PILGRIM, KY 41250

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8374

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Donny Young

1934 PIGEON ROOST RD

PILGRIM, KY 41250

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8381

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Ruth Ellen Staton

2648 PIGEON ROOST RD

PILGRIM, KY 41250

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8428

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Shelby Moore

163 ASHLOG BR

INEZ, KY 41224

Postmark Here
JAN 27 2011
USPS 41245

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1970 0000 6670 8442

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage \$

To: Dave Jude

Se: 127 DANS BR

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7016 1970 0000 6670 8435

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$

To: Phillip Jude

Se: 2254 S WOLF CREEK

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7016 1970 0000 6670 8466

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage \$

To: Glen Howard

Se: 5162 S WOLF CREEK

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7016 1970 0000 6670 8459

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage \$

To: Christopher Jude

Se: 2592 PIGEON ROOST RD

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7016 1970 0000 6670 8480

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage \$

To: Bobby Hale

Se: 469 BIG PETER CAVE ROAD

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



7016 1970 0000 6670 8473

**U.S. Postal Service™
CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$


Postage \$

To: Bobby Hale

Se: 2909 PIGEON ROOST RD

St: PILGRIM, KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OFFICIAL USE

Certified Mail Fee \$

Extra Services & Fees (check box, add fee as appropriate)

- Return Receipt (hardcopy) \$
- Return Receipt (electronic) \$
- Certified Mail Restricted Delivery \$
- Adult Signature Required \$
- Adult Signature Restricted Delivery \$

Postage \$

Timothy Blevins

513 CASSIUS MOORE RD

PILGRIM, KY 41250



7016 1970 0000 6670 8497

AFFIDAVIT OF PUBLICATION

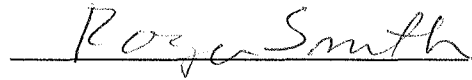
I, Roger Smith, Publisher of **The Mountain Citizen**, a newspaper published in **Inez, Kentucky**, and having the largest circulation of any newspaper in **Martin County, Kentucky**, do hereby certify, from my own knowledge and a check of the files of this newspaper, that the advertisement of PUBLIC NOTICE for MARTIN COUNTY SOLAR PROJECT, LLC was inserted in **The Mountain Citizen** on the following dates

DATE 01-27-21 PAGE NO: 3B COLUMN NO: 8&9

DATE _____ PAGE NO: _____ COLUMN NO: _____

DATE _____ PAGE NO: _____ COLUMN NO: _____

DATE _____ PAGE NO: _____ COLUMN NO: _____

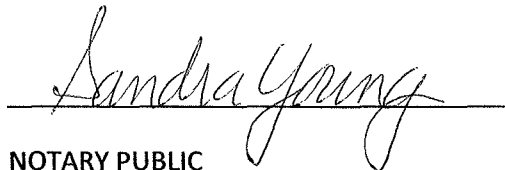


ROGER SMITH, PUBLISHER

STATE OF KENTUCKY

COUNTY OF MARTIN

SUBSCRIBED, SWORN TO and ACKNOWLEDGED before me by ROGER SMITH, Publisher, this 27TH day of JANUARY, 2021.



NOTARY PUBLIC

My commission expires: April 15, 2024. ID #: KYNP6099.

LEGALS

LEGAL NOTICE

A message from Jaryd H. Crum, Esq.

A complaint has been filed in the Martin Circuit Court by MID SOUTH CAPITAL PARTNERS, LP against BRANDI DAVIS a/k/a BRANDI HENSLEY, et al. The Defendant in which I have been ordered to notify is SHIRLEY WALLER. The lawsuit concerns real estate in Martin County. I, Jaryd H. Crum, represent no one in this lawsuit. Rather, I have merely been appointed by the court as a "Warning Order Attorney" to publish this message to inform THOSE LISTED ABOVE of this case. I further advise that: (a) you may acquire additional information about this matter by consulting with the Martin Circuit Court Clerk (case number: 20-CI-00182); (b) that if you are an interested party and take no action within the next 20 days, that a Court judgement may be entered in the case. You may contact the Martin Circuit Court Clerk to obtain more information regarding this matter.

3,4b

thority has
dance with
ulation of
1 rates can
tin County
t Riverside
rfield KY
ns will be
i. The pub-
end March
fect at that
se contact
395-5575.

Extension
z, KY. will
meeting on
m, Zoom
to contact
Extension

PUBLIC NOTICE

MARTIN COUNTY SOLAR PROJECT

Martin County Solar Project, LLC, is proposing to develop and construct an approximately 200-megawatt solar electric generating facility to be located on Old Martiki Road in Martin County, Kentucky. The public is invited to learn more about the Project through the Project website and a virtual public information meeting.

The Project website includes information about the size and location of the proposed Project and the anticipated economic impact. Information on an upcoming virtual meeting is also included.

The website can be accessed at: martincountysolarproject.com. Additionally, you may email questions to info@martincountysolarproject.com.

A virtual public information meeting will be held to provide a live presentation of the Project, followed by a live question and answer session. The public meeting will be held on February 10, 2021, at 6:00 pm. The public meeting will be accessible via the internet and telephone. You may join the meeting by visiting the Project website at martincountysolarproject.com and clicking the "join online" link.

The dial in number is 877-229-8493 and the access ID code is 119551#. The presentation will be recorded and available on the Project website after the meeting date.

4pd

-298-7570



CHECK US OUT!

VEHICLES NOW HAVE SALE PRICE IN WINDOW!



The Wonder Corgi, Shelter Rescue and Allen Bolling

nsburg, KY • www.mannautos.com

-5PM, SATURDAY • 9AM-3PM



MARTIN COUNTY

SOLAR PROJECT

May 12, 2021

[NAME]
[Address]
[CITY, STATE, ZIP]

Dear Name,

We are writing again to inform you of an approximate 200-megawatt solar energy project we are developing on the old Martiki mine site adjacent to your property located in Pilgrim, KY. We have been working for the past year to develop the Martin County Solar Project and are formally submitting our project to the Kentucky Electric Generation and Transmission Siting Board for review and approval to begin construction in the next 12-18 months.

Savion LLC, the owner of Martin County Solar, LLC, is one of the largest, most technologically advanced utility-scale solar and energy storage project development companies in the U.S. We have been developing over 130 utility-scale photovoltaic (PV) and energy storage projects in more than 25 states. We uphold the highest standard of safety and competency required for long-term and day-to-day operations.

We are excited to be working in partnership with the Martin County community on an opportunity to host a renewable energy generation facility, located on a previously disturbed reclaimed mine. We feel the reuse of this area for the development and operation of renewable energy is the perfect opportunity for the state of Kentucky to lead in the effort to bringing our country to a future that will allow for energy independence. We look forward to addressing any questions and/or concerns the local community may have when it comes to siting a solar facility on this previously mined site. In general, communities receive numerous economic and environmental benefits from hosting a solar facility. This includes providing potentially hundreds of jobs during construction. In these cases, Martin County Solar will make all efforts to utilize local labor, where available. Tax revenue generated by solar facilities also provide positive benefits to the local economy through increased revenues to local governments and other services, including helping fund improvements to schools, roads, and social services. When the project has reached the end of its life span, the land will be restored to its original use using best practices.

We enclosed a notice for the upcoming permit application submission that will be filed to the state within the coming week. If you have any questions about the project or would like to learn more, please feel free to reach out to me at the contact information below.

Thank You,



Erich Miarka
Senior Development Manager
913-568-0331
Emiarka@savionenergy.com

7016 1370 0000 9854 9422

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Emzy Staton
2817 PIGEON ROOST RD
PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4731

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Mr. William Pauley
672 S WOLF CRK
PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4724

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Inez, KY 41224

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Shelby Moore

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4687

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Mr. Bobby Hale
2909 PIGEON ROOST RD
PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 9446

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Mr. Donny Young
1934 PIGEON ROOST RD
PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 9439

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee	\$3.60
Extra Services & Fees (check box, add fee as appropriate)	\$2.85
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55
 \$ Total \$7.00
 \$ Sent \$7.00
 \$ Sir
 \$ City

Ms. Ruth Ellen Staton

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4717

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Mr. Christopher Jude
 2592 PIGEON ROOST RD.
 PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4700

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Ms. Lacy Howard
 RT 1714 FALL ROCK HL
 PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4694

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Mr. Glen Howard

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9855 2026

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Ms. Brenda Butch Mills
 128 POPLAR WICKET RD.
 PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 9965

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Mr. Phillip Jude
 2254 S WOLF CREEK
 PILGRIM KY 41250

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 9958

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim, KY 41250

Certified Mail Fee \$3.60

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Mr. Phillip Jude

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7016 1370 0000 9854 4663

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim KY 41250

Certified Mail Fee **\$3.60** 0043
01

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$	\$2.85
<input type="checkbox"/> Return Receipt (electronic)	\$	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$	\$0.00
<input type="checkbox"/> Adult Signature Required	\$	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$	\$0.00

Postage **\$0.55**

Mr. Timothy Blevins
513 CASS MOORE RD
PILGRIM KY 41250

Postmark Here
05/12/2021

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

1370 0000 9854 4670

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Pilgrim KY 41250

Certified Mail Fee **\$3.60** 0043
01

Extra Services & Fees (check box, add fee if appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$	\$2.85
<input type="checkbox"/> Return Receipt (electronic)	\$	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$	\$0.00
<input type="checkbox"/> Adult Signature Required	\$	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$	\$0.00

Postage **\$0.55**

Mr. Bobby Hale
400 BIG BEVERCAVE ROAD

Postmark Here
05/12/2021

LEGALS

CLASSIFIED

FOR RENT:

Trailer for Rent located in Warfield (Collins Creek) 2 bedrooms.

\$350 mth., \$300 security deposit.

Call (606) 626-9690

FOR SALE

Mobile home for sale

2 BR, 2 BA, Living room, kitchen.

located at Spring Branch, 2 miles below Inez on Old Rt. 3, behind Ap. Reachout

Also for sale, small wood burning cook stove

Call (606) 939-3509 for info.

INEZ APARTMENTS

1 Bedroom, 1 Bath Unit Available

Pet Policy in Place

Free Laundry Room

Rent Ranges from \$100 and Up

Based on Income

Senior Citizens 62 and Older

606-298-7645



McCoy's Tree Service

P. O. Box 988

Inez, Kentucky 41224

(606) 395-0473

JAMES MCCOY
Owner • Fully Insured
Over 40 years experience

Complete Tree Service
Topping • Trimming • Removal
Stump Removal

NOTICE OF APPLICATION
MARTIN COUNTY SOLAR PROJECT

Martin County Solar Project, LLC is proposing to develop and construct an approximately 200-megawatt solar electric generating facility to be located on Old Martini Road in Martin County, Kentucky. The proposed Solar Project will be situated on approximately 1,500 acres of mainly reclaimed mine areas and will consist of photovoltaic panels and their associated racking systems, inverters, collection system, battery storage and project substation.

Martin County Solar Project, LLC is required to file an application with the Kentucky Electric Generation and Transmission Siting Board ("Board") for construction and operation of the proposed facility. This filing will occur in the coming weeks. This proposed construction is subject to approval by the Board, which can be reached at P.O. Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602-0615, or via phone at (502) 564-3940.

A person who wishes to become a party to a proceeding before the board may, by written motion filed no later than thirty (30) days after the application has been submitted, request leave to intervene. A party may, upon written motion filed no later than thirty (30) days after an application has been filed, request the board to schedule an evidentiary hearing at the offices of the Public Service Commission, 211 Sower Boulevard, Frankfort Kentucky. A request for a local public hearing or local public information meeting shall be made by at least three (3) interested persons who reside in the county or municipal corporation in which the pipeline, plant, or transmission line is proposed to be located. The request shall be made in writing and shall be filed within thirty (30) days following the filing of a completed application.

20b

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF)
MARTIN COUNTY WATER DISTRICT)
FOR ALTERNATIVE RATE ADJUSTMENT) CASE NO. 2021-00154

NOTICE FROM MARTIN COUNTY WATER DISTRICT

Notice is hereby given that a hearing is scheduled for May 27, 2021 at 9:00 a.m. Eastern Daylight Time, via video conferencing link, in the Richard Kall Hearing Room at the offices of the Public Service Commission at 211 Sower Boulevard, Frankfort, Kentucky.

The purpose of this hearing is to take evidence for Martin County Water District's request for emergency rate relief.

This hearing will be streamed live and may be viewed on the Public Service Commission website, pscky.gov. Public comments may be made at the beginning of the hearing. Those wishing to make oral public comments may do so by following the instructions listed on the Public Service Commission website, pscky.gov.

Printed legal notices
are part of the historic record
for communities.

There's no guarantee
history will be preserved online.

PUBLIC NOTICE

COMMONWEALTH OF KENTUCKY

24TH JUDICIAL CIRCUIT

MARTIN CIRCUIT COURT

CASE NO. 19-CI-050

APEX FUND SERVICES

CUSTODIAN FOR CERES TAX RECEIVABLES, LLC

PLAINTIFF

VS:

NOTICE OF SALE

RICK CRUM; REBECCA H. CRUM; UNKNOWN OCCUPANTS OF THE PREMISES; FIRST COMMONWEALTH BANK OF PRESTONSBURG, INC.; COMMONWEALTH OF KENTUCKY - MARTIN COUNTY

DEFENDANTS

By virtue of a Judgment and Order of Sale of the Martin Circuit Court entered the 24th day of February, 2021, in the above cause, for the sum of \$6,059.28, with interest thereon, plus additional sums and costs; please be advised that I shall proceed to offer for sale at the new county government building, outside the front door main street entrance, located at 42 E. Main Street, Inez, Martin County, Kentucky, to the highest and best bidder on May 25, 2021, at 10:00 o'clock a.m., upon the terms set forth below, the following property, to wit:

Owner: Rebecca H. Crum & Rick Crum
Address: 1128 New Rt. 3, Inez, KY 41224
PVA Map No.: 029-00-00-0601

THE SALE WILL BE HELD OUTDOORS, SOCIALLY DISTANCED, EVERY PERSON PRESENT FOR THE

SALEMUST WEAR A FACIAL COVERING, AND MAINTAIN SOCIAL DISTANCING, SPACING AT LEAST SIX FEET APART. ANYONE NOT IN COMPLIANCE WILL NOT BE ADMITTED. THOSE WHO ARE EXHIBITING SYMPTOMS OF COVID-19 AS IDENTIFIED BY THE CDC, HAS BEEN ASKED TO QUARANTINE. HAVE BEEN DIAGNOSED WITH COVID-19, OR WHO FALL WITHIN A HIGH RISK CATEGORY, WILL BE ALLOWED TO PARTICIPATE REMOTELY. CALL 606-298-0428 AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE SALE IF YOU MUST PARTICIPATE REMOTELY. FOR ARRANGEMENTS

The successful bidder shall either pay

The property described above is sold subject to any easements, restrictions, defects, liens or encumbrances of record in the Martin County Court Clerk's Office and such rights of redemption as may exist in favor of the United States of America and/or the record owners thereof.

This 4th day of May, 2021.

BRIAN CUMBO
CLERK & MASTER COMMISSIONER
Martin Circuit Court
P. O. Box 1844
Inez, Kentucky 41224
Telephone: 606-298-0428
Facsimile: 606-298-0316
Email: cumbolaw@cumbo1920b.com
law.com

PUBLIC NOTICE

Notice is hereby given that DONALD LEE BLACKBURN, 25 BLACKBURN LN, KY 41224, has filed an application with the Energy and Environment Cabinet to REPAIR (ROCK) CREEK BANKS APPROXIMATELY 500 FEET (LENGTH OF PROPERTY). The property is located JUST OFF KY-ROUTE 40 BLACKLOG RD AT BLACKBURN LANE. Any comments or objections can be submitted via email to: DOW@energyandenvironment.com; Kentucky Division of Water Floodplain Management Section, 300 Sower Blvd., Frankfort, KY 40601. Call 502-564-3410 with questions. 21.22.23 Pd

LEGAL deadline is Monday at 2 p.m. Call 606-298-7570

MIKE HARMON
AUDITOR OF PUBLIC ACCOUNTS

To the People of Kentucky
The Honorable Andy Beshear, Governor
Holly M. Johnson, Secretary, Finance and Administration Cabinet
The Honorable Victor Slone, Martin County Judge/Executive
The Honorable William Davis, Former Martin County Judge/Executive
The Honorable Kelly E. Callahan, Former Martin County Judge/Executive
Members of the Martin County Fiscal Court

Independent Auditor's Report

Report on the Financial Statement

We have audited the accompanying Statement of Receipts, Disbursements, and Changes in Fund Balances - Regulatory Basis of the Martin County Fiscal Court's financial statement as listed in the table of contents.

Management's Responsibility for the Financial Statement

Management is responsible for the preparation and fair presentation of this financial statement in accordance with accounting practices prescribed or permitted by the Department for Local Government to demonstrate compliance with the Commonwealth of Kentucky's regulatory basis of accounting and budget laws. This includes determining that the regulatory basis of accounting is an acceptable basis for the preparation of the financial statement in the circumstances. Management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of a financial statement that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on this financial statement based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States and the Audit Guide for Fiscal Court Audits issued by the Auditor of Public Accounts, Commonwealth of Kentucky. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statement. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statement, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statement in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statement.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Basis for Adverse Opinion on U.S. Generally Accepted Accounting Principles

As described in Note 1 of the financial statement, the financial statement is prepared by the Martin County Fiscal Court on the basis of the accounting practices prescribed or permitted by the Department for Local Government to demonstrate compliance with the Commonwealth of Kentucky's regulatory basis of accounting and budget laws, which is a basis of accounting other than accounting principles generally accepted in the United States of America.

The effects on the financial statement of the variances between the regulatory basis of accounting described in Note 1 and accounting principles generally accepted in the United States of America, although not reasonably determinable, are presumed to be material.

Adverse Opinion on U.S. Generally Accepted Accounting Principles

In our opinion, because of the significance of the matter discussed in the Basis for Adverse Opinion on U.S. Generally Accepted Accounting Principles paragraph, the financial statement referred to above does not present fairly, in accordance with accounting principles generally accepted in the United States of America, the financial position of the Martin County Fiscal Court as of June 30, 2018, or changes in financial position or cash flows thereof for the year then ended.

Opinion on Regulatory Basis of Accounting

In our opinion, the financial statement referred to above presents fairly, in all material respects, the fund balances of the Martin County Fiscal Court as of June 30, 2018, and their respective cash receipts and disbursements, and budgetary results for the year then ended, in accordance with the basis of accounting practices prescribed or permitted by the Department for Local Government described in Note 1.

Other Matters

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statement taken as a whole of the Martin County Fiscal Court. The Budgetary Comparison Schedules and Capital Asset Schedule, are presented for purposes of additional analysis and are not a required part of the financial statement; however, they are required to be presented in accordance with accounting practices prescribed or permitted by the Department for Local Government to demonstrate compliance with the Commonwealth of Kentucky's regulatory basis of accounting and budget laws.

The accompanying Budgetary Comparison Schedules and Capital Asset Schedule, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the financial statement. Such information has been subjected to the auditing procedures applied in the audit of the financial statement and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statement or to the financial statement itself, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Budgetary Comparison Schedules and Capital Asset Schedule, are fairly stated in all material respects in relation to the financial statement as a whole.

To the People of Kentucky
The Honorable Andy Beshear, Governor
Holly M. Johnson, Secretary Finance and Administration Cabinet
The Honorable Victor Slone, Martin County Judge/Executive
The Honorable William Davis, Former Martin County Judge/Executive
The Honorable Kelly E. Callahan, Former Martin County Judge/Executive
Members of the Martin County Fiscal Court

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have issued our report dated February 2, 2021, on our consideration of the Martin County Fiscal Court's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Martin County Fiscal Court's internal control over financial reporting and compliance.

Based on the results of our audit, we present the accompanying Schedule of Findings and Responses included herein, which discusses the following report findings:

2018-001 The Martin County Fiscal Court's Overall Design And Operation Of The Control Environment Needs Improvement
2018-002 The Martin County Fiscal Court Has Adequately Identified Federal Grants
2018-003 The Martin County Fiscal Court Has \$58,000 of Questioned HUD Funds
2018-004 The Martin County Fiscal Court Does Not Have Adequate Internal Controls Over Disbursement
2018-005 The Martin County Fiscal Court Does Not Have Adequate Internal Controls Over Receipts
2018-006 The Martin County Fiscal Court Did Not Properly Approve Transfers
2018-007 The Martin County Fiscal Court Did Not Have A Policy To Address Reimbursements To The Coroner's Office For Transports
2018-008 The Martin County Fiscal Court Does Not Have An Accurate Capital Asset Schedule Or Insurance Listing

Respectfully submitted,


Mike Harmon
Auditor of Public Accounts

February 2, 2021

State law requires the Auditor of Public Accounts to annually audit fiscal courts, county clerks, and sheriffs; and print the results in a newspaper having general circulation in the county. The complete audit and any other audit of state agencies, fiscal courts, county clerks, sheriffs, and property valuation administrators may be viewed in the reports section of the Auditor of Public Accounts website at www.auditor.ky.gov or upon request by calling 1-800-247-9126.

209 ST. CLAIR STREET
FRANKFORT, KY 40601-1817

TELEPHONE 502.564.3841
FACSIMILE 502.564.3912
WWW.AUDITOR.KY.GOV

AN EQUAL OPPORTUNITY EMPLOYER M / F / D

EXHIBIT C

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF MARTIN)
COUNTY SOLAR PROJECT, LLC FOR A)
CERTIFICATE OF CONSTRUCTION FOR)
AN APPROXIMATELY 200 MEGAWATT) Case No. 2021-00029
MERCHANT ELECTRIC SOLAR GENERATING)
FACILITY IN MARTIN COUNTY, KENTUCKY)
PURSUANT TO KRS 278.700 AND)
807 KAR 5:110.)

Certification Required by KRS 278.706(2)(d)

Comes the Affiant, Scott Zeimetz, and hereby states as follows:

1. I am over the age of 18 and a resident of Kansas
2. I am the Chief Development Officer of Savion, LLC, the direct parent company of Martin County Solar Project, LLC.
3. I have conducted an inquiry into the facts contained in this Statement and have found them to be true to the best of my knowledge and belief.
4. I hereby certify that the proposed facility as planned and to be constructed in Martin County, Kentucky will be in compliance with all local ordinances and regulations concerning noise control, and will be in compliance with any local planning and zoning ordinances.
5. There is no planning and zoning commission with jurisdiction over Martin County, and thus the county has no setback requirements.

EXHIBIT D



**Generation Interconnection
System Impact Study Report**

for

Queue Project AF1-130

INEZ 138 KV

133.9 MW Capacity / 200 MW Energy

August, 2020

Table of Contents

- 1 Introduction..... 4
- 2 Preface..... 4
- 3 General..... 5
- 4 Point of Interconnection..... 6
- 5 Cost Summary 6
- 6 Transmission Owner Scope of Work..... 8
 - 6.1 Attachment Facilities..... 8
 - 6.2 Direct Connection Cost Estimate..... 8
 - 6.3 Non-Direct Connection Cost Estimate..... 8
- 7 Incremental Capacity Transfer Rights (ICTRs) 9
- 8 Schedule..... 9
- 9 Interconnection Customer Requirements..... 9
- 10 Revenue Metering and SCADA Requirements10
 - 10.1 PJM Requirements.....10
 - 10.2 Meteorological Data Reporting Requirements.....10
 - 10.3 Interconnected Transmission Owner Requirements.....10
- 11 Summer Peak Analysis11
 - 11.1 Generation Deliverability11
 - 11.2 Multiple Facility Contingency11
 - 11.3 Contribution to Previously Identified Overloads.....11
 - 11.4 Steady-State Voltage Requirements.....11
 - 11.5 Potential Congestion due to Local Energy Deliverability.....11
 - 11.6 System Reinforcements.....12
- 12 Light Load Analysis13
- 13 Short Circuit Analysis.....13
- 14 Stability and Reactive Power Requirements for Low Voltage Ride Through13
- 15 Affected Systems13
 - 15.1 TVA.....13
 - 15.2 Duke Energy Progress.....13
 - 15.3 MISO13
 - 15.4 LG&E.....13

16 Attachment 1: One-Line Diagram and Point of Interconnection Map.....14

1 Introduction

This System Impact Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 205, as well as the System Impact Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is AEP.

2 Preface

The intent of the System Impact Study is to determine a plan, with approximate cost and construction time estimates, to connect the subject generation interconnection project to the PJM network at a location specified by the Interconnection Customer. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system. All facilities required for interconnection of a generation interconnection project must be designed to meet the technical specifications (on PJM web site) for the appropriate transmission owner.

In some instances an Interconnection Customer may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection or merchant transmission upgrade, may also contribute to the need for the same network reinforcement. The possibility of sharing the reinforcement costs with other projects may be identified in the Feasibility Study, but the actual allocation will be deferred until the System Impact Study is performed.

The System Impact Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

The Interconnection Customer seeking to interconnect a wind or solar generation facility shall maintain meteorological data facilities as well as provide that meteorological data which is required per Schedule H to the Interconnection Service Agreement and Section 8 of Manual 14D.

An Interconnection Customer with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). See Section 8.5.3 of Appendix 2 to the Interconnection Service Agreement as well as section 4.3 of PJM Manual 14D for additional information.

3 General

The Interconnection Customer (IC), has proposed a Solar generating facility located in Martin County, Kentucky. The installed facilities will have a total capability of 200 MW with 133.9 MW of this output being recognized by PJM as Capacity. The Point of Interconnection will be a direct connection to AEP's Inez 138 kV substation.

The proposed in-service date for this project is December 01, 2023. This study does not imply a TO commitment to this in-service date.

The objective of this System Impact Study is to determine budgetary cost estimates and approximate construction timelines for identified transmission facilities required to connect the proposed generating facilities to the ITO transmission system. These reinforcements include the Attachment Facilities, Local Upgrades, and Network Upgrades required for maintaining the reliability of the ITO transmission system.

Queue Number	AF1-130
Project Name	INEZ 138 KV
State	Kentucky
County	Martin
Transmission Owner	AEP
MFO	200
MWE	200
MWC	133.9
Fuel	Solar
Basecase Study Year	2023

Any new service customers who can feasibly be commercially operable prior to June 1st of the basecase study year are required to request interim deliverability analysis.

4 Point of Interconnection

AF1-130 will interconnect with the AEP transmission system via a direct connection to the Inez 138 kV station.

To accommodate the interconnection at the Inez 138 kV substation, the substation will have to be expanded, requiring addition of a new string and installation of two (2) 138 kV circuit breakers (see Attachment 1). Installation of associated protection and control equipment, 138 kV line risers, SCADA, and 138 kV revenue metering will also be required. AEP reserves the right to specify the final acceptable configuration considering design practices, future expansion, and compliance requirements.

Installation of the generator lead first span exiting the POI station, including the first structure outside the AEP fence, will also be included in AEP's scope. In the case where the generator lead is a single span, the structure in the customer station will be the customer's responsibility.

5 Cost Summary

The AF1-130 project will be responsible for the following costs:

Description	Total Cost
Attachment Facilities	\$ 788,000
Direct Connection Network Upgrade	\$ 1,530,000
Non Direct Connection Network Upgrades	\$90,000
Allocation for New Network Upgrades*	\$0
Contribution to Previously Identified Upgrades*	\$0
Total Costs	\$ 2,408,000

*As your project progresses through the study process and other projects modify their request or withdraw, then your cost allocation could change.

The estimates provided in this report are preliminary in nature, as they were determined without the benefit of detailed engineering studies. Final estimates will require an on-site review and coordination to determine final construction requirements. In addition, Stability analysis will be completed during the Facilities Study stage. It is possible that a need for additional upgrades could be identified by these studies.

This cost excludes a Federal Income Tax Gross Up charges. This tax may or may not be charged based on whether this project meets the eligibility requirements of IRS Notice 88-129. If at a future date it is determined that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

Note 1: PJM Open Access Transmission Tariff (OATT) section 217.3A outline cost allocation rules. The rules are further clarified in PJM Manual 14A Attachment B. The allocation of costs for a network upgrade will start with the first Queue project to cause the need for the upgrade. Later queue projects will receive cost allocation contingent on their contribution to the violation and are allocated to the queues that have not

closed less than 5 years following the execution of the first Interconnection Service Agreement which identifies the need for this upgrade.

Note 2: For customers with System Reinforcements listed: If your present cost allocation to a System Reinforcement indicates \$0, then please be aware that as changes to the interconnection process occur, such as prior queued projects withdrawing from the queue, reducing in size, etc, the cost responsibilities can change and a cost allocation may be assigned to your project. In addition, although your present cost allocation to a System Reinforcement is presently \$0, your project may need this system reinforcement completed to be deliverable to the PJM system. If your project comes into service prior to completion of the system reinforcement, an interim deliverability study for your project will be required

6 Transmission Owner Scope of Work

6.1 Attachment Facilities

The total preliminary cost estimate for the Attachment work is given in the table below. These costs do not include CIAC Tax Gross-up.

Description	Total Cost
138kV Revenue Metering	\$ 250,000
Generator lead first span exiting the POI station, including the first structure outside the fence.	\$400,000
Total Attachment Facility Costs	\$ 788,000

6.2 Direct Connection Cost Estimate

The total preliminary cost estimate for the Direct Connection work is given in the table below. These costs do not include CIAC Tax Gross-up.

Description	Total Cost
Expand the 138 kV bus at Inez and adding a new string and install two (2) additional 138 kV circuit breakers. Installation of associated protection and control equipment. 138 kV line risers and SCADA will also be required.*	\$ 1,530,000
Total Direct Connection Facility Costs	\$ 1,530,000

*An AEP supplemental project is under evaluation which adds a new string to the existing Inez station configuration. PJM has not assigned the S number yet. Information about this supplemental project is available at the following link:

<https://www.pjm.com/~media/committees-groups/committees/srrtep-w/2020/20200619/20200619-aep-supplemental.ashx>

6.3 Non-Direct Connection Cost Estimate

The total preliminary cost estimate for the Non-Direct Connection work is given in the table below. These costs do not include CIAC Tax Gross-up.

Description	Total Cost
Review and Revise the P&C Relay Settings at Inez 138 kV station.	\$ 90,000
Total Non-Direct Connection Facility Costs	\$ 90,000

7 Incremental Capacity Transfer Rights (ICTRs)

None

8 Schedule

It is anticipated that the time between receipt of executed Agreements and Commercial Operation may range from 12 to 18 months if no line work is required. If line work is required, construction time would generally be between 24 to 36 months after Agreement execution.

9 Interconnection Customer Requirements

It is understood that the Interconnection Customer is responsible for all costs associated with this interconnection. The costs above are reimbursable to the Interconnected Transmission Owner. The cost of the Interconnection Customer's generating plant and the costs for the line connecting the generating plant to the Interconnected Transmission Owner's Transmission circuit are not included in this report; these are assumed to be the Interconnection Customer's responsibility.

The Generation Interconnection Agreement does not in or by itself establish a requirement for the Interconnected Transmission Owner to provide power for consumption at the developer's facilities. A separate agreement may be reached with the local utility that provides service in the area to ensure that infrastructure is in place to meet this demand and proper metering equipment is installed. It is the responsibility of the developer to contact the local service provider to determine if a local service agreement is required.

Requirement from the PJM Open Access Transmission Tariff:

1. An Interconnection Customer entering the New Services Queue on or after October 1, 2012 with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). See Section 8.5.3 of Appendix 2 to the Interconnection Service Agreement as well as section 4.3 of PJM Manual 14D for additional information.
2. The Interconnection Customer may be required to install and/or pay for metering as necessary to properly track real time output of the facility as well as installing metering which shall be used for billing purposes. See Section 8 of Appendix 2 to the Interconnection Service Agreement as well as Section 4 of PJM Manual 14D for additional information.

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Section 8 of Attachment O.

10.2 Meteorological Data Reporting Requirements

The solar generation facility shall provide the Transmission Provider with site-specific meteorological data including:

- Back Panel temperature (Fahrenheit)
- Irradiance (Watts/meter²)
- Ambient air temperature (Fahrenheit) – (Accepted, not required)
- Wind speed (meters/second) – (Accepted, not required)
- Wind direction (decimal degrees from true north) – (Accepted, not required)

10.3 Interconnected Transmission Owner Requirements

The IC will be required to comply with all Interconnected Transmission Owner's revenue metering requirements for generation interconnection customers located at the following link:

<http://www.pjm.com/planning/design-engineering/to-tech-standards/>

11 Summer Peak Analysis

The Queue Project AF1-130 was evaluated as a 200.0 MW (Capacity 133.9 MW) injection at the Inez 138kV substation in the AEP area. Project AF1-130 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AF1-130 was studied with a commercial probability of 100.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

None

11.2 Multiple Facility Contingency

(Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output)

None

11.3 Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

None

11.4 Steady-State Voltage Requirements

None

11.5 Potential Congestion due to Local Energy Deliverability

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which shall study all overload conditions associated with the overloaded element(s) identified.

None

11.6 System Reinforcements

None

12 Light Load Analysis

Not Required

13 Short Circuit Analysis

The following Breakers are overdutied

None

14 Stability and Reactive Power Requirements for Low Voltage Ride Through

(Summary of the VAR requirements based upon the results of the dynamic studies)

To be evaluated during the Facilities Study Phase

15 Affected Systems

15.1 TVA

TVA Impacts to be determined during later study phases (as applicable).

15.2 Duke Energy Progress

Duke Energy Progress Impacts to be determined during later study phases (as applicable).

15.3 MISO

MISO Impacts to be determined during later study phases (as applicable).

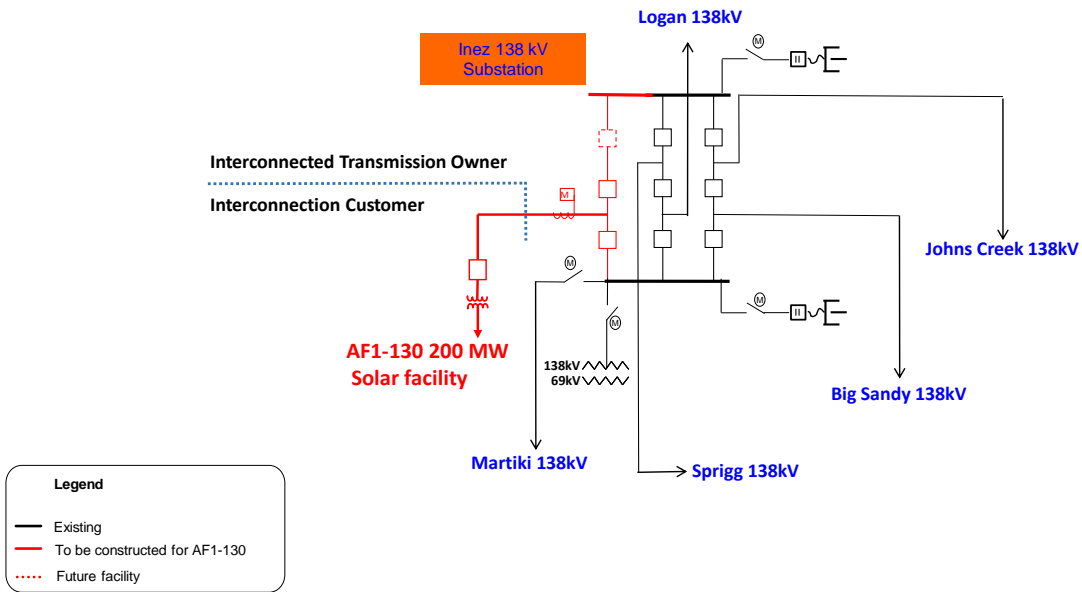
15.4 LG&E

LG&E Impacts to be determined during later study phases (as applicable).

16 Attachment 1: One-Line Diagram and Point of Interconnection Map

AF1-130 Point of Interconnection Inez 138kV Substation

*Remote Stations not completely shown



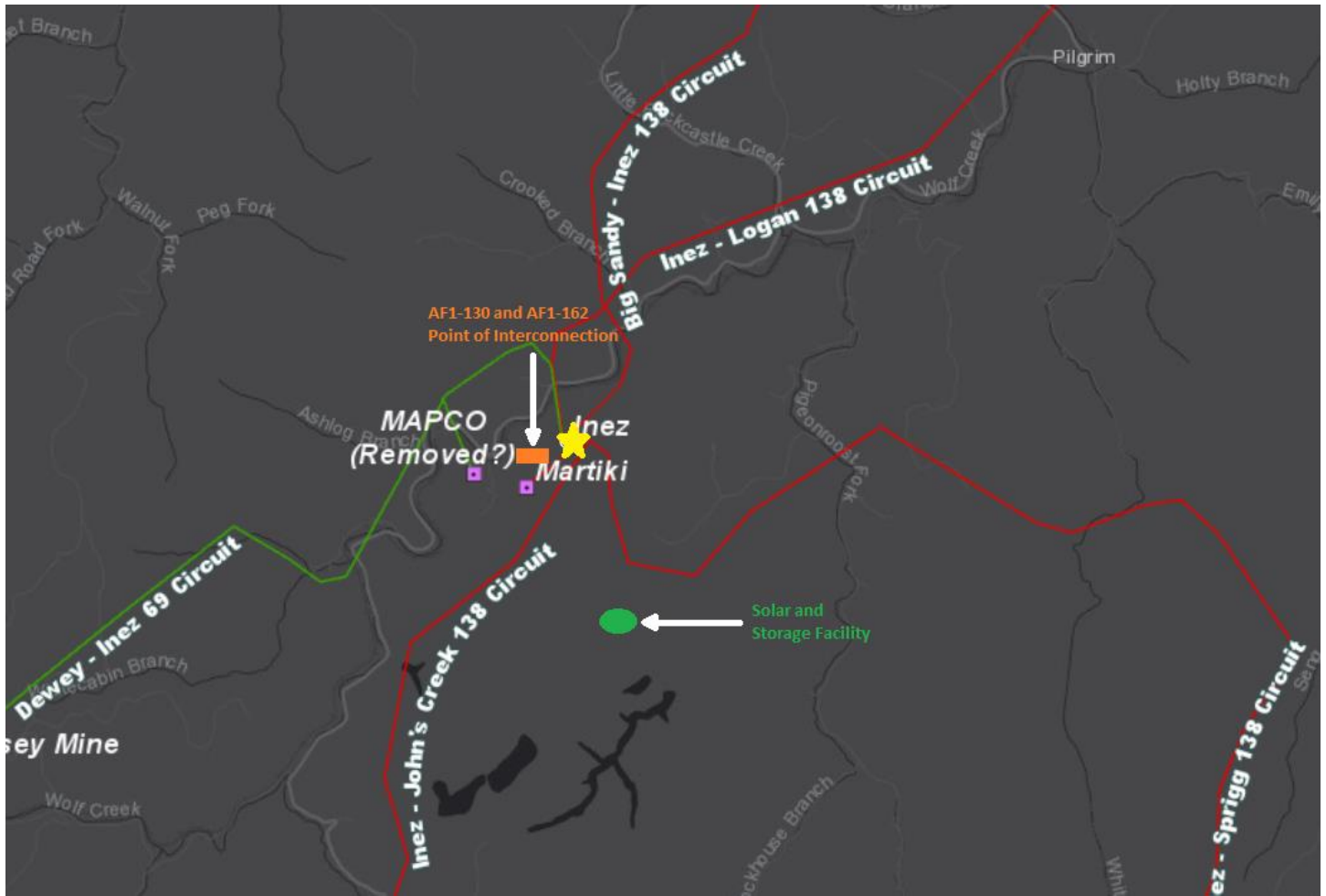


EXHIBIT E

Economic Impact Analysis of Martin County Solar Project

March 2021

David G. Loomis, Ph.D.



About the Author

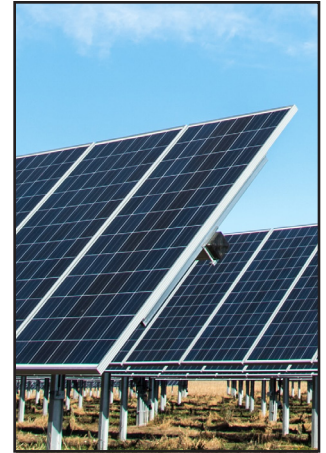


Dr. David G. Loomis is Professor of Economics at Illinois State University and Co-Founder of the Center for Renewable Energy. He has over 10 years of experience in the renewable energy field and has performed economic analyses at the county, region, state and national levels for utility-scale wind and solar generation. He has served as a consultant for Apex Clean Energy, Clean Line Energy Partners, EDF Renewables, E.ON Climate and Renewables,

Geronimo Energy, Invenergy, J-Power, the National Renewable Energy Laboratories, Ranger Power, Savion, State of Illinois, Tradewind, and others. He has testified on the economic impacts of energy projects before the Illinois Commerce Commission, Missouri Public Service Commission, Illinois Senate Energy and Environment Committee, the Wisconsin Public Service Commission, and numerous county boards. Dr. Loomis is a widely recognized expert and has been quoted in the Wall Street Journal, Forbes Magazine, Associated Press, and Chicago Tribune as well as appearing on CNN.

Dr. Loomis has published over 25 peer-reviewed articles in leading energy policy and economics journals. He has raised and managed over \$7 million in grants and contracts from government, corporate and foundation sources. He received the 2011 Department of Energy's Midwestern Regional Wind Advocacy Award and the 2006 Best Wind Working Group Award. Dr. Loomis received his Ph.D. in economics from Temple University in 1995.

Table of Contents



- I. Executive Summary of Findings 1
- II. U.S. Solar PV Industry Growth and Economic Development 2
 - a. U.S. Solar PV Industry Growth..... 2
 - b. Kentucky Solar PV Industry 4
 - c. Economic Benefits of Utility-Scale Solar PV Energy..... 6
- III. Martin County Solar Project Description and Location 8
 - a. Martin County Solar Project Description..... 8
 - b. Martin County, Kentucky..... 9
 - i. Economic and Demographic Statistics..... 10
 - ii. Agricultural Statistics..... 16
- IV. Economic Impact Methodology 17
- V. Economic Impact Results 19
- VI. Property Tax Revenue 22
- VII. References..... 24
- VIII. Curriculum Vita..... 26

Figures:

- Figure 1. — Annual U.S. Solar PV Installations, 2010-2025..... 2
- Figure 2. — U.S. Annual Solar PV Installed Price Trends 3
- Figure 3. — U.S. Utility PV Pipeline 3
- Figure 4. — Solar Company Locations in Kentucky..... 5
- Figure 5. — Kentucky Annual Solar Installations..... 5
- Figure 6. — Electric Generation Employment By Technology 5
- Figure 7. — Location of Martin County, Kentucky 9
- Figure 8. — Total Employment in Martin County 11
- Figure 9. — Population in Martin County..... 12
- Figure 10. — Median Household Income in Martin County..... 13
- Figure 11. — Real Gross Domestic Product (GDP)
in Martin County..... 14
- Figure 12. — Number of Farms in Martin County..... 15

Tables:

- Table 1. — Employment by Industry in Martin County 10
- Table 2. — Total Employment Impact..... 19
- Table 3. — Total Earnings Impact..... 21
- Table 4. — Total Output Impact..... 21
- Table 5. — Property Tax Revenue from Martin County Solar Project..... 23

I. Executive Summary



Savion is developing the Martin County Solar Project in Martin County, Kentucky. The purpose of this report is to aid decision makers in evaluating the economic impact of this project on Martin County and the State of Kentucky. The basis of this analysis is to study the direct, indirect, and induced impacts on job creation, wages, and total economic output.

Martin County Solar is a 200 MW solar project using single-axis tracking panels. The project represents an investment in excess of \$245 million. The total development is anticipated to result in the following:

Economic Impact

Jobs - all jobs numbers are full-time equivalents

- 251 new local jobs during construction for Martin County
- 502 new local jobs during construction for the State of Kentucky
- Over 16.2 new local long-term jobs for Martin County
- Over 21.2 new local long-term jobs for the State of Kentucky

Earnings

- Over \$20.4 million in new local earnings during construction for Martin County
- Over \$39.3 million in new local earnings during construction for the State of Kentucky
- Over \$754 thousand in new local long-term earnings for Martin County annually
- Over \$1.5 million in new local long-term earnings for the State of Kentucky annually

Output

- Over \$28.4 million in new local output during construction for Martin County
- Over \$63.4 million in new local output during construction for the State of Kentucky
- Over \$1.4 million in new local long-term output for Martin County annually
- Over \$3.5 million in new local long-term output for the State of Kentucky annually

Property Taxes

- Over \$339 thousand in total property taxes to the State of Kentucky over the life of the Project
- \$9.0 million in total school district and county property taxes over the life of the Project
- Over \$9.3 million in property taxes in total for all taxing districts over the life of the Project

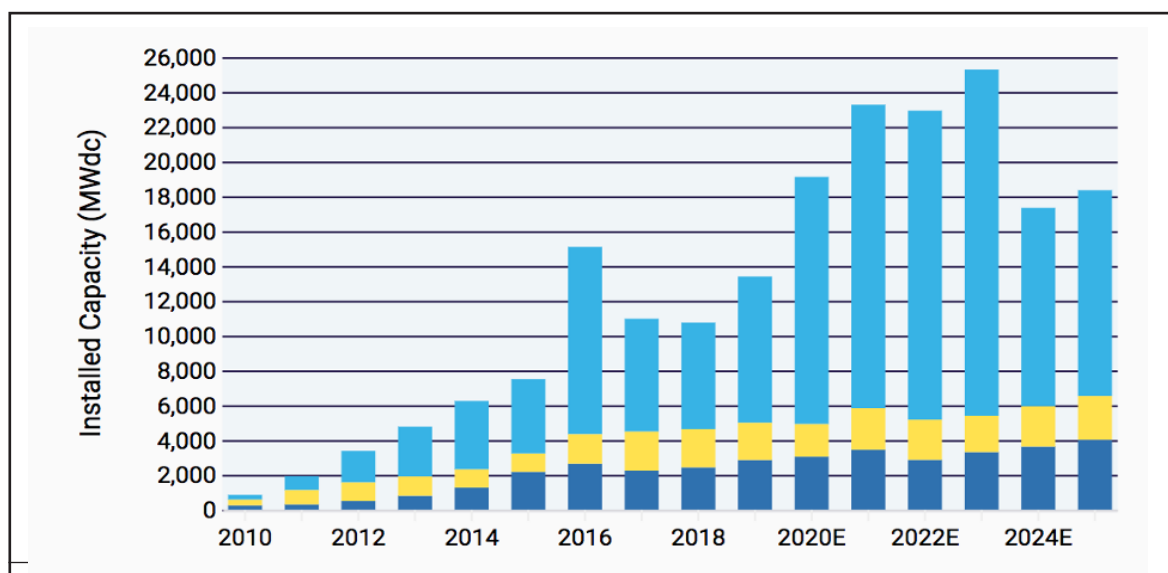
The U.S. solar industry is growing at a rapid but uneven pace, with systems installed for onsite use, including residential, commercial and industrial properties and with utility-scale solar powered-electric generation facilities intended for wholesale distribution, such as Martin County Solar. From 2013 to 2018, the amount of electricity generated from solar had more than quadrupled, increasing 444%. (EIA, 2020). The industry continued to add increasing numbers of PV systems to the grid. In 2020, the U.S. installed over 18,000 MW direct current (MWdc) of solar PV driven mostly by utility-scale PV which exceeded the previous annual record established in 2016.¹ As Figure 1 clearly shows, the capacity additions in 2017-2019 still outpaced any year before 2016. The primary driver of this overall sharp pace of growth is large price declines in solar equipment. Since 2010, the price of solar PV has declined from about \$5.79/watt in 2010 to \$1.33/watt in 2020 according to Figure 2. Solar PV also benefits from the Federal Investment Tax Credit (ITC) which provides a 26 percent tax credit for residential and commercial properties.

Utility-scale PV leads the installation growth in the U.S. A total of 8,402 MWdc of utility PV projects were completed in 2019 and accounted for 63% of the total installed capacity in 2019. An additional 9,988 MWdc are under construction and are expected to come on-line in 2020. According to Figure 3, there are 69,000 MWdc of contracted utility-scale installations that have not been built yet.

II. U.S. Solar PV Industry Growth and Economic Development

a. U.S. Solar PV Industry Growth

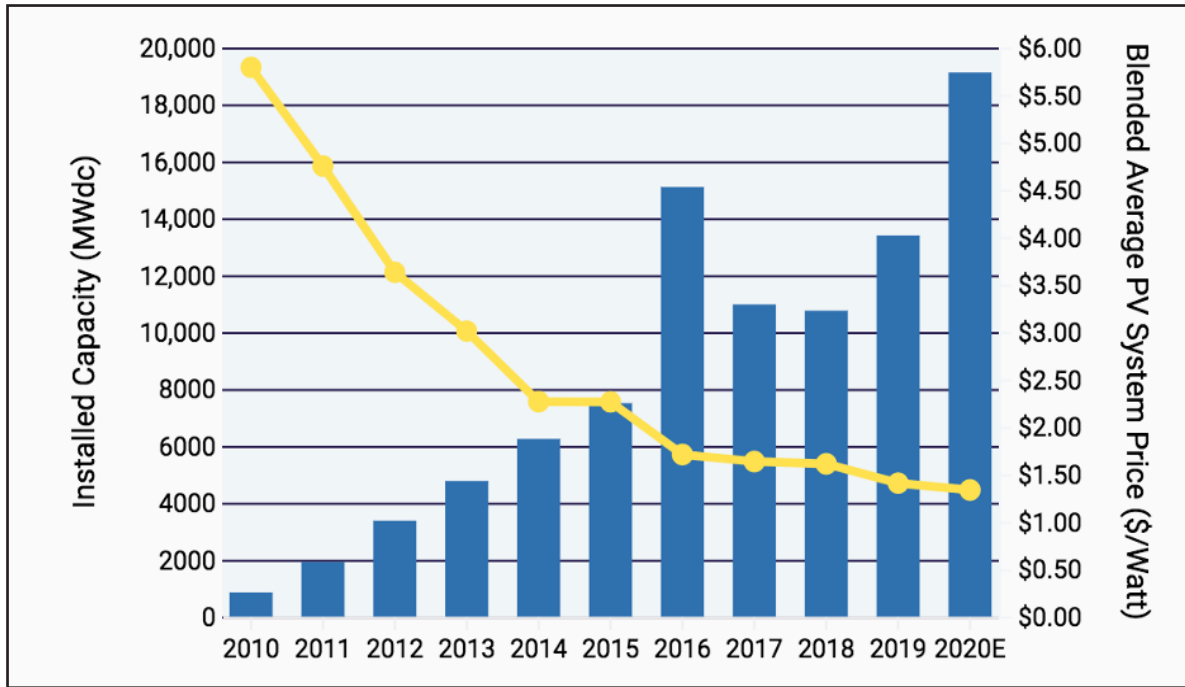
Figure 1. — Annual U.S. Solar PV Installations, 2010 - 2025



Solar Energy Industries Association, Solar Market Insight Report 2020 Year in review

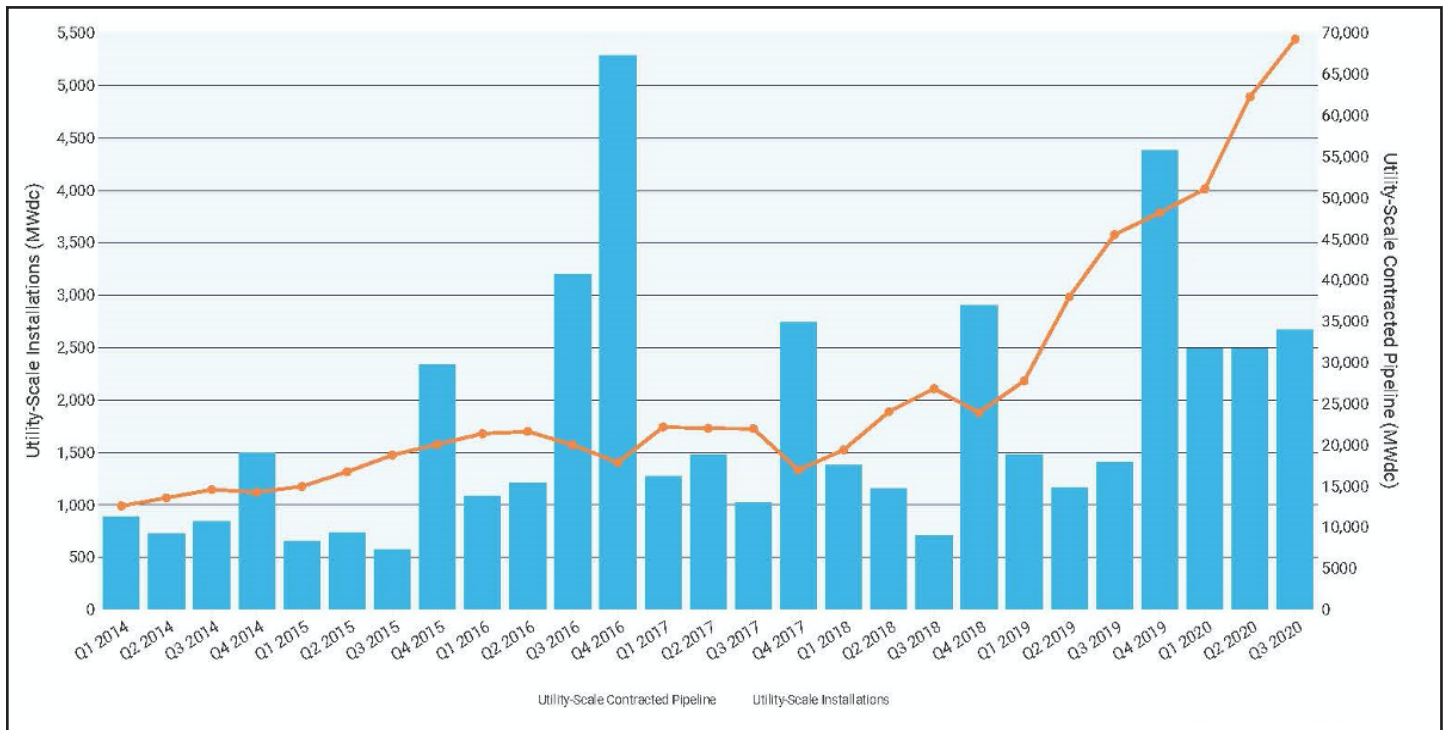
¹ There was a dramatic increase in 2016 because the industry was expecting the expiration of the federal investment tax credit and rushed to complete as many projects as possible before the expected expiration. This rush effectively pulled projects that were originally slated for 2017 and 2018 forward into 2016 resulting in the high amount installed in 2016 but a lower amount installed in 2017 and 2018.

Figure 2. — U.S. Annual Solar PV Installed Price Trends Over Time



Solar Energy Industries Association, Solar Market Insight Report 2020 Q4

Figure 3. — U.S. Utility PV Installations vs. Contracted Pipeline



Solar Energy Industries Association, Solar Market Insight Report 2020 Q4

According to SEIA, Kentucky is ranked 46th in the U.S. in cumulative installations of solar PV. California, North Carolina, and Arizona are the top 3 states for solar PV which may not be surprising because of the high solar irradiation that they receive. However, other states with similar solar irradiation to Kentucky rank highly including New Jersey (7th), Massachusetts (8th), New York (10th), and Maryland (15th). In 2019, Kentucky installed 5.15 MW of solar electric capacity bringing its cumulative capacity to 53.71 MW.

Kentucky has great potential to expand its solar installations. Kentucky's three largest solar farms in operation are: Cooperative Solar One is an 8.5 MW installation; General Motors has a 0.85 MW installation in Bowling Green, KY; and the Crittenden Solar Facility is a 2 MW installation. The 200 MW Martin County Solar Project will be one of the largest installations in Kentucky to date.

There are more than 43 solar companies in Kentucky including 11 manufacturers, 17 installers/developers, and 15 others.² Figure 4 shows the locations of solar companies in Kentucky as of the time of this report. Currently, there are 1,362 solar jobs in the State of Kentucky according to SEIA.

Figure 5 shows the Kentucky historical installed capacity by year according to the SEIA. Huge growth in solar is forecasted in the next 5 years, a projection of over 396 MW.

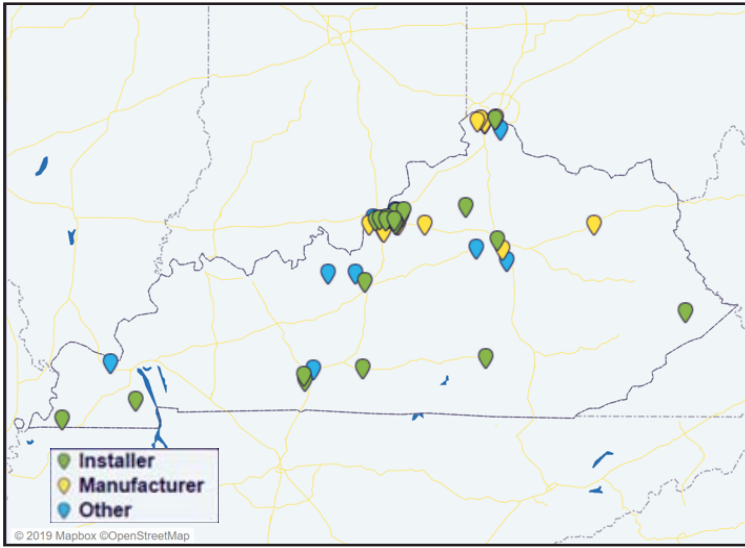
The U.S. Department of Energy sponsors the U.S. Energy and Employment Report each year. Electric Power Generation covers all utility and non-utility employment across electric generating technologies, including fossil fuels, nuclear, and renewable technologies. It also includes employees engaged in facility construction, turbine and other generation equipment manufacturing, operations and maintenance, and wholesale parts distribution for all electric generation technologies. According to Figure 6, employment in the solar energy industry (1,745) trails behind coal generation (1,790) but is larger than natural gas generation (688) and other generation (435).

b. Kentucky Solar PV Industry



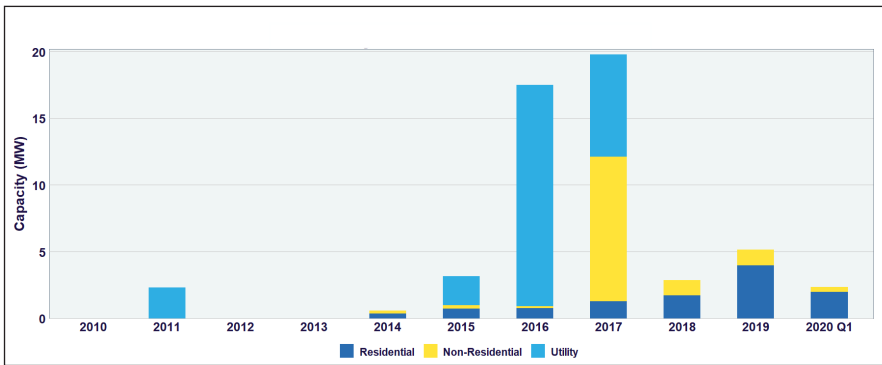
² "Other" includes Sales and Distribution, Project Management, and Engineering.

Figure 4. — Solar Company Locations in Kentucky



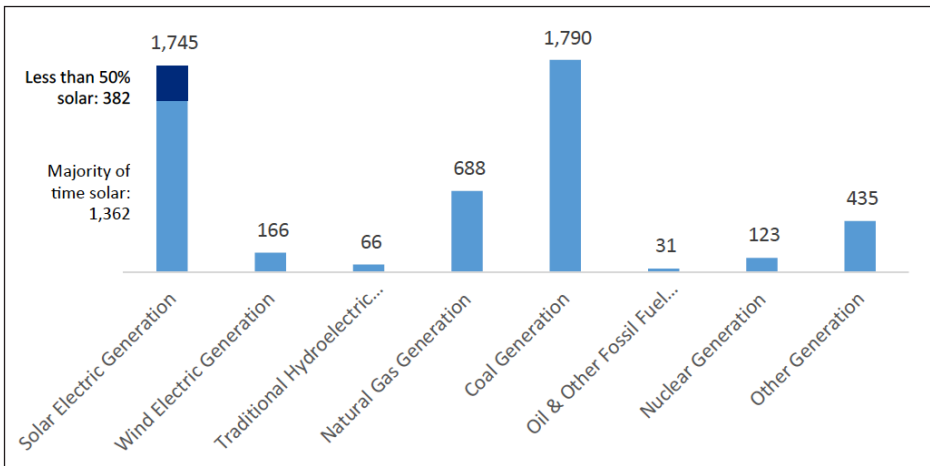
Solar Energy Industries Association,
Solar Spotlight: Kentucky

Figure 5. — Kentucky Annual Solar Installations



Source: Solar Energy Industries Association,
Solar Spotlight: Kentucky

Figure 6. — Kentucky Electric Generation Employment By Technology



Source: U.S. Energy and Employment
Report 2020: Kentucky

Utility-scale solar energy projects have numerous economic benefits. Solar installations create job opportunities in the local area during both the short-term construction phase and the long-term operational phase. In addition to the workers directly involved in the construction and maintenance of the solar energy project, numerous other jobs are supported through indirect supply chain purchases and the higher spending that is induced by these workers. Solar projects strengthen the local tax base and help improve county services, and local infrastructure, such as public roads.

Numerous studies have quantified the economic benefits of Solar PV projects across the United States and have been published in peer-reviewed academic journals using the same methodology as this report. Some of these studies examine smaller-scale solar systems, and some examine utility-scale solar energy. Croucher (2012) uses NREL's Jobs and Economic Development Impacts ("JEDI") modeling methodology to find which state will receive the greatest economic impact from installing one hundred 2.5 kW residential systems. He shows that Pennsylvania ranked first supporting 28.98 jobs during installation and 0.20 jobs during operations. Illinois ranked second supporting 27.65 jobs during construction and 0.18 jobs during operations.

Jo et. al. (2016) analyzes the financing options and economic impact of solar PV systems in Normal, IL and uses the JEDI model to determine the county and state economic impact. The study examines the effect of 100 residential retrofit fixed-mount crystalline-silicone systems having a nameplate capacity of 5kW. Eight JEDI models estimated the economic impacts using different input assumptions. They found that county employment impacts varied from 377 to 1,059 job-years during construction and 18.8 to 40.5 job-years during the operating years. Each job-year is a full-time equivalent job of 2,080 hours for a year.

c. Economic Benefits of Utility-Scale Solar PV Energy



Loomis et. al. (2016) estimates the economic impact for the State of Illinois if the state were to reach its maximum potential for solar PV. The study estimates the economic impact of three different scenarios for Illinois – building new solar installations of either 2,292 MW, 2,714 MW or 11,265 MW. The study assumes that 60% of the capacity is utility-scale solar, 30% of the capacity is commercial, and 10% of the capacity is residential. It was found that employment impacts vary from 26,753 to 131,779 job years during construction and from 1,223 to 6,010 job years during operating years.

Several other reports quantify the economic impact of solar energy. Bezdek (2006) estimates the economic impact for the State of Ohio, and finds the potential for PV market in Ohio to be \$25 million with 200 direct jobs and 460 total jobs. The Center for Competitive Florida (2009) estimates the impact if the state were to install 1,500 MW of solar and finds that 45,000 direct jobs and 50,000 indirect jobs could be created. The Solar Foundation (2013) uses the JEDI modeling methodology to show that Colorado's solar PV installation to date created 10,790 job-years. They also analyze what would happen if the state were to install 2,750 MW of solar PV from 2013 to 2030 and find that it would result in nearly 32,500 job years. Berkman et. al (2011) estimates the economic and fiscal impacts of the 550 MWAC Desert Sunlight Solar Farm. The project creates approximately 440 construction jobs over a 26-month period, \$15 million in new sales tax revenues, \$12 million in new property revenues for Riverside County, CA, and \$336 million in indirect benefits to local businesses in the county.

Martin County Solar Project, LLC (Project) is a proposed 200MWac ground mounted solar facility located in Martin County, Kentucky near the unincorporated community of Pilgrim. The solar site itself spans approximately 2,000 acres including 1,000 acres of reclaimed coal mine. However, for the purposes of this evaluation, the study is examining the impact of 200MWac.

Due to the high slope and geologic challenges of building on a reclaimed coal mine, the Project will utilize fixed-tilt racking and a higher DC sizing (300MWdc). The Project will interconnect to the Inez Substation which is located on site and will inject electricity into the Appalachian Power/PJM system. As typical with large solar developments, the site is being evaluated for a number of criteria including geotechnical analysis, hydrology, threatened and endangered species, wetlands, and cultural resources.

Building a solar farm on a reclaimed coal mine presents unique construction challenges. It is expected that the construction phase will take longer than other solar projects of comparable size and could be as long as eighteen months. Likely, much of the labor force will be from outside of the Martin County area, as solar construction such as this is new to this region. However, much of the civil construction force will come from the immediate area as this area has a long history of earth moving through coal operations. Once operational, the project will generate enough electricity to power over 28,000 Kentucky homes, utilizing approximately 658,000 solar photovoltaic modules.

Savion is also working with regional technical schools and economic development departments to help recruit local, displaced coals miners for construction of the project. The ultimate goal is to provide them with experience and a credential that they can use on future solar installations in the region.

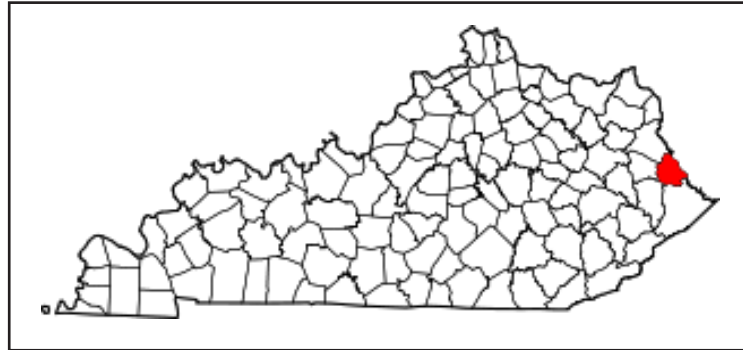
III. Martin County Solar Project Description and Location

a. Martin County Solar Project Description

b. Martin County, Kentucky

Martin County is located in the Eastern part of Kentucky (see Figure 7). It has a total area of 231 square miles and the U.S. Census estimates that the 2010 population was 12,929. The county has a population density of 56 (persons per square mile) compared to 109 for the State of Kentucky. Median household income in the county was \$29,575.

Figure 7. — Location of Martin County, Kentucky



https://en.wikipedia.org/wiki/Martin_County,_Kentucky#/media/File:Map_of_Kentucky_highlighting_Martin_County.svg

i. Economic and Demographic Statistics

As shown in Table 1, the largest industry is “Administrative Government” followed by “Health Care and Social Assistance,” “Retail Trade” and “Mining, Quarrying, and Oil and Gas Extraction.” These data for Table 1 come from IMPLAN covering the year 2018 (the latest year available).

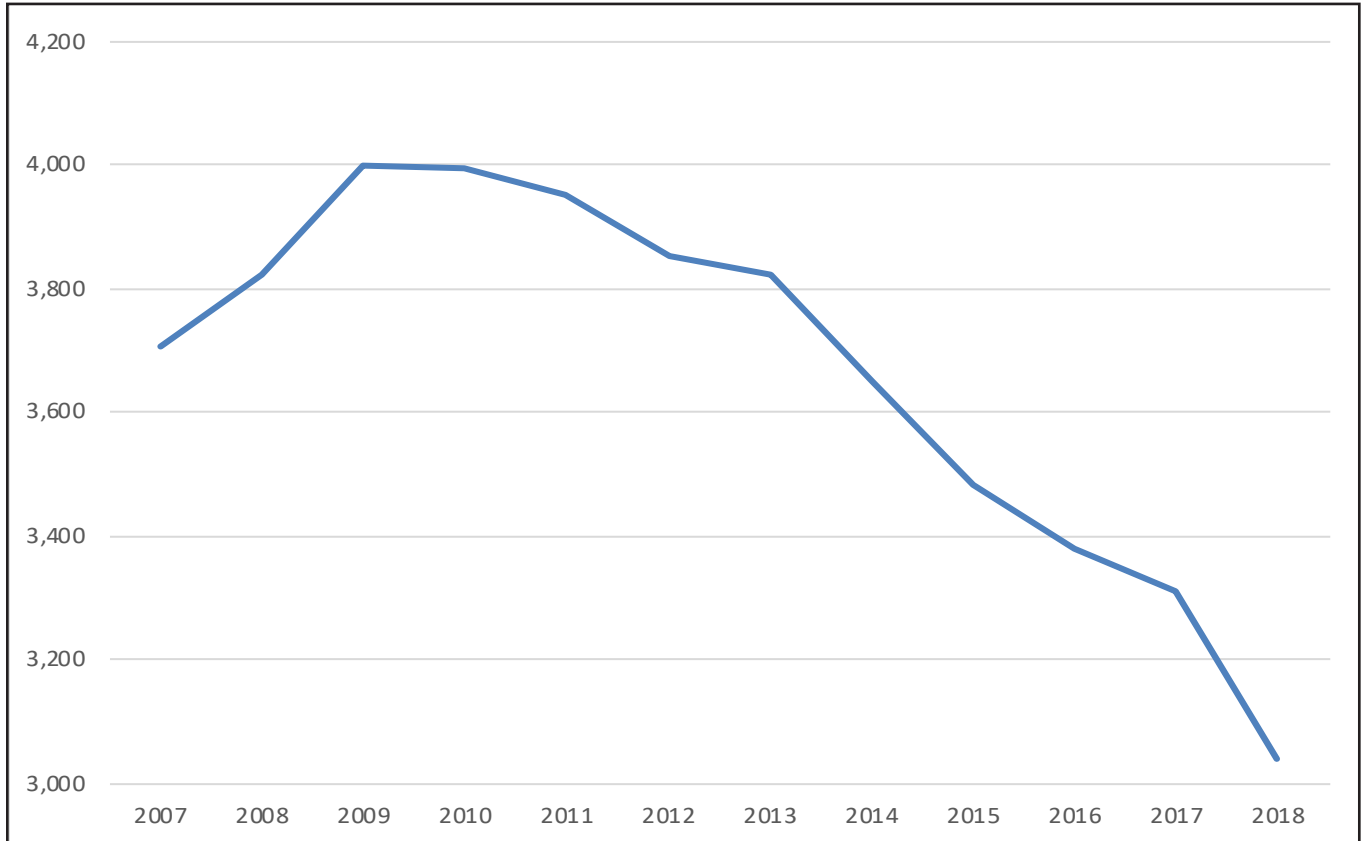
Table 1. — Employment by Industry in Martin County

Industry	Number	Percent
Administrative Government	907	30.1%
Health Care and Social Assistance	312	10.3%
Retail Trade	311	10.3%
Mining, Quarrying, and Oil and Gas Extraction	299	9.9%
Other Services (except Public Administration)	228	7.6%
Accommodation and Food Services	194	6.4%
Construction	147	4.9%
Administrative and Support and Waste Management and Remediation Services	138	4.6%
Professional, Scientific, and Technical Services	131	4.4%
Finance and Insurance	69	2.3%
Transportation and Warehousing	48	1.6%
Real Estate and Rental and Leasing	47	1.6%
Wholesale Trade	46	1.5%
Manufacturing	44	1.5%
Government Enterprises	24	0.8%
Agriculture, Forestry, Fishing and Hunting	22	0.7%
Management of Companies and Enterprises	18	0.6%
Arts, Entertainment, and Recreation	12	0.4%
Information	9	0.3%
Utilities	5	0.2%
Educational Services	4	0.1%

Source: Impact Analysis for Planning (IMPLAN), County Employment by Industry

Table 1 provides the most recent snapshot of total employment but does not examine the historical trends within the county. Figure 8 shows employment from 2007 to 2018. Total employment in Martin County was at its highest at 3,999 in 2009 and its lowest at 3,038 in 2018.

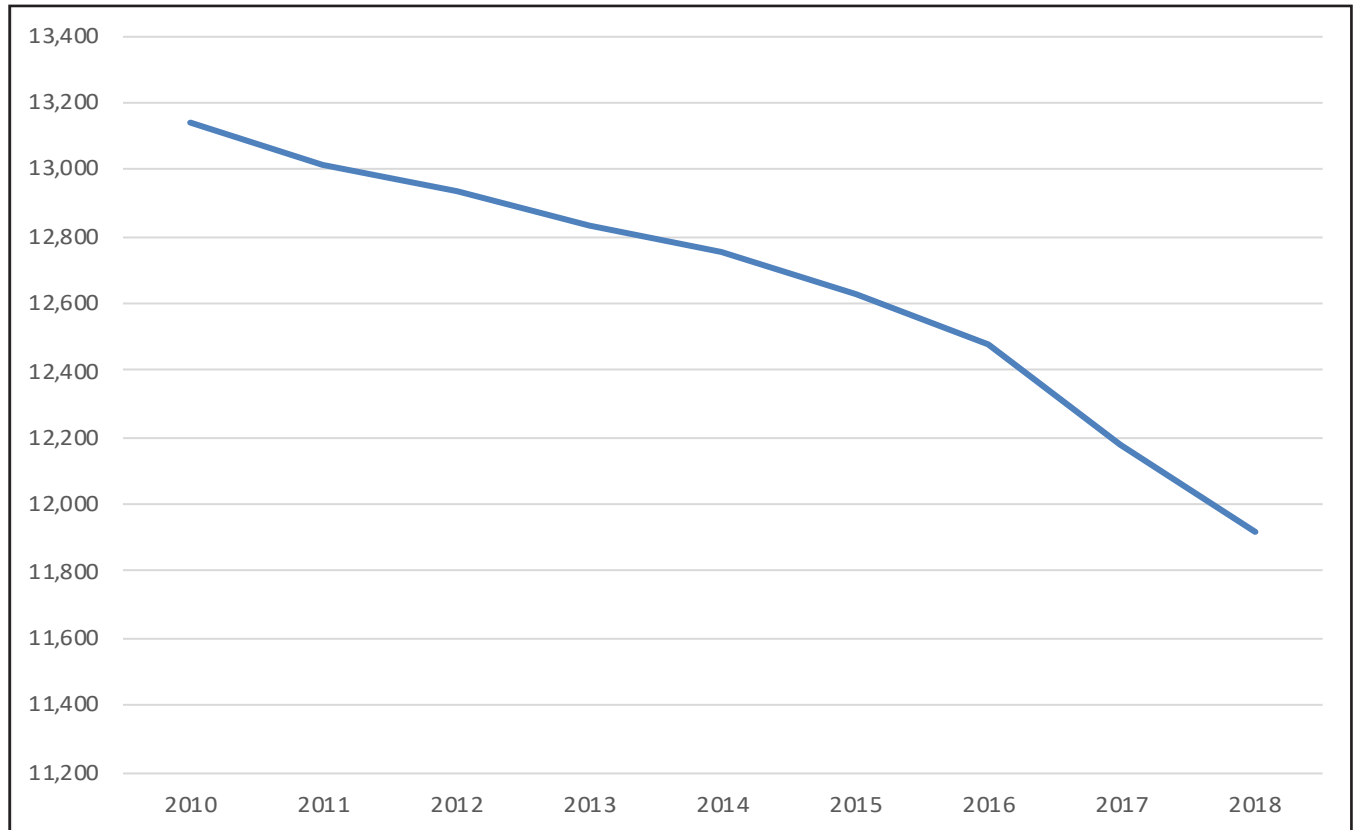
Figure 8. — Total Employment in Martin County from 2007 to 2018



Source: Bureau of Economic Analysis, Regional Data, GDP and Personal Income

Similar to the downward trend of employment, the overall population in the county has been decreasing steadily, as shown in Figure 9. Martin County population was 13,138 in 2010 and 11,919 in 2018, a loss of 1,219. The average annual population decrease over this time period was 152.

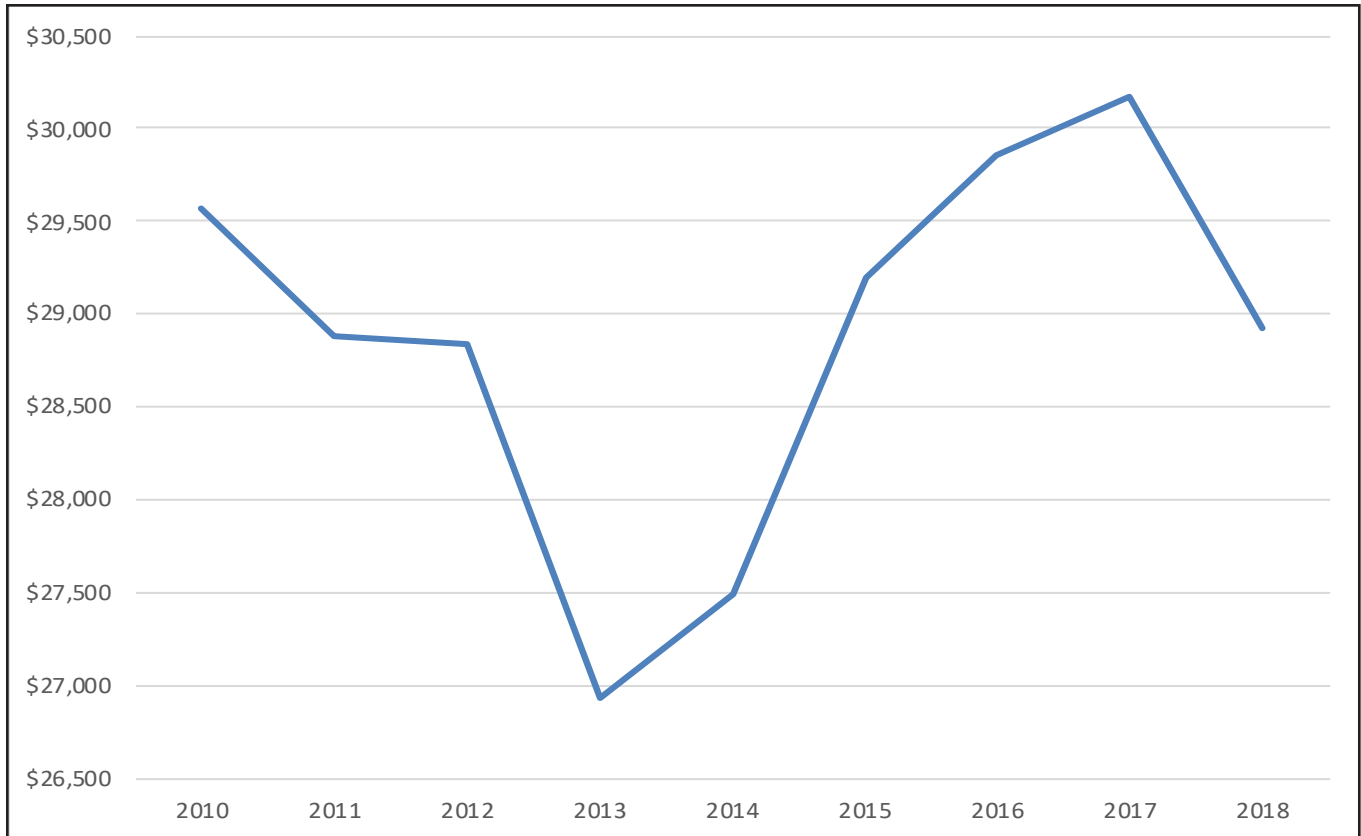
Figure 9. — Population in Martin County 2010-2018



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Estimate of Population

Unlike the population trend, household income has been fluctuating in Martin County. Figure 10 shows the median household income in Martin County from 2010 to 2018. Household income was at its lowest at \$26,931 in 2013 and its highest at \$30,177 in 2017.

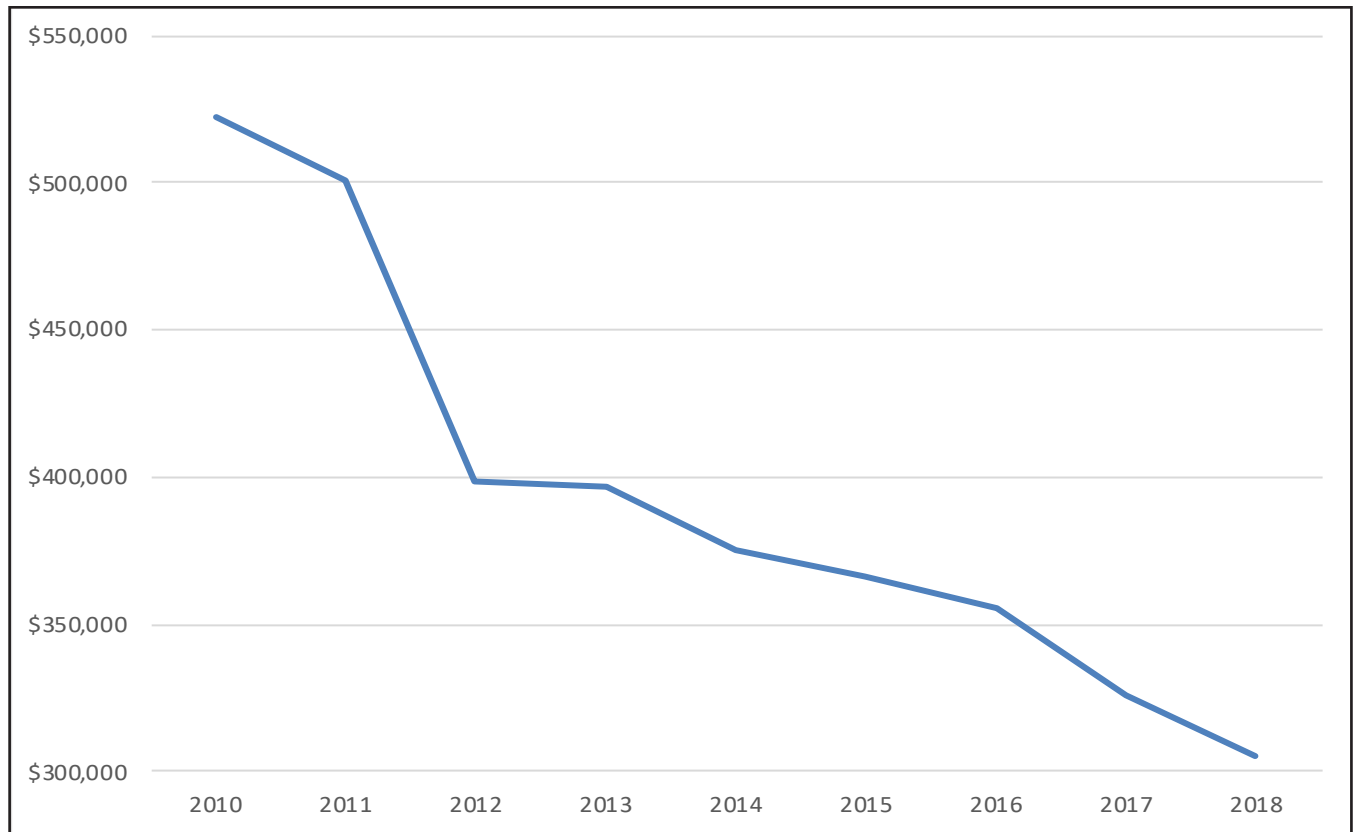
Figure 10. — Median Household Income in Martin County from 2010 to 2018



Source: Federal Reserve Bank of St. Louis Economic Data, U.S. Census Bureau, Estimate of Median Household Income

Real Gross Domestic Product (GDP) is a measure of the value of goods and services produced in an area and adjusted for inflation over time. The Real GDP for Martin County has been decreasing since hitting a high in 2010, as shown in Figure 11.

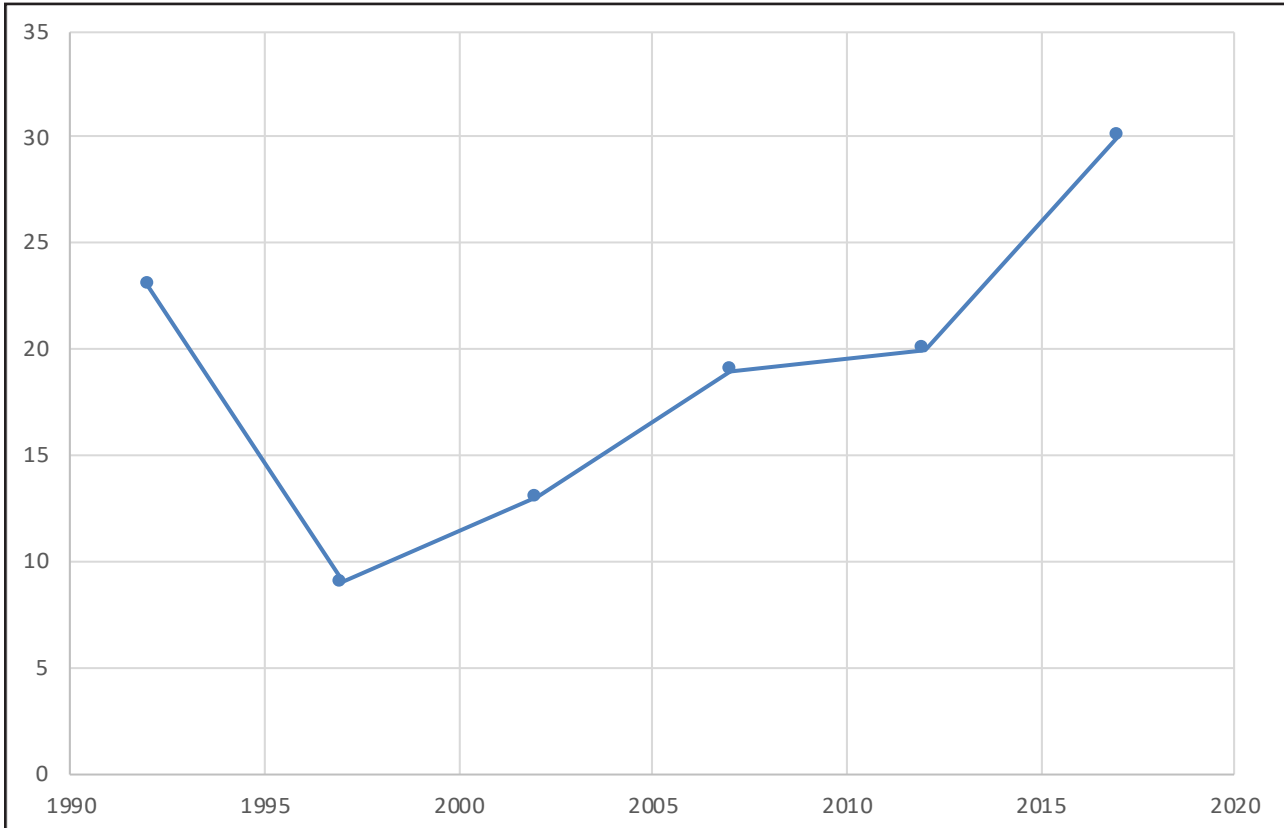
Figure 11. — Real Gross Domestic Product (GDP) in Martin County from 2010-2018



Source: Bureau of Economic Analysis, Regional Data, GDP and Personal Income

The farming industry has increased in Martin County. As shown in Figure 12, the number of farms has increased from 9 in 1997 to 30 in 2017.

Figure 12. — Number of Farms in Martin County from 1992 to 2017



Source: Census of Agriculture, 1992-2017

Kentucky is ranked twenty-sixth among U. S. states in total value of agricultural products sold (Census, 2017). It is ranked twenty-third in the value of livestock, and twenty-third in the value of crops (Census, 2017). In 2019, Kentucky had 74,800 farms and 12.9 million acres in operation with the average farm being 172 acres (State Agricultural Overview, 2019). Kentucky had 50 thousand cattle and produced 941 million pounds of milk (State Agricultural Overview, 2019). In 2019, Kentucky yields averaged 169 bushels per acre for grain corn with a total market value of \$1 billion (State Agricultural Overview, 2019). Soybean yields averaged 46 bushels per acre with a total market value of \$707 million (State Agricultural Overview, 2019). The average net cash farm income per farm is \$20,784 (Census, 2017).

In 2017, Martin County had 30 farms covering 11,039 acres for an average farm size of 368 acres (Census, 2017). The total market value of products sold was \$214 thousand, with 89 percent coming from livestock sales and 11 percent coming from crop sales (Census, 2017). The average net cash farm income of operations was -\$2,850 (Census, 2017).

ii. Agricultural Statistics

IV. Economic Impact Methodology

NREL: National Renewable Energy Laboratory

JEDI: Jobs and Economic Development Impacts

IMPLAN: IMpact Analysis for PLANning

The economic analysis of solar PV project presented uses NREL's latest Jobs and Economic Development Impacts (JEDI) PV Model (PV12.23.16). The JEDI PV Model is an input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output. That is, the JEDI Model takes into account that the output of one industry can be used as an input for another. For example, when a PV system is installed, there are both soft costs consisting of permitting, installation and customer acquisition costs, and hardware costs, of which the PV module is the largest component. The purchase of a module not only increases demand for manufactured components and raw materials, but also supports labor to build and install a module. When a module is purchased from a manufacturing facility, the manufacturer uses some of that money to pay employees. The employees use a portion of their compensation to purchase goods and services within their community. Likewise, when a developer pays workers to install the systems, those workers spend money in the local economy that boosts economic activity and employment in other sectors. The goal of economic impact analysis is to quantify all of those reverberations throughout the local and state economy.

The first JEDI Model was developed in 2002 to demonstrate the economic benefits associated with developing wind farms in the United States. Since then, JEDI models have been developed for biofuels, natural gas, coal, transmission lines and many other forms of energy. These models were created by Marshall Goldberg of MRG & Associates, under contract with the National Renewable Energy Laboratory. The JEDI model utilizes state-specific industry multipliers obtained from IMPLAN (IMpact analysis for PLANning). IMPLAN software and data are managed and updated by the Minnesota IMPLAN Group, Inc., using data collected at federal, state, and local levels. This study analyzes the gross jobs that the new solar energy project development supports and does not analyze the potential loss of jobs due to declines in other forms of electric generation.

The total economic impact can be broken down into three distinct types: direct impacts, indirect impacts, and induced impacts. **Direct impacts** during the construction period refer to the changes that occur in the onsite construction industries in which the direct final demand (i.e., spending on construction labor and services) change is made. Onsite construction-related services include installation labor, engineering, design, and other professional services. Direct impacts during operating years refer to the final demand changes that occur in the onsite spending for the solar operations and maintenance workers.

The initial spending on the construction and operation of the PV installation will create a second layer of impacts, referred to as “supply chain impacts” or “indirect impacts.” **Indirect impacts** during the construction period consist of changes in inter-industry purchases resulting from the direct final demand changes and include construction spending on materials and PV equipment, as well as other purchases of goods and offsite services. Utility-scale solar PV indirect impacts include PV modules, invertors, tracking systems, cabling, and foundations.

Induced impacts during construction refer to the changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects of final demand changes. Local spending by employees working directly or indirectly on the Project that receive their paychecks and then spend money in the community is included. The model includes additional local jobs and economic activity that are supported by the purchases of these goods and services.

V. Economic Impact Results

The economic impact results were derived from detailed project cost estimates supplied by Savion. In addition, Savion also estimated the percentages of project materials and labor that will be coming from within Martin County and the State of Kentucky.

Two separate JEDI models were produced to show the economic impact of the Martin County Solar Project. The first JEDI model used the 2019 Martin County multipliers from IMPLAN. The second JEDI model used the 2019 IMPLAN multipliers for the State of Kentucky and the same project costs.

Tables 2-4 show the output from these models. Table 2 lists the total employment impact from the Martin County Solar Project for Martin County and the State of Kentucky. Table 3 shows the impact on total earnings and Table 4 contains the impact on total output.

Table 2. — Total Employment Impact from Martin County Solar Project

	Martin County Jobs	State of Kentucky Jobs
Construction		
Project Development and Onsite Labor Impacts (direct)	180	289
Module and Supply Chain Impacts (indirect)	62	130
Induced Impacts	9	83
<i>New Local Jobs during Construction</i>	251	502
Operations (Annual)		
Onsite Labor Impacts (direct)	11.0	11.0
Local Revenue and Supply Chain Impacts (indirect)	4.6	3.6
Induced Impacts	0.6	6.6
<i>New Local Long-Term Jobs</i>	16.2	21.2

The results from the JEDI model show significant employment impacts from the Martin County Solar Project. Employment impacts can be broken down into several different components. Direct jobs created during the construction phase typically last anywhere from 12 to 18 months depending on the size of the project; however, the direct job numbers present in Table 2 from the JEDI model are based on a full time equivalent (FTE) basis for a year. In other words, 1 job = 1 FTE = 2,080 hours worked in a year. A part time or temporary job would constitute only a fraction of a job according to the JEDI model. For example, the JEDI model results show 180 new direct jobs during construction in Martin County, though the construction of the solar center could involve closer to 360 workers working half-time for a year. Thus, due to the short-term nature of construction projects, the JEDI model often significantly understates the number of people actually hired to work on the project. It is important to keep this fact in mind when looking at the numbers or when reporting the numbers.

As shown in Table 2, new local jobs created or retained during construction total 251 for Martin County, and 502 for the State of Kentucky. New local long-term jobs created from the Martin County Solar Project total 16.2 for Martin County and 21.2 for the State of Kentucky.

Direct jobs created during the operational phase last the life of the solar energy project, typically 20-30 years. Direct construction jobs and operations and maintenance jobs both require highly-skilled workers in the fields of construction, management, and engineering. These well-paid professionals boost economic development in rural communities where new employment opportunities are often welcome due to economic downturns. Accordingly, it is important to not just look at the number of jobs but also the earnings that they produce. Table 3 shows the earnings impacts from the Martin County Solar Project, which are categorized by construction impacts and operations impacts. The new local earnings during construction total over \$20.4 million for Martin County and over \$39.3 million for the State of Kentucky. The new local long-term earnings total over \$754 thousand for Martin County and over \$1.5 million for the State of Kentucky.

Table 3. — Total Earnings Impact from Martin County Solar Project

	Martin County	State of Kentucky
Construction		
Project Development and Onsite Earnings Impacts	\$17,251,753	\$28,738,642
Module and Supply Chain Impacts	\$2,881,127	\$6,652,384
Induced Impacts	\$362,908	\$3,919,935
<i>New Local Earnings during Construction</i>	\$20,495,788	\$39,310,961
Operations (Annual)		
Onsite Labor Impacts	\$544,301	\$1,086,097
Local Revenue and Supply Chain Impacts	\$184,971	\$182,865
Induced Impacts	\$24,982	\$312,997
<i>New Local Long-Term Earnings</i>	\$754,253	\$1,581,959

Output refers to economic activity or the value of production in the state or local economy. It is an equivalent measure to the Gross Domestic Product, which measures output on a national basis. According to Table 4, the new local output during construction totals over \$28.4 million for Martin County and over \$63.4 million for the State of Kentucky. The new local long-term output totals over \$1.4 million for Martin County and over \$3.5 million for the State of Kentucky.

Table 4. — Total Output Impact from Martin County Solar Project

	Martin County	State of Kentucky
Construction		
Project Development and Onsite Jobs Impacts on Output	\$19,875,034	\$32,400,056
Module and Supply Chain Impacts	\$7,308,638	\$18,908,001
Induced Impacts	\$1,230,534	\$12,162,213
<i>New Local Output during Construction</i>	\$28,414,207	\$63,470,270
Operations (Annual)		
Onsite Labor Impacts	\$544,301	\$1,086,097
Local Revenue and Supply Chain Impacts	\$848,246	\$1,525,326
Induced Impacts	\$84,053	\$963,080
<i>New Local Long-Term Output</i>	\$1,476,600	\$3,574,503

Solar energy projects increase the property tax base of a county, creating a new revenue source for education and other local government services, such as fire protection, park districts, and road maintenance. According to the guidelines posted on the Kentucky Department of Revenue¹, solar electric equipment is divided into three categories: manufacturing machinery, tangible personal property and real property. Each of these three categories is taxed at different rates. Solar panels, inverters & converters, transformers, mounting racks, DC meters, cables and converters are classified as manufacturing machinery. Above ground transmission power lines, switchgear, meters, cables and connectors are classified as tangible personal property. The land used for solar panels, right-of-way conduits, buildings, and fencing is classified as real personal property.

The Project is expected to pay to the State of Kentucky a rate of \$0.0015 per \$100 of assessed value on both the manufacturing machinery and the tangible personal property.

However, since very few utility-scale solar projects have been built in Kentucky, there is some uncertainty about how these recommended guidelines will be applied across the state. To provide clarity, Martin County and Savion are looking to enter into a Payment-in-Lieu-of-Taxes (PILOT) agreement. The analysis assumes that the Project pays a PILOT amount of \$1,500 per MWac of installed capacity. For purposes of this report, we have assumed the installed capacity of the project to be 200 MWac. The County will then have the authority to decide how to allocate the annual contribution to different taxing bodies, including the local school district.

Table 5 details the government revenue implications of the Martin County Solar Project.

VI. Property Tax Revenue

**Table 5. — Property Tax Revenue from
Martin County Solar Project**

Tax Year	State of Kentucky	Martin County and School District	Total
2024	\$22,640	\$300,000	\$322,640
2025	\$21,663	\$300,000	\$321,663
2026	\$20,686	\$300,000	\$320,686
2027	\$19,710	\$300,000	\$319,710
2028	\$18,733	\$300,000	\$318,733
2029	\$17,756	\$300,000	\$317,756
2030	\$16,779	\$300,000	\$316,779
2031	\$15,803	\$300,000	\$315,803
2032	\$14,826	\$300,000	\$314,826
2033	\$13,849	\$300,000	\$313,849
2034	\$12,872	\$300,000	\$312,872
2035	\$11,896	\$300,000	\$311,896
2036	\$10,919	\$300,000	\$310,919
2037	\$10,120	\$300,000	\$310,120
2038	\$9,321	\$300,000	\$309,321
2039	\$8,522	\$300,000	\$308,522
2040	\$7,723	\$300,000	\$307,723
2041	\$6,925	\$300,000	\$306,925
2042	\$6,525	\$300,000	\$306,525
2043	\$6,525	\$300,000	\$306,525
2044	\$6,525	\$300,000	\$306,525
2045	\$6,525	\$300,000	\$306,525
2046	\$6,525	\$300,000	\$306,525
2047	\$6,525	\$300,000	\$306,525
2048	\$6,525	\$300,000	\$306,525
2049	\$6,525	\$300,000	\$306,525
2050	\$6,525	\$300,000	\$306,525
2051	\$6,525	\$300,000	\$306,525
2052	\$6,525	\$300,000	\$306,525
2053	\$6,525	\$300,000	\$306,525
TOTAL	\$339,045	\$9,000,000	\$9,339,045
30 YR AVG	\$11,302	\$300,000	\$311,302

VII. References

Berkman, M., M. Tran, and W. Ahlgren. 2011. "Economic and Fiscal Impacts of the Desert Sunlight Solar Farm." Prepared for First Solar, Tempe, AZ (US).

Bezdek (2007) Economic and Jobs Impacts of the Renewable Energy and Energy Efficiency Industries: U.S. and Ohio, presented at SOLAR 2007, Cleveland, Ohio, accessed on 11/25/2013 at <http://www.greenenergyohio.org/page.cfm?pageID=1386>.

Bhavin, Shah. (2008). Solar Cell Supply Chain. Asia Pacific Equity Research, accessed on 11/1/2013 at <http://www.slideshare.net/JackChalice/solar-cell-supplychain>.

Census of Agriculture – Kentucky State and County Data. (1992). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Census of Agriculture – Kentucky State and County Data. (1997). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Census of Agriculture – Kentucky State and County Data. (2002). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Census of Agriculture – Kentucky State and County Data. (2007). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Census of Agriculture – Kentucky State and County Data. (2012). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Census of Agriculture – Kentucky State and County Data. (2017). United States Department of Agriculture. Accessed on 6/10/20 at <https://www.nass.usda.gov/AgCensus/index.php>.

Center for Competitive Florida. (2009). The Positive Economic Impact of Solar Energy on the Sunshine State, Briefings, accessed 11/25/2013 at <http://www.floridatxwatch.org/resources/pdf/04162009SolarEnergy.pdf>.

Chopra, Sunil and Peter Meindl. (2004). What is a Supply Chain?, Supply Chain Management.

Dixit, Avinash and Robert S. Pindyck. (1994). Investment Under Uncertainty. Princeton University Press: Princeton, NJ.

Gazheli, Ardjan and Luca Di Carato. (2013). Land-use change and solar energy production: a real option approach. *Agricultural Finance Review*. 73 (3): 507-525.

Jin, J.H., Cross, J., Rose, Z., Daebel, E., Verderber, A., and Loomis, D. G. (2016). Financing options and economic impact: distributed generation using solar photovoltaic systems in Normal, Illinois, *AIMS Energy*, 4(3): 504-516.

Jo J. H., Loomis, D.G., and Aldeman, M. R. (2013). Optimum penetration of utility-scale grid-connected solar photovoltaic systems in Illinois, *Renewable Energy*, 60, 20-26.

Loomis, D.G., Jo, J.H., and Aldeman, M.R., (2016). Economic Impact Potential of Solar Photovoltaics in Illinois, *Renewable Energy*, 87, 253-258.

National Renewable Energy Laboratories. (2012). Utility-Scale Concentrating Solar Power and Photovoltaics Projects: A Technology and Market Overview. National Renewable Energy Laboratory.

Overview of the Solar Energy Industry and Supply Chain, accessed on 10/30/2013 at <http://www.thecemc.org>.

SEIA. (2016a). Solar Market Insight Report 2016 Q4. Solar Energy Industries Association.

SEIA. (2016b). Solar Spotlight: Virginia. Solar Energy Industries Association.

SEIA. (2019). U.S. Solar Market Insight: Executive Summary, 2018 year in review. March 2019. Solar Energy Industries Association, accessed on 3/20/2019 at <http://www2.seia.org/l/139231/2019-03-06/2gb5dw>.

Solar Foundation. (2013). An Assessment of the Economic, Revenue, and Societal Impacts of Colorado's Solar Industry. October 2013, accessed on 11/25/2013 at http://solarcommunities.org/wp-content/uploads/2013/10/TSF_COSEIA-Econ-Impact-Report_FINAL-VERSION.pdf.

Stone & Associates (2011). Overview of the Solar Energy Industry and Supply Chain, Prepared for the Blue Green Alliance, accessed on 12/13/13 at <http://www.thecemc.org/body/Solar-Overview-for-BGA-Final-Jan-2011.pdf>.

Toothman, Jessica, and Aldous, Scott. (2013). How Solar Cells Work, How Stuff Works, accessed on 10/28/2013 at <http://science.howstuffworks.com/environmental/energy/solar-cell.htm>.

David G. Loomis
 Illinois State University
 Department of Economics
 Campus Box 4200
 Normal, IL 61790-4200
 (815) 905-2750
 dloomis@ilstu.edu

VIII. Curriculum Vita - David Loomis

Education

Doctor of Philosophy, Economics, Temple University, Philadelphia, Pennsylvania, May 1995.

Bachelor of Arts, Mathematics and Honors Economics, Temple University, Magna Cum Laude, May 1985.

Experience

1996-present Illinois State University, Normal, IL

Full Professor – Department of Economics (2010-present)

Associate Professor - Department of Economics (2002-2009)

Assistant Professor - Department of Economics (1996-2002)

- Taught Regulatory Economics, Telecommunications Economics and Public Policy, Industrial Organization and Pricing, Individual and Social Choice, Economics of Energy and Public Policy and a Graduate Seminar Course in Electricity, Natural Gas and Telecommunications Issues.
- Supervised as many as 5 graduate students in research projects each semester.
- Served on numerous departmental committees.

1997-present Institute for Regulatory Policy Studies, Normal, IL

Executive Director (2005-present)

Co-Director (1997-2005)

- Grew contributing membership from 5 companies to 16 organizations.
- Doubled the number of workshop/training events annually.
- Supervised 2 Directors, Administrative Staff and internship program.
- Developed and implemented state-level workshops concerning regulatory issues related to the electric, natural gas, and telecommunications industries.

Experience (cont'd)

2006-2018 Illinois Wind Working Group, Normal, IL

Director

- Founded the organization and grew the organizing committee to over 200 key wind stakeholders
- Organized annual wind energy conference with over 400 attendees
- Organized strategic conferences to address critical wind energy issues
- Initiated monthly conference calls to stakeholders
- Devised organizational structure and bylaws

2007-2018 Center for Renewable Energy, Normal, IL

Director

- Created founding document approved by the Illinois State University Board of Trustees and Illinois Board of Higher Education.
- Secured over \$150,000 in funding from private companies.
- Hired and supervised 4 professional staff members and supervised 3 faculty members as Associate Directors.
- Reviewed renewable energy manufacturing grant applications for Illinois Department of Commerce and Economic Opportunity for a \$30 million program.
- Created technical "Due Diligence" documents for the Illinois Finance Authority loan program for wind farm projects in Illinois.

2011-present Strategic Economic Research, LLC

President

- Performed economic impact analyses on policy initiatives and energy projects such as wind energy, solar energy, natural gas plants and transmission lines at the county and state level.
- Provided expert testimony before state legislative bodies, state public utility commissions, and county boards.
- Wrote telecommunications policy impact report comparing Illinois to other Midwestern states.

1997-2002 International Communications Forecasting Conference Chair

- Expanded Planning Committee with representatives from over 18 different international companies and delivered high quality conference attracting over 500 people over 4 years.

Experience (cont'd)

1985-1996 Bell Atlantic, Philadelphia, Pa.

Economist - Business Research

- Wrote and taught Applied Business Forecasting multimedia course.
- Developed and documented 25 econometric demand models that were used in regulatory filings.
- Provided statistical and analytic support to regulatory costing studies.
- Served as subject matter expert in switched and special access.
- Administered \$4 million budget including \$1.8 million consulting budget.

Professional Awards and Memberships

2016 Outstanding Cross-Disciplinary Team Research Award with Jin Jo and Matt Aldeman – recognizes exemplary collaborative research conducted by multiple investigators from different disciplines.

2011 Midwestern Regional Wind Advocacy Award from the U. S. Department of Energy's Wind Powering America presented at WindPower 2011

2009 Economics Department Scott M. Elliott Faculty Excellence Award – awarded to faculty who demonstrate excellence in teaching, research and service.

2009 Illinois State University Million Dollar Club – awarded to faculty who have over \$1 million in grants through the university.

2008 Outstanding State Wind Working Group Award from the U. S. Department of Energy's Wind Power America presented at WindPower 2008.

1999 Illinois State University Teaching Initiative Award

Member of the American Economic Association, National Association of Business Economists, International Association for Energy Economics, Institute for Business Forecasters; Institute for International Forecasters, International Telecommunications Society.

Professional Publications

34. Aldeman, M.R., Jo, J.H., and Loomis, D.G. (2018). Quantification of Uncertainty Associated with Wind Assessments of Various Intervals, Transactions of the Canadian Society for Mechanical Engineering, forthcoming.

33. Jin, J.H., Cross, J., Rose, Z., Daebel, E., Verderber, A., and Loomis, D. G. (2016). Financing options and economic impact: distributed generation using solar photovoltaic systems in Normal, Illinois, AIMS Energy, 4(3): 504-516.

Professional Publications (cont'd)

32. Loomis, D.G., Hayden, J., Noll, S. and Payne, J.E. (2016). Economic Impact of Wind Energy Development in Illinois, *The Journal of Business Valuation and Economic Loss Analysis*, 11(1), 3-23.
31. Loomis, D.G., Jo, J.H., and Aldeman, M.R., (2016). Economic Impact Potential of Solar Photovoltaics in Illinois, *Renewable Energy*, 87, 253-258.
30. Aldeman, M.R., Jo, J.H., and Loomis, D.G. (2015). The Technical Potential for Wind Energy in Illinois, *Energy*, 90(1), 1082-1090.
29. Tegen, S., Keyser, D., Flores-Espino, F., Miles, J., Zammit, D. and Loomis, D. (2015). Offshore Wind Jobs and Economic Development Impacts in the United States: Four Regional Scenarios, National Renewable Energy Laboratory Technical Report, NREL/TP-5000-61315, February.
28. Loomis, D. G. and Bowden, N. S. (2013). Nationwide Database of Electric Rates to Become Available, *Natural Gas & Electricity*, 30 (5), 20-25.
27. Jin, J. H., Loomis, D. G., and Aldeman, M. R. (2013). Optimum penetration of utility-scale grid-connected solar photovoltaic systems in Illinois, *Renewable Energy*, 60, 20-26.
26. Malm, E., Loomis, D. G., DeFranco, J. (2012). A Campus Technology Choice Model with Incorporated Network Effects: Choosing Between General Use and Campus Systems, *International Journal of Computer Trends and Technology*, 3(4), 622-629.
25. Chupp, B. A., Hickey, E.A. & Loomis, D. G. (2012). Optimal Wind Portfolios in Illinois, *Electricity Journal*, 25, 46-56.
24. Hickey, E., Loomis, D. G., & Mohammadi, H. (2012). Forecasting hourly electricity prices using ARMAX-GARCH models: An application to MISO hubs, *Energy Economics*, 34, 307-315.
23. Theron, S., Winter, J.R, Loomis, D. G., & Spaulding, A. D. (2011). Attitudes Concerning Wind Energy in Central Illinois. *Journal of the America Society of Farm Managers and Rural Appraisers*, 74, 120-128.
22. Payne, J. E., Loomis, D. G. & Wilson, R. (2011). Residential Natural Gas Demand in Illinois: Evidence from the ARDL Bounds Testing Approach. *Journal of Regional Analysis and Policy*, 41(2), 138.

Professional Publications (cont'd)

21. Loomis, D. G. & Ohler, A. O. (2010). Are Renewable Portfolio Standards A Policy Cure-all? A Case Study of Illinois's Experience. *Environmental Law and Policy Review*, 35, 135-182.
20. Gil-Alana, L. A., Loomis, D. G., & Payne, J. E. (2010). Does energy consumption by the U.S. electric power sector exhibit long memory behavior ? *Energy Policy*, 38, 7512-7518.
19. Carlson, J. L., Payne, J. E., & Loomis, D. G. (2010). An assessment of the Economic Impact of the Wind Turbine Supply Chain in Illinois. *Electricity Journal*, 13, 75-93.
18. Apergis, N., Payne, J. E., & Loomis, D. G. (2010). Are shocks to natural gas consumption transitory or permanent? *Energy Policy*, 38, 4734-4736.
17. Apergis, N., Payne, J. E., & Loomis, D. G. (2010). Are fluctuations in coal consumption transitory or permanent? Evidence from a panel of U.S. states. *Applied Energy*, 87, 2424-2426.
16. Hickey, E. A., Carlson, J. L., & Loomis, D. G. (2010). Issues in the determination of the optimal portfolio of electricity supply options. *Energy Policy*, 38, 2198-2207.
15. Carlson, J. L., & Loomis, D. G. (2008). An assessment of the impact of deregulation on the relative price of electricity in Illinois. *Electricity Journal*, 21, 60-70.
14. Loomis, D. G., (2008). The telecommunications industry. In H. Bidgoli (Ed.), *The handbook of computer networks* (pp. 3-19). Hoboken, NJ: John Wiley & Sons.
13. Cox, J. E., Jr., & Loomis, D. G. (2007). A managerial approach to using error measures in the evaluation of forecasting methods. *International Journal of Business Research*, 7, 143-149.
12. Cox, J. E., Jr., & Loomis, D. G. (2006). Improving forecasting through textbooks – a 25 year review. *International Journal of Forecasting*, 22, 617-624.
11. Swann, C. M., & Loomis, D. G. (2005). Competition in local telecommunications – there's more than you think. *Business Economics*, 40, 18-28.
10. Swann, C. M., & Loomis, D. G. (2005). Intermodal competition in local telecommunications markets. *Information Economics and Policy*, 17, 97-113.

Professional Publications (cont'd)

9. Swann, C. M., & Loomis, D. G. (2004) Telecommunications demand forecasting with intermodal competition – a multi-equation modeling approach. *Elektronikk*, 100, 180-184.
 8. Cox, J. E., Jr., & Loomis, D. G. (2003). Principles for teaching economic forecasting. *International Review of Economics Education*, 1, 69-79.
 7. Taylor, L. D. & Loomis, D. G. (2002). *Forecasting the internet: understanding the explosive growth of data communications*. Boston: Kluwer Academic Publishers.
 6. Wiedman, J. & Loomis, D. G. (2002). U.S. broadband pricing and alternatives for internet service providers. In D. G. Loomis & L. D. Taylor (Eds.) Boston: Kluwer Academic Publishers.
 5. Cox, J. E., Jr. & Loomis, D. G. (2001). Diffusion of forecasting principles: an assessment of books relevant to forecasting. In J. S. Armstrong (Ed.), *Principles of Forecasting: A Handbook for Researchers and Practitioners* (pp. 633-650). Norwell, MA: Kluwer Academic Publishers.
 4. Cox, J. E., Jr. & Loomis, D. G. (2000). A course in economic forecasting: rationale and content. *Journal of Economics Education*, 31, 349-357.
 3. Malm, E. & Loomis, D. G. (1999). Active market share: measuring competitiveness in retail energy markets. *Utilities Policy*, 8, 213-221.
 2. Loomis, D. G. (1999). Forecasting of new products and the impact of competition. In D. G. Loomis & L. D. Taylor (Eds.), *The future of the telecommunications industry: forecasting and demand analysis*. Boston: Kluwer Academic Publishers.
- Loomis, D. G. (1997). Strategic substitutes and strategic complements with interdependent demands. *The Review of Industrial Organization*, 12, 781-791.

Expert Testimony

23. McLean County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, LLC, Direct Oral Testimony, January 4, 2018.
22. New Mexico Public Regulation Commission, Case No. 17-00275-UT, Application of Sagamore Wind Energy LLC, on behalf of Invenergy, LLC, Direct Written Testimony filed November 6, 2017.

Expert Testimony (cont'd)

21. Ohio Power Siting Board, Case No. 17-773-EL-BGN, In the Matter of Hardin Solar Energy LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Hardin County, Ohio, on behalf of Invenergy, LLC, Exhibit with Report filed July 5, 2017.
20. Macon County (Illinois) Environmental, Education, Health and Welfare Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 20, 2015.
19. Illinois Commerce Commission, Case No. 15-0277, Oral Cross-examination Testimony on behalf of Grain Belt Express Clean Line LLC appeared before the Commission on August 19, 2015.
18. Macon County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of E.ON Energy, Direct Oral Testimony, August 11, 2015.
17. Illinois Commerce Commission, Case No. 15-0277, Written Rebuttal Testimony on behalf of Grain Belt Express Clean Line LLC filed August 7, 2015.
16. Kankakee County (Illinois) Planning, Zoning, and Agriculture Committee, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 22, 2015.
15. Kankakee County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of EDF Renewables, Direct Oral Testimony, July 13, 2015.
14. Bureau County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Berkshire Hathaway Energy/Geronimo Energy, Direct Oral Testimony, June 16, 2015.
13. Illinois Commerce Commission, Case No. 15-0277, Written Direct Testimony on behalf of Grain Belt Express Clean Line LLC filed April 10, 2015.
12. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Oral Cross-Examination, December 8-9, 2014.

Expert Testimony (cont'd)

11. Missouri Public Service Commission, Case No. EA-2014-0207, Oral Cross-examination Testimony on behalf of Grain Belt Express Clean Line LLC appeared before the Commission on November 21, 2014.
10. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of Invenergy, Direct Oral Testimony, November 17-19, 2014.
9. Missouri Public Service Commission, Case No. EA-2014-0207, Written Surrebuttal Testimony on behalf of Grain Belt Express Clean Line LLC, filed October 14, 2014.
8. Missouri Public Service Commission, Case No. EA-2014-0207, Written Direct Testimony on behalf of Grain Belt Express Clean Line LLC, filed March 26, 2014.
7. Illinois Commerce Commission, Case No. 12-0560, Oral Cross-examination Testimony on behalf of Rock Island Clean Line LLC appeared before the Commission on December 11, 2013.
6. Illinois Commerce Commission, Case No. 12-0560, Written Rebuttal Testimony on behalf of Rock Island Clean Line LLC filed August 20, 2013.
5. Boone County (Illinois) Board, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, April 23, 2013.
4. Illinois Commerce Commission, Case No. 12-0560, Written Direct Testimony on behalf of Rock Island Clean Line LLC filed October 10, 2012.
3. Whiteside County (Illinois) Board and Whiteside County Planning and Zoning Committee, Examination of Wind Energy Conversion System Ordinance, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, April 12, 2012.
2. State of Illinois Senate Energy and Environment Committee, Direct Testimony and Cross-Examination, on behalf of the Center for Renewable Energy, October 28, 2010.
1. Livingston County (Illinois) Zoning Board of Appeals, Application for Special Use Permit for a Wind Energy Conversion System, on behalf of the Center for Renewable Energy, Direct Testimony and Cross-Examination, July 28, 2010.

Selected Presentations

“Smart Cities and Micro Grids: Cost Recovery Issues,” presented September 12, 2017 at the National Association of Regulatory Utility Commissioners Staff Subcommittee on Accounting and Finance Meeting, Springfield, IL.

“Cloud Computing: Regulatory Principles and ICC NOI,” presented September 11, 2017 at the National Association of Regulatory Utility Commissioners Staff Subcommittee on Accounting and Finance Meeting, Springfield, IL.

“Illinois Wind, Illinois Solar and the Illinois Future Energy Jobs Act,” presented July 25, 2017 at the Illinois County Assessors Meeting, Normal, IL.

“Illinois Wind, Illinois Solar and the Illinois Future Energy Jobs Act,” presented April 21, 2017 at the Illinois Association of County Zoning Officers Meeting, Bloomington, IL.

“Energy Storage Economics and RTOs,” presented October 30, 2016 at the Energy Storage Conference at Argonne National Laboratory.

“Wind Energy in Illinois,” on October 6, 2016 at the B/N Daybreak Rotary Club, Bloomington, IL.

“Smart Grid for Schools,” presented August 17, 2016 to the Ameren External Affairs Meeting, Decatur, IL.

“Solar Energy in Illinois,” presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL

“Wind Energy in Illinois,” presented July 28, 2016 at the 3rd Annual K-12 Teachers Clean Energy Workshop, Richland Community College, Decatur, IL

“Smart Grid for Schools,” presented June 21, 2016 at the ISEIF Grantee and Ameren Meeting, Decatur, IL.

“Costs and Benefits of Renewable Energy,” presented November 4, 2015 at the Osher Lifelong Learning Institute at Bradley, University, Peoria, IL.

“Energy Sector Workforce Issues,” presented September 17, 2015 at the Illinois Workforce Investment Board, Springfield, IL.

“The Past, Present and Future of Wind Energy in Illinois,” presented March 13, 2015 at the Peoria Rotary Club, Peoria, IL.

“Where Are All the Green Jobs?” presented January 28, 2015 at the 2015 Illinois Green Economy Network Sustainability Conference, Normal, IL.

Presentations (cont'd)

“Teaching Next Generation Energy Concepts with Next Generation Science Standards: Addressing the Critical Need for a More Energy-Literate Workforce,” presented September 30, 2014 at the Mathematics and Science Partnerships Program 2014 Conference in Washington, DC.

“National Utility Rate Database,” presented October 23, 2013 at Solar Power International, Chicago, IL.

“Potential Economic Impact of Offshore Wind Energy in the Great Lakes,” presented May 6, 2013 at WindPower 2013, Chicago, IL.

“Why Illinois? Windy City, Prairie Power,” presented May 5, 2013 at WindPower 2013, Chicago, IL.

“National Utility Rate Database,” presented January 29, 2013 at the EUEC Conference, Phoenix, AZ.

“Energy Learning Exchange and Green Jobs,” presented December 13, 2012 at the TRICON Meeting of Peoria and Tazewell County Counselors, Peoria, IL.

“Potential Economic Impact of Offshore Wind Energy in the Great Lakes,” presented November 12, 2012 at the Offshore Wind Jobs and Economic Development Impacts Webinar.

“Energy Learning Exchange,” presented October 31, 2012 at the Utility Workforce Development Meeting, Chicago, IL.

“Wind Energy in McLean County,” presented June 26, 2012 at BN By the Numbers, Normal, IL.

“Wind Energy,” presented June 14, 2012 at the Wind for Schools Statewide Teacher Workshop, Normal, IL.

“Economic Impact of Wind Energy in Illinois,” presented June 6, 2012 at AWEA's WINDPOWER 2012, Atlanta, GA.

“Trends in Illinois Wind Energy,” presented March 6, 2012 at the AWEA Regional Wind Energy Summit – Midwest in Chicago, IL.

“Challenges and New Growth Strategies in the Wind Energy Business,” invited plenary session speaker at the Green Revolution Leaders Forum, November 18, 2011 in Seoul, South Korea.

“Overview of the Center for Renewable Energy,” presented July 20, 2011 at the University-Industry Consortium Meeting at Illinois Institute of Technology, Chicago, IL.

Presentations (cont'd)

“Building the Wind Turbine Supply Chain,” presented May 11, 2011 at the Supply Chain Growth Conference, Chicago, IL

“Building a Regional Energy Policy for Economic Development,” presented April 4, 2011 at the Midwestern Legislative Conference’s Economic Development Committee Webinar.

“Wind Energy 101,” presented February 7, 2011 at the Wind Power in Central Illinois - A Public Forum, CCNET Renewable Energy Group, Champaign, IL.

“Alternative Energy Strategies,” presented with Matt Aldeman November 19, 2010 at the Innovation Talent STEM Education Forum, Chicago, IL.

“Siting and Zoning in Illinois,” presented November 17, 2010 at the Wind Powering America Webinar.

“What Governor Quinn Should Do about Energy?” presented November 15, 2010 at the Illinois Chamber of Commerce Energy Forum Conference, Chicago, IL.

“Is Wind Energy Development Right for Illinois,” presented with Matt Aldeman October 28, 2010 at the Illinois Association of Illinois County Zoning Officials Annual Seminar in Utica, IL.

“Economic Impact of Wind Energy in Illinois,” presented July 22, 2010 at the AgriEnergy Conference in Champaign, IL.

“Renewable Energy Major at ISU,” presented July 21, 2010 at Green Universities and Colleges Subcommittee Webinar.

“Economics of Wind Energy,” presented May 19, 2010 at the U.S. Green Building Council meeting in Chicago, IL.

“Forecasting: A Primer for the Small Business Entrepreneur,” presented with James E. Cox, Jr. April 14, 2010 at the Allied Academies’ Spring International Conference in New Orleans, LA.

“Are Renewable Portfolio Standards a Policy Cure-All? A Case Study of Illinois’ Experience,” presented January 30, 2010 at the 2010 William and Mary Environmental Law and Policy Review Symposium in Williamsburg, VA.

“Creating Partnerships between Universities and Industry,” presented November 19, 2009, at New Ideas in Educating a Workforce in Renewable Energy and Energy Efficiency in Albany, NY.

“Educating Illinois in Renewable Energy,” presented November 14, 2009 at the Illinois Science Teachers Association in Peoria, IL.

Presentations (cont'd)

“Green Collar Jobs,” invited presentation October 14, 2009 at the 2009 Workforce Forum in Peoria, IL.

“The Role of Wind Power in Illinois,” presented March 4, 2009 at the Association of Illinois Electric Cooperatives Engineering Seminar in Springfield, IL.

“The Economic Benefits of Wind Farms,” presented January 30, 2009 at the East Central Illinois Economic Development District Meeting in Champaign, IL.

“Green Collar Jobs in Illinois,” presented January 6, 2009 at the Illinois Workforce Investment Board Meeting in Macomb, Illinois.

“Green Collar Jobs: What Lies Ahead for Illinois?” presented August 1, 2008 at the Illinois Employment and Training Association Conference.

“Mapping Broadband Access in Illinois,” presented October 16, 2007 at the Rural Telecon '07 conference.

“A Managerial Approach to Using Error Measures to Evaluate Forecasting Methods,” presented October 15, 2007 at the International Academy of Business and Economics.

“Dollars and Sense: The Pros and Cons of Renewable Fuel,” presented October 18, 2006 at Illinois State University Faculty Lecture Series.

“Broadband Access in Illinois,” presented July 28, 2006 at the Illinois Association of Regional Councils Annual Meeting.

“Broadband Access in Illinois,” presented November 17, 2005 at the University of Illinois’ Connecting the e to Rural Illinois.

“Improving Forecasting Through Textbooks – A 25 Year Review,” with James E. Cox, Jr., presented June 14, 2005 at the 25th International Symposium on Forecasting.

“Telecommunications Demand Forecasting with Intermodal Competition, with Christopher Swann, presented April 2, 2004 at the Telecommunications Systems Management Conference 2004.

“Intermodal Competition,” with Christopher Swann, presented April 3, 2003 at the Telecommunications Systems Management Conference 2003.

Presentations (cont'd)

“Intermodal Competition in Local Exchange Markets,” with Christopher Swann, presented June 26, 2002 at the 20th Annual International Communications Forecasting Conference.

“Assessing Retail Competition,” presented May 23, 2002 at the Institute for Regulatory Policy Studies’ Illinois Energy Policy for the 21st Century workshop.

“The Devil in the Details: An Analysis of Default Service and Switching,” with Eric Malm presented May 24, 2001 at the 20th Annual Advanced Workshop on Regulation and Competition.

“Forecasting Challenges for U.S. Telecommunications with Local Competition,” presented June 28, 1999 at the 19th International Symposium on Forecasting.

“Acceptance of Forecasting Principles in Forecasting Textbooks,” presented June 28, 1999 at the 19th International Symposium on Forecasting.

“Forecasting Challenges for Telecommunications With Local Competition,” presented June 17, 1999 at the 17th Annual International Communications Forecasting Conference.

“Measures of Market Competitiveness in Deregulating Industries,” with Eric Malm, presented May 28, 1999 at the 18th Annual Advanced Workshop on Regulation and Competition.

“Trends in Telecommunications Forecasting and the Impact of Deregulation,” Proceedings of EPRI’s 11th Forecasting Symposium, 1998.

“Forecasting in a Competitive Age: Utilizing Macroeconomic Forecasts to Accurately Predict the Demand for Services,” invited speaker, Institute for International Research Conference, September 29, 1997.

“Regulatory Fairness and Local Competition Pricing,” presented May 30, 1996 at the 15th Annual Advanced Workshop in Regulation and Public Utility Economics.

“Optimal Pricing For a Regulated Monopolist Facing New Competition: The Case of Bell Atlantic Special Access Demand,” presented May 28, 1992 at the Rutgers Advanced Workshop in Regulation and Public Utility Economics.

Grants

“SmartGrid for Schools 2018 and Energy Challenge,” with William Hunter, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002 - extended, January 2017, \$300,000.

“Energy Learning Exchange - Implementing Nationally Recognized Energy Curriculum and Credentials in Illinois,” Northern Illinois University, RSP Award # A17-0098, February, 2017, \$13,000.

“SmartGrid for Schools 2017 and Energy Challenge,” with William Hunter, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002 - extended, January 2017, \$350,000.

“Illinois Jobs Project,” University of California Berkeley, RSP Award # A16-0148, August, 2016, \$10,000.

“Energy Workforce Ready Through Building Performance Analysis,” Illinois Department of Commerce and Economic Opportunity through the Department of Labor, RSP # A16-0139, June, 2016, \$328,000 (grant was de-obligated before completion).

“SmartGrid for Schools 2016 and Smart Appliance Challenge,” with William Hunter, Brad Christenson and Jeritt Williams, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-002, January 2016, \$450,000.

“SmartGrid for Schools 2015,” with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP Award # A15-0092-001, February 2015, \$400,000.

“Economic Impact of Nuclear Plant Closings: A Response to HR 1146,” Illinois Department of Economic Opportunity, RSP Award # 14-025001 amended, January, 2015, \$22,000.

“Partnership with Midwest Renewable Energy Association for Solar Market Pathways” with Missy Nergard and Jin Jo, U.S. Department of Energy Award Number DE-EE0006910, October, 2014, \$109,469 (ISU Award amount).

“Renewable Energy for Schools,” with Matt Aldeman and Jin Jo, Illinois Department of Commerce and Economic Opportunity, Award Number 14-025001, June, 2014, \$130,001.

“SmartGrid for Schools 2014,” with William Hunter and Matt Aldeman, Illinois Science and Energy Innovation Foundation, RSP # 14B116, March 2014, \$451,701.

“WINDPOWER 2014 Conference Exhibit,” Illinois Department of Commerce and Economic Opportunity, RSP #14C167, March, 2014, \$95,000.

Grants (cont'd)

“Lake Michigan Offshore Wind Energy Buoy,” with Matt Aldeman, Illinois Clean Energy Community Foundation, Request ID 6435, November, 2013, \$90,000.

“Teaching Next Generation Energy Concepts with Next Generation Science Standards,” with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170A, October, 2013, second year, \$159,954; amended to \$223,914.

“Solar for Schools,” with Matt Aldeman, Illinois Green Economy Network, RSP # 13C280, August, 2013, \$66,072.

“Energy Learning Exchange Implementation Grant,” with William Hunter and Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 13-052003, June, 2013, \$350,000.

“Teaching Next Generation Energy Concepts with Next Generation Science Standards,” with William Hunter, Matt Aldeman and Amy Bloom, Illinois State Board of Education, RSP # 13B170, April, 2013, \$159,901.

“Illinois Sustainability Education SEP,” Illinois Department of Commerce and Economic Opportunity, Award Number 08-431006, March, 2013, \$225,000.

“Illinois Pathways Energy Learning Exchange Planning Grant,” with William Hunter and Matt Aldeman, Illinois State Board of Education (Source: U.S. Department of Education), RSP # 13A007, December, 2012, \$50,000.

“Illinois Sustainability Education SEP,” Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, amended March, 2012, \$98,911.

“Wind for Schools Education and Outreach,” with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11-025001, amended February, 2012, \$111,752.

“A Proposal to Support Solar Energy Potential and Job Creation for the State of Illinois Focused on Large Scale Photovoltaic System,” with Jin Jo (lead PI), Illinois Department of Commerce and Economic Opportunity, Award Number 12-025001, January 2012, \$135,000.

“National Database of Utility Rates and Rate Structure,” U.S. Department of Energy, Award Number DE-EE0005350TDD, 2011-2014, \$850,000.

“Illinois Sustainability Education SEP,” Illinois Department of Commerce and Economic Opportunity, Award Number 08-431005, June 2011, \$75,000.

Grants (cont'd)

“Wind for Schools Education and Outreach,” with Matt Aldeman, Illinois Department of Commerce and Economic Opportunity, Award Number 11-025001, March 2011, \$190,818.

“Using Informal Science Education to Increase Public Knowledge of Wind Energy in Illinois,” with Amy Bloom and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February 2011, \$13,713.

“Wind Turbine Market Research,” with Matt Aldeman, Illinois Manufacturers Extension Center, May, 2010, \$4,000.

“Petco Resource Assessment,” with Matt Aldeman, Petco Petroleum Co., April, 2010 amended August 2010 \$34,000; original amount \$18,000.

“Wind for Schools Education and Outreach,” with Anthony Lornbach and Matt Aldeman, Scott Elliott Cross-Disciplinary Grant Program, February, 2010, \$13,635.

“IGA IFA/ISU Wind Due Diligence,” Illinois Finance Authority, November, 2009, \$8,580 amended December 2009; original amount \$2,860.

“Green Industry Business Development Program, with the Shaw Group and Illinois Manufacturers Extension Center, Illinois Department of Commerce and Economic Opportunity, Award Number 09-021007, August 2009, \$245,000.

“Wind Turbine Workshop Support,” Illinois Department of Commerce and Economic Opportunity, June 2009, \$14,900.

“Illinois Wind Workers Group,” with Randy Winter, U.S. Department of Energy, Award Number DE-EE0000507, 2009-2011, \$107,941.

“Wind Turbine Supply Chain Study,” with J. Lon Carlson and James E. Payne, Illinois Department of Commerce and Economic Opportunity, Award Number 09-021003, April 2009, \$125,000.

“Renewable Energy Team Travel to American Wind Energy Association WindPower 2009 Conference, Center for Mathematics, Science and Technology, February 2009, \$3,005.

“Renewable Energy Educational Lab Equipment,” with Randy Winter and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), February, 2008, \$232,600.

Grants (cont'd)

“Proposal for New Certificate Program in Electricity, Natural Gas and Telecommunications Economics,” with James E. Payne, Extended Learning Program Grant, April, 2007, \$29,600.

“Illinois Broadband Mapping Study,” with J. Lon Carlson and Rajeev Goel, Illinois Department of Commerce and Economic Opportunity, Award Number 06-205008, 2006-2007, \$75,000.

“Illinois Wind Energy Education and Outreach Project,” with David Kennell and Randy Winter, U.S. Department of Energy, Award Number DE-FG36-06GO86091, 2006-2010, \$990,000.

“Wind Turbine Installation at Illinois State University Farm,” with Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), May, 2004, \$500,000.

“Illinois State University Wind Measurement Project,” Doug Kingman and David Kennell, Illinois Clean Energy Community Foundation (peer-reviewed), with August, 2003, \$40,000.

“Illinois State University Wind Measurement Project,” with Doug Kingman and David Kennell, NEG Micon matching contribution, August, 2003, \$65,000.

“Distance Learning Technology Program,” Illinois State University Faculty Technology Support Services, Summer 2002, \$3,000.

“Providing an Understanding of Telecommunications Technology By Incorporating Multimedia into Economics 235,” Instructional Technology Development Grant (peer-reviewed), January 15, 2001, \$1,400.

“Using Real Presenter to create a virtual tour of GTE’s Central Office,” with Jack Chizmar, Instructional Technology Literacy Mentoring Project Grant (peer-reviewed), January 15, 2001, \$1,000.

“An Empirical Study of Telecommunications Industry Forecasting Practices,” with James E. Cox, College of Business University Research Grant (peer-reviewed), Summer, 1999, \$6,000.

“Ownership Form and the Efficiency of Electric Utilities: A Meta-Analytic Review” with L. Dean Hiebert, Institute for Regulatory Policy Studies research grant (peer-reviewed), August 1998, \$6,000.

Total Grants: \$7,740,953

External Funding

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Aqua Illinois (\$7,500); Commonwealth Edison (\$7,500); Exelon (\$7,500); Illinois American Water (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2017, \$67,500 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2017, \$18,342.

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Aqua Illinois (\$7,500); Commonwealth Edison (\$7,500); Exelon (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2017, \$75,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2016, \$19,667.

Corporate Funding for Energy Learning Exchange, Calendar Year 2016, \$53,000.

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Aqua Illinois (\$7,500); Commonwealth Edison (\$7,500); Exelon/Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Utilities, Inc. (\$7,500) Fiscal Year 2016, \$82,500 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2015, \$15,897.

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Exelon/Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midcontinent ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2015, \$90,000 total.

Corporate Funding for Energy Learning Exchange, Calendar Year 2014, \$55,000.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2014, \$12,381.

External Funding (cont'd)

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Energy Efficiency Alliance (\$4,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2014, \$102,000 total.

Corporate Funding for Energy Learning Exchange, Calendar Year 2013, \$53,000.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2013, \$17,097.

Corporate Funding for Institute for Regulatory Policy Studies, Ameren (\$7,500), Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2013, \$97,500 total.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2012, \$29,325.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2012, \$16,060.

Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2012, \$90,000 total.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2011, \$57,005.

Workshop Surplus for Institute for Regulatory Policy Studies, with Adrienne Ohler, Fiscal Year 2011, \$13,562.

Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline (\$7,500); Aqua Illinois (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); Illinois American Water (\$7,500) ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2011, \$90,000 total.

External Funding (cont'd)

Corporate Funding for Center for Renewable Energy, Calendar Year 2010, \$50,000.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2010, \$49,000.

Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2010, \$17,759.

Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline (\$7,500); Ameren (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); ITC Holdings (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2010, \$82,500 total.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2009, \$57,140.

Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2009, \$21,988.

Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline (\$7,500); Ameren (\$7,500); AT&T (\$7,500); Commonwealth Edison (\$7,500); Constellation NewEnergy (\$7,500); MidAmerican Energy (\$7,500); Midwest Generation (\$7,500); MidWest ISO (\$7,500); NICOR Energy (\$7,500); People Gas Light and Coke (\$7,500); PJM Interconnect (\$7,500); Fiscal Year 2009, \$82,500 total.

Corporate Funding for Center for Renewable Energy, Calendar Year 2008, \$157,500.

Corporate Funding for Illinois Wind Working Group, Calendar Year 2008, \$38,500.

Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2008, \$28,489.

Corporate Funding for Institute for Regulatory Policy Studies, Alliance Pipeline (\$5,000); Ameren (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$5,000), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); Fiscal Year 2008, \$60,000 total.

External Funding (cont'd)

Corporate Funding for Illinois Wind Working Group, Calendar Year 2007, \$16,250.

Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2007, \$19,403.

Corporate Funding for Institute for Regulatory Policy Studies, AARP (\$3,000), Alliance Pipeline (\$5,000), Ameren (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$5,000), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$5,000); Verizon (\$5,000); Fiscal Year 2007, \$73,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with Lon Carlson, Fiscal Year 2006, \$13,360.

Corporate Funding for Institute for Regulatory Policy Studies, AARP (\$1,500), Alliance Pipeline (\$2,500), Ameren (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); DTE Energy (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); Peabody Energy (\$2,500), People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$5,000); Verizon (\$5,000); Fiscal Year 2006, \$71,500 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2005, \$12,916.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); Citizens Utility Board (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); MidWest ISO (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); SBC (\$2,500); Verizon (\$2,500); Fiscal Year 2005, \$60,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2004, \$17,515.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); Commonwealth Edison (\$5,000); Constellation NewEnergy (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); Midwest Generation (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); PJM Interconnect (\$5,000); Fiscal Year 2004, \$45,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Fiscal Year 2003, \$8,300.

External Funding (cont'd)

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$2,500); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Fiscal Year 2003, \$32,500 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2002, \$15,700.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$2,500); AT&T (\$5,000); Commonwealth Edison (\$2,500); Illinois Power (\$2,500); MidAmerican Energy (\$2,500); NICOR Energy (\$2,500); People Gas Light and Coke (\$2,500); Calendar Year 2002, \$17,500 total.

Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); Calendar Year 2002, \$20,000 total

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 2001, \$35,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2001, \$19,400.

Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); SAS Institute (\$10,000); Calendar Year 2001, \$30,000 total.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 2000, \$35,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 2000, \$20,270.

Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates (\$10,000); Taylor Nelson Sofres Telecoms (\$10,000); Calendar Year 2000, \$20,000 total.

External Funding (cont'd)

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); AT&T (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); NICOR Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1999, \$35,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1999, \$10,520.

Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates (\$10,000); PNR Associates (\$10,000); Calendar Year 1999, \$20,000 total.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); CILCO (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1998, \$30,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1998, \$44,334.

Corporate Funding for International Communications Forecasting Conference, National Economic Research Associates (\$10,000); PNR Associates (\$10,000); Calendar Year 1998, \$20,000 total.

Corporate Funding for Institute for Regulatory Policy Studies, with L. Dean Hiebert, AmerenCIPS (\$5,000); CILCO (\$5,000); Commonwealth Edison (\$5,000); Illinois Power (\$5,000); MidAmerican Energy (\$5,000); People Gas Light and Coke (\$5,000); Calendar Year 1997, \$30,000 total.

Workshop Surplus for Institute for Regulatory Policy Studies, with L. Dean Hiebert, Calendar Year 1997, \$19,717.

Total External Funding: \$2,492,397

