

ORDER NO. 89347

IN THE MATTER OF THE APPLICATION *
OF KIEFFER FUNK, LLC FOR A * PUBLIC SERVICE COMMISSION
CERTIFICATE OF PUBLIC * OF MARYLAND
CONVENIENCE AND NECESSITY TO *
CONSTRUCT A 11.80 MW SOLAR *
PHOTOVOLTAIC GENERATING *
FACILITY IN WASHINGTON COUNTY, *
MARYLAND *

CASE NO. 9495

Issued: October 15, 2019

PROPOSED ORDER OF PUBLIC UTILITY LAW JUDGE

Appearances:

David W. Beugelmans, Esquire, on behalf of Kieffer Funk, LLC.

Sondra S. McLemore, Esquire, on behalf of Department of Natural Resources, Power Plant Research Program.

Phillip H. Sheehan, Esquire, on behalf of Maryland Office of People's Counsel.

Lloyd J. Spivak, Esquire, on behalf of the Staff of the Maryland Public Service Commission.

I. Procedural History

On November 14, 2018, Kieffer Funk, LLC ("Company" or "Applicant") filed an application for a Certificate of Public Convenience and Necessity ("CPCN") seeking authorization for the construction of an 11.80 MW solar photovoltaic generating facility ("Project" or "Facility") in Washington County, Maryland ("Application").¹

¹ Applicant ("Appl.") Exhibit ("Ex.") 3.

Accompanying the Application was an Environmental Review Document (“ERD”) for the Project dated October 25, 2018, prepared by H&B Solutions, LLC, on behalf of the Applicant.²

On November 15, 2018, the Public Service Commission of Maryland (“Commission”) initiated this matter to consider the Application and delegated the proceedings to the Public Utility Law Judge Division.

On November 28, 2018, the Applicant submitted copies of the notices it provided to members of the General Assembly pursuant to Public Utilities Article, *Annotated Code of Maryland* (“PUA”), §7-207(c)(1)(iv)-(v).³

On December 18, 2018, a prehearing conference was held, at which time a procedural schedule was adopted for the matter.⁴

On March 13, 2019, an evening hearing for public comment was held in Smithsburg, Maryland.

On March 21, 2019, the Applicant filed the Direct Testimonies of Dane S. Bauer, Vice President of H&B Solutions, LLC, and James Crawford, Director of Development at Urban Grid Co.⁵ Mr. Crawford stated that he has been involved in the Project since its early stages, and is familiar with “all aspects” of the Project. Mr. Bauer assisted in drafting the Applicant’s ERD, and sponsored specific sections of it.⁶

² Appl. Ex. 4.

³ Appl. Ex. 1.

⁴ Notice and Certificates of Publication for the Pre-Hearing Conference were entered into the record as Appl. Ex. 2.

⁵ Appl. Ex. 7, Direct Testimony of James Crawford, (“Crawford Direct”), and Appl. Ex. 8, Direct Testimony of Dane S. Bauer, (“Bauer Direct”).

⁶ Bauer Direct at 1.

On July 3, 2019, the Staff of the Maryland Public Service Commission (“Staff”) filed the Direct Testimony of Roger Austin, an Engineer in the Commission's Division of Engineering.⁷ Mr. Austin’s testimony addressed the engineering requirements for the Project's interconnection with Potomac Edison Company (“PE”) and PJM Interconnection, LLC (“PJM”) and contained Proposed Conditions of Staff.

On July 3, 2019, the Department of Natural Resources (“DNR”), Power Plant Research Program (“PPRP”), filed the following: the Direct Testimony of Frederick S. Kelley,⁸ the Project Assessment Report (“PAR”),⁹ Initial Recommended Conditions,¹⁰ and the State Secretarial Letter.¹¹

On July 10, 2019 an evening hearing for public comment was held in Hagerstown, Maryland.

On July 12, 2019, in response to various comments at the second evening public hearing, the Applicant filed a Supplement Attachment B to the Direct Testimony of James Crawford containing an explanation and a representative photograph of how the Project tie line will appear once the Project is completed.¹²

On July 25, 2019, PPRP filed Revised Recommended Licensing Conditions.¹³

⁷ Staff Ex. 1 (“Austin Direct”).

⁸ PPRP Ex. 1 (“Kelley Direct”).

⁹ PPRP Ex. 3 (“PAR”).

¹⁰ PPRP Ex. 4.

¹¹ PPRP Ex. 2 (“State Secretarial Letter”).

¹² Appl. Ex. 14.

¹³ PPRP Ex. 5 (“Revised Recommended Licensing Conditions”). PPRP Ex. 6 is the redlined version.

On July 26, 2019, Kieffer Funk, LLC filed a Final Settlement Status Update, indicating that the Applicant was not contesting the Revised Proposed Licensing Conditions filed by PPRP and the proposed Staff Conditions.¹⁴

On July 29, 2019, an evidentiary hearing was held at which time the Parties each indicated their agreement to and acceptance of the Project and the specific licensing conditions recommended by both PPRP, as revised, and by Staff. The evidentiary record remained open after the hearing to allow Staff the time to file a clean copy of its conditions.

II. Overview of the Project

The Applicant seeks a CPCN to construct an 11.80 Megawatt (“MW”) alternating current (“AC”) solar photovoltaic (“PV”) generating facility on Parcel 304 of Tax Map 50, which is a 167.6 acre parcel, of which approximately 79.84 acres will be leased for the Project, in Washington County, Maryland, east of Hagerstown and near the Town of Smithsburg.¹⁵

The Application stated that the Project will cost approximately \$22 million, and, at the height of construction, will create between 60-80 temporary jobs.¹⁶ The Project will interconnect with the PJM system through an existing 12.47 kV utility distribution circuit located at the intersection of Kieffer Funk Road and White Hall Road.¹⁷

In its Application and subsequent submissions, the Applicant addressed the requirements of PUA § 7-207(e), as well as several environmental and public-safety-related topics not specifically required by the statute.

¹⁴ Final Settlement Status Update, filed July 26, 2019 under Maillog No. 226219.

¹⁵ Application at 2.

¹⁶ *Id.*

¹⁷ ERD at 3e.

III. Public Comments

At the March 2019 hearing, 13 members of the public spoke against the Project. Mr. Wally McClure objects to all solar projects on agricultural land. Mr. Jerry Cump expressed concern regarding what potential impact the Project might have on the area, which he described to be a “high water table area.”¹⁸ Mr. Dennis Easterday was similarly concerned about the effect on local waterways. Several neighbors to the proposed Project site spoke against the Project, reporting concerns about the view, concerns over the potential for a decline in property values, concern over traffic, concern about local wildlife, including deer and bald eagles, and a desire to know whether the electricity generated would be used locally, and whether there will be any financial benefit to Washington County.

At the second public hearing held in July 2019, eight nearby residents spoke against the Project, five of whom had spoken at the first public hearing. Mr. Martin Brubaker added concerns regarding a designated bike route through the area entitled “A View of the Valley,” providing an illustrative brochure, and raised questions regarding the proposed vegetative buffer and the esthetics of the actual interconnection.

Various written comments and photographs were received, most from neighbors to the Project who spoke overwhelmingly against the Project for the reasons noted above.

¹⁸ March 13, 2019 Tr. at p. 25, l. 23.

IV. Applicable Law

The PUA § 7-207(e) mandates the Commission to take final action on a CPCN application only after due consideration of the following:

- (1) the recommendation of the governing body of each county or municipal corporation in which any portion of the construction of the generating station, overhead transmission line, or qualified generator lead line is proposed to be located;
- (2) the effect of the generating station, overhead transmission line, or qualified generator lead line on:
 - (i) the stability and reliability of the electric system;
 - (ii) economics;
 - (iii) esthetics;
 - (iv) historic sites;
 - (v) aviation safety as determined by the Maryland Aviation Administration and the administrator of the Federal Aviation Administration;
 - (vi) when applicable, air and water pollution; and
 - (vii) the availability of means for the required timely disposal of wastes produced by any generating station; and
- (3) for a generating station:
 - (i) the consistency of the application with the comprehensive plan and zoning of each county or municipal corporation where any portion of the generating station is proposed to be located; and
 - (ii) the efforts to resolve any issues presented by a county or municipal corporation where any portion of the generating station is proposed to be located.

V. Analysis and Findings

The Applicant has accepted the licensing conditions as recommended by PPRP and Staff. PPRP and Staff have both recommended that the CPCN be granted, as long as it is subject to the recommended licensing conditions from PPRP and Staff. Despite the agreement among the parties that a CPCN, subject to the recommended license conditions, should be granted, the Commission still must give due considerations to the factors in PUA § 7-207(e). Below I consider each of the PUA § 7-207(e) factors as well as the additional factors identified by the Applicant, PPRP, and Staff in their analyses.

A. Consideration of PUA § 7-207(e) Factors

1. Recommendations of Washington County

Washington County did not intervene as an interested person or as a party to this matter. After a public hearing on April 3, 2019, the Washington County Board of Appeals issued a written opinion on May 1, 2019 granting a special exception authorizing the Project at its proposed location, stating “[a]lthough there was opposition to the project, most if not all was based on aesthetics and no evidence was presented of any actual adverse effects.”¹⁹

The Board of County Commissioners of Washington County, Maryland filed a letter with the Commission on July 9, 2019 asking that requisite consideration be given to the concerns of residents in the neighborhood regarding a negative impact on property

¹⁹ Applicant Ex. 10 at p. 4.

values and disruption of the existing viewshed, noting the residents' opposition to the Project, and asking that the Application be denied.²⁰

I have considered the Opinion of the County Board of Appeals and the Letter from the Board of County Commissioners. I agree with the finding in the County Board of Appeals Opinion that the "subject property appears to be ideal for the proposed solar energy generating system."²¹ The main concern noted by the surrounding residents and by the Board of County Commissioners is the esthetics of the Project. There is nothing in the record to show whether or not those opposed to the Project were aware of PPRP's proposed conditions with regards to the visual impacts of the Project as proposed, both from neighboring properties and at a distance. I find that PPRP conducted an extensive analysis of the visual impacts of this Project²² and that the set-backs and vegetative buffers as proposed will temper the view of the Project from most areas. As the County Board of Appeals noted in its Opinion, the "property is located among rural farm land and is obscured somewhat by the grade differences and the groves of trees and other vegetation present around the subject property." Consequently, I find that the CPCN, subject to Revised Recommended Licensing Conditions of Staff and PPRP, was authorized by the Washington County Board of Appeals in its grant of a Special Exception, and is a sufficiently tempered approach that will allay many of the concerns of the residents and County Commissioners.

²⁰ Letter from Washington County, Board of County Commissioners, dated July 9, 2019 and filed under Maillog No. 226052 was admitted as Bench Exhibit 1.

²¹ Applicant Ex. 10 at p. 3.

²² See Section 4. Esthetics below.

2. Stability and Reliability of the Electric System

According to the Applicant, PJM has completed the applicable Generation Feasibility Report and the System Impact Study for the Project.²³ In his testimony, Staff Witness Austin addressed the Project's effect on the stability and reliability of the electric system. He provided an overview of the PJM interconnection process and described the studies conducted during the process. He explained the term "capacity resource"²⁴ and identified other studies and agreements required as part of the interconnection process.

Mr. Austin described the manner in which the Project will interconnect with the regional transmission system.²⁵ Mr. Austin said that the Applicant's compliance with PE's and PJM's interconnection requirements, which will be memorialized in the Interconnection Service Agreement ("ISA"), and the completion of the requisite facility upgrades and milestones established in the ISA will assure no adverse impact to the reliability and stability of the electric transmission system.²⁶ He added that the additional generation capability of the Project will be of benefit to Maryland and the PJM system.²⁷ Mr. Austin recommended six license conditions to which any grant of the CPCN should be subject.²⁸

I find that, subject to Staff proposed conditions, and the Applicant's compliance with all the agreements entered into with PJM and/or PE, the Project will have no adverse impact on the stability and reliability of the electric transmission system.

²³ ERD at 2, 10.

²⁴ Austin Direct at 6.

²⁵ Austin Direct at 5.

²⁶ Austin Direct at 9.

²⁷ Austin Direct at 10.

²⁸ Austin Direct at 10-11; *see also* Attachment B hereto.

3. Economics

The Company described the economic benefits of the Project as including a capital cost of the Project of up to \$22 million with approximately 60 to 80 design, management, and construction personnel working remotely or on the Project site at the height of construction.²⁹ The Company noted that it would employ significant local resources as part of the design, entitlement, construction, and startup process; thus, it would contribute to the local economy during the construction period.³⁰ The Applicant said that the tax revenue yield for the Project also would be significant.³¹

The Applicant also noted that the Project will provide some measurable offsets to the approximate 43% of generation power imported into Maryland.³² It stated that with the reduction in reliance on imported power and given the nature of solar power generation, the Project will lead to reduced and more certain costs of electricity produced.³³ Additionally, the Company represented that the Project will increase the State's current solar electricity output and assist Maryland in reaching its Renewable Portfolio Standard ("RPS") goals.³⁴

PPRP evaluated the socio-economic impacts associated with the Project, which evaluation is summarized in the PAR. PPRP agreed with the Applicant that the Project would result in construction jobs from the local labor pool, with the caveat that

²⁹ See Appendix 16 ERD, Economic Impact Report.

³⁰ *Id.*

³¹ *Id.*

³² ERD at 31.

³³ ERD at 7, 22.

³⁴ *Id.*

subcontractors in the area would have to bid the work.³⁵ Local construction jobs will have a positive effect on the local economy from construction worker payrolls and subsequent consumption expenditures, local purchases of common construction materials, and associated multiplier effects.³⁶ PPRP noted that not all the benefits will flow to Maryland because certain of the specialized components necessary to construct the Project are manufactured elsewhere and will be imported into the State.³⁷

PPRP also evaluated the fiscal benefits from taxes to the County, the State, and surrounding jurisdictions. He noted that the State's corporate income tax rate on Maryland taxable income is 8.25%; the State's sales and use tax rate is 6%; personal income tax rates in Maryland range from 2% to 5.75%, with a 2.8% County piggyback rate; and real property is taxed at \$0.112 per \$100 valuation by Maryland and \$0.948 per \$100 valuation by the County.³⁸ PPRP represented in the PAR that the County assesses a tax rate of \$2.37 to ordinary business personal property and utilities. Consequently, PPRP estimated that business personal property taxes from the Property could be more than \$115,000 in the first full year of operation, declining to \$44,000 in Year 30, depending on the final design and equipment.³⁹

Because there will be no permanent operations and maintenance work force and most of the construction workforce will be within a daily commuting distance, PPRP determined that the Project will have a de minimus effect on the population and housing, or

³⁵ PAR at 55.

³⁶ PAR at 24.

³⁷ *Id.*

³⁸ *Id.*

³⁹ PAR at 25.

population-related public service provision.⁴⁰ Consequently, with public service levels largely unaffected, PPRP considered the net benefit of the Project's construction to be positive for both Washington County and Maryland.⁴¹

PPRP also considered the impact of the Project on nearby property value. It said that limited evidence from real estate appraisal methods has mostly supported the contention that solar farm development does not influence property value.⁴² PPRP concluded that the Project, once constructed, will have a "moderately benign local presence" because it will not emit significant noise, air, or water pollutants, will not generate any hazardous waste, and will be largely out of sight from nearby properties.⁴³ PPRP concluded that the Project will not affect property values.

Although the precise economic benefit to the County and State cannot be determined, the evidence reflects that there will be creation of jobs associated with the construction of the Project that will produce economic benefit to the County, State, and surrounding jurisdictions. Further, the County and State will receive tax revenues generated by the Project during its operations. The Project, however, will not result in any population or housing increase or increased needs for public services. I therefore find that the Project will have net economic benefit to the County, the State, and surrounding jurisdictions.

⁴⁰ PAR at 24.

⁴¹ *Id.*

⁴² PAR at 50.

⁴³ *Id.*

4. Esthetics

The Project site is primarily agricultural fields with wooded buffers along the northern edge and a portion of the eastern site boundary.⁴⁴ PPRP conducted an extensive analysis of the visual impacts of this Project, which can be found on page 34 through 43 of the PAR. PPRP states:

In general, the topmost parts of Project components (such as array edges at maximum tracking orientation, inverters, perimeter fencing) are expected to be visible east of the Project, primarily from unobstructed elevated perspectives that lend only far views that are likely to elicit less of an impact. PPRP's visibility analysis does not expect far views to be mitigated by maturing landscape screening because the Project is situated on slightly elevated terrain relative to view from the east. However, landscaping will mitigate some near views east and west of the Project.

Parts of the array [will be] visible from some adjacent and nearby properties that currently overlook the Kieffer Funk parcel, even after the proposed landscape buffer matures. These include two residential properties just north of the Project, and an adjacent farmstead southeast of the Project at the intersection of Kieffer Funk Road and White Hall Road. Existing vegetation is expected to limit views to a small part of the array from another property southwest of the Project. Other nearby properties are not expected to be within the Project's visual footprint.

PPRP Conditions 23 and 24 will mitigate these views. PPRP proposes that

where the Project abuts a primarily residential property, or a public or private road, Kieffer Funk shall design a landscape buffer that provides an opaque visual barrier to obscure the facility from sight. The landscape buffer shall have a minimum width of 25 feet within the setback and outside the fence line that will effectively screen, to a minimum of 10 feet above ground level year-round, views of the solar facility once the vegetation reaches maturity or within five years.

PPRP requires the applicant work with the County Planning Commission on the site plan for this vegetative buffer. PPRP further adds Condition No. 24, to address any and all complaints about the visual impact.

⁴⁴ Kelley Direct at p. 4.

As to lighting, PPRP determined that the Project will not create any new sources of substantial light disturbance as long as the Applicant complies with the County's lighting requirements. PPRP also addressed the issue of glare that may result from the solar panels. PPRP undertook its own glare analysis. For the single-axis tracking panels, PPRP determined that in "no case is glare cast upon any observation point."⁴⁵ PPRP recommended Condition No. 28 requiring the Applicant to develop a process to document and address complaints related to potential solar reflections.

Subject to the PPRP conditions related to visual impacts (Conditions Nos. 23 through 28), I find that the Project will not have a significant adverse visual impact on the adjacent and surrounding properties.

5. Historic Sites

The Applicant reported that the Maryland Historical Trust ("MHT") indicated that the Project is not located in an area of interest.⁴⁶

In its PAR, PPRP noted that there is no property on the National Register of Historic places within one mile of the Project site. Nor are there any properties on the Maryland Inventory of Historic properties within one mile.⁴⁷ PPRP further noted that the County archeologist has determined no archeological work is required for the site. PPRP recommended Condition No. 29 in the event that relics or unforeseen archeological sites are revealed and identified during construction.

⁴⁵ PAR at 44.

⁴⁶ ERD at 29.

⁴⁷ PAR at 32.

PPRP also assessed the Project's impact on cultural resources of the Maryland Heritage Areas Program. The PAR noted that there are 13 Chesapeake Heritage Areas ("CHAs") in Maryland, including the Heart of the Civil War Heritage Area,⁴⁸ but noted that the Project is not within the Heart of the Civil War Country Heritage Area. PPRP reviewed scenic views and programs and concluded that the Project will not detract from the Byway's intrinsic qualities.⁴⁹

Accordingly, subject to Condition Nos. 29, 30, and 31, I find that the Project will have no adverse effect on historic sites on or within one mile of the Project site.

6. Aviation Safety

The Applicant conducted a glare study based on the use of single axis rotation. The Project is between 2.6 and 7 miles from the nearest airports, to include: Hagerstown Regional Airport, Harp Airport, and Laura's Landing. The study reflects that there would be no glare impact on the flight patterns associated with these airports.

Accordingly, I find that the Project will not affect aviation safety.

7. Air Quality and Water Pollution

a. Air Quality

The Applicant asserts that any air quality issues will occur during construction because, once operational, the Project will generate no air emissions.⁵⁰ During construction, the Applicant identified dust from non-point sources such as

⁴⁸ PAR at 31.

⁴⁹ PAR at 46.

⁵⁰ ERD at 39.

earthwork and construction traffic on unpaved roads (fugitive dust). According to the Applicant, the fugitive dust is expected to be less than normal construction projects because the Project does not require excessive earthwork activities.⁵¹ Additional sources of pollutants during construction are mobile combustion engines from earthwork equipment and an increase in vehicle traffic from workers.⁵²

In its PAR, PPRP agrees that once the Project is operational, as it is a non-combustion process relying on direct conversion of solar energy into electric energy, no air emissions will be produced.⁵³ PPRP reviewed the air emissions possible during construction and recommended Condition No. 4 to minimize any air quality impacts. Condition No. 4 requires the Applicant to comply with three Code of Maryland Regulations (“COMAR”) provisions: COMAR 26.11.06.03D (Particulate Matter from Materials); COMAR 26.11.06.08 (Nuisance); and COMAR 26.11.06.09 (Odors).

Subject to Condition No. 4, I find that the Project will result in a slight temporary increase in air emissions, but once operational, the Project will not have any impact on air quality in the State.

b. Water Quality

Applicant reported that there are no jurisdictional waters within the Project boundary. The Site is located in the Antietam watershed which discharges into the

⁵¹ *Id.*

⁵² *Id.*

⁵³ PAR at 10.

Potomac River. The Applicant reports that no impacts to streams or aquifers are anticipated as a result of the Project.⁵⁴

The Applicant further reported that the facility will need limited water and has no sewer requirements.⁵⁵ It also said that water tanker trucks may be used to manage dust during construction, if required.⁵⁶

In its PAR, PPRP found that with proper construction techniques, stormwater management, and adherence to licensing conditions, the Project can improve, or at least maintain, water quality in the surrounding wetlands and streams.

Subject to Condition Nos. 4 through 11, I find that the Project will not adversely impact water quality onsite or in streams, watersheds, and jurisdiction waters on or surrounding the Project site.

8. Timely Disposal of Wastes Produced

The Applicant described the manner in which materials will be collected and removed from the Site during construction, operations, and decommissioning of the Project. During construction, the Applicant does not anticipate large amounts of waste being produced; for the waste produced, its contractor will collect the waste and remove it from the Site to an approved waste handling facility.⁵⁷ During operations, the Applicant expects little or no waste to be produced; any waste generated during maintenance or repair operations will be removed from the site and disposed at an approved waste handling

⁵⁴ ERD at 40.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ ERD at 42.

facility. No sanitary sewer waste will be generated at the site, according to the Applicant.⁵⁸ Finally, any waste associated with decommissioning or deconstruction of the Project will be handled appropriately pursuant to the Applicant's Decommission Plan.⁵⁹

I find that the waste materials produced during construction, operations, and decommissioning will be collected and removed from the Site, and will be appropriately disposed at an approved waste handling facility.

9. Consistency with County's Comprehensive Plan and Zoning – Efforts Taken to Resolve any Issues

The Applicant reported that the Project site is currently zoned agricultural, rural ("AR") and residential, transition ("RT"). According to the Applicant, properties zoned as thus in Washington County are acceptable for utility scale solar generation facilities provided Special Exception approval is obtain from the County Board of Appeals. The Applicant stated it received Special Exception approval from the County Board of Appeals on May 1, 2019.⁶⁰

In its PAR, PPRP recommended Condition No. 17 to require the Applicant to design its facility in compliance with the County's site plan requirements applicable to the Project and receive site plan approval and all required local permits prior to commencement of construction.

I conclude that the Project is located on a parcel of land for which the Project has received approval for a Special Exception. Therefore, I find, subject to the Final License Conditions, the construction and operation of the Project is consistent with

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ Appl. Ex. 10.

the County's comprehensive plan and its zoning ordinances applicable to utility scale solar array projects.

B. Other Considerations

1. Forest Conservation Act

The Applicant stated that it will voluntarily comply with the Washington County Forest Conservation Act, which was patterned after the State's Forest Conservation Act ("FCA").⁶¹ The Applicant indicated that no forested areas would be cut and that trees would be planted as a part of the landscape buffer plan, and as such, the Project has met the “no net loss” requirement in the FCA; therefore the County will not require afforestation mitigation.

An amendment to PPRP’s conditions involved application of the FCA. PPRP, in Condition 12, asks that the Applicant be required to develop and implement a forest planting plan that includes not less than 12.15 acres of forest planting and landscape buffers.

With the Applicant's voluntary agreement to comply with FCA requirements and subject to Applicant's compliance with Condition No. 12, I find that the Project will satisfy the applicable FCA requirements.

⁶¹ ERD at 12.

2. Decommissioning

In its ERD, the Applicant references that it will provide a Decommissioning Plan to the Commission and to PPRP.⁶² It represented that once the life of the Project is complete, the land will revert back to its original condition.⁶³

PPRP recommended Condition No. 34 to require the Applicant to submit a decommissioning plan, including among other things, identifying who is responsible for decommissioning, the timeframes, and the costs associated with the decommissioning. The Plan must be submitted to PPRP and the Commission prior to beginning construction of the Project, and the Commission must have approved the Decommissioning Plan prior to Applicant beginning construction. Included in Condition No. 34 is the requirement that the Applicant secure a decommissioning surety bond, letter of credit or other alternative arrangement via the estimate of a third-party consultant to cover the cost of implementing the Plan so that these costs are not borne by the State or County at the end of the Project's useful life. Further, the funding mechanism must be updated every five years after a review of the estimated decommissioning costs is conducted.

I find that a decommissioning plan is necessary to ensure that the Project is decommissioned appropriately and properly at the end of its useful life. Additionally, I find that a funding mechanism is critical to the Plan to avoid any costs of the decommissioning being borne by State or County taxpayers. I further find that the Applicant should coordinate with PPRP, Staff, and the County to determine the appropriate entity to hold the financial surety, and the entity be set forth in the Plan, subject to the Commission's approval.

⁶² ERD at 42.

⁶³ *Id.*

3. Noise and Vibration

In its ERD, the Applicant described the Maryland noise pollution standard as referenced in COMAR 26.02.03, with certain exceptions for noise sources and noise generating activities.⁶⁴ According to the Applicant, during the day the maximum allowable noise levels for residential are 65 decibels (“dB”) and 55 dB for night (with commercial and industrial maximums higher than the residential levels).⁶⁵ The Applicant represents that during construction of the facility, all noise shall be maintained below the average daily 90dB rating at the property lines as permitted under COMAR.⁶⁶ Once the Project is operational, the Applicant stated that the Project has no moving parts, so the only noise generated is from the electrical equipment on the Project site.⁶⁷ Based on studies conducted by others, the Applicant said a typical transformer for a solar facility has a 50dB rating at 100 feet. Noise reduction occurs at 6dB for every 100 feet of added distance, according to the Applicant.⁶⁸ Applicant stated that the closest residential dwelling is approximately ¼ mile away from the closest inverter pad; consequently, the dB levels at the residential location will be well below the 65/55 dB levels set forth in COMAR.⁶⁹

In its PAR, PPRP agreed with the Applicant's description of the COMAR provision. PPRP agreed that operational noise from the solar facilities is typically low.⁷⁰ According to a 2013 report from Argonne National Laboratory, while there is some audible noise associated with motors in the solar panel tracking mechanism, the noise is not a

⁶⁴ ERD at 24.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

significant source of noise for off-site receptors (ANL 2013).⁷¹ PPRP also addressed the noise generated by the power inverters and transformers. According to a study conducted for the Massachusetts Clean Energy Center (2012), the operational noise was found to be inaudible at moderate distances.⁷² The study noted that inverters enter standby mode after sunset and before sunrise and do not create nighttime noise impacts.⁷³

Based on Applicant's information as to the distance from the inverter pad to the nearest residential dwelling, PPRP agreed that the noise generated by the solar facility will be far below the ambient background noise levels at the residential dwelling and will have no significant impact at the residential receptors.⁷⁴ PPRP, however, recommended Condition No. 4j to require Applicant's compliance with the relevant County noise ordinances.

Subject to Condition No. 4j, I find that the construction and operation of the Project will have no significant impact from noise associated with the Project on nearby residential dwellings.

4. Electromagnetic Field Impacts

PPRP addressed the electric and magnetic fields ("EMF") that occur as a result of generation, transmission, and use of electric power. It described the dependence on the strength of the field on the voltage level and amount of current flow. PPRP said the electric fields are measured in units of volts per meter (V/m) while magnetic fields are

⁷¹ *Id.*

⁷² *Id.*

⁷³ PAR at 52-53.

⁷⁴ *Id.*

measured in units of gauss (G) or tesla (T) and result from the flow of current through wires or electrical devices and increase in strength as the current increases.⁷⁵

PPRP explained that electric fields are shielded or weakened by material that conduct electricity (i.e., trees, buildings, and human skin), while magnetic fields pass through most materials and are difficult to shield.⁷⁶ Both fields decrease rapidly as the distance from the source increases. Because magnetic fields are not easily shielded, the research in recent years has focused on the potential health effects from magnetic field exposure.⁷⁷ PPRP noted that estimated average background levels of 60-hertz ("HZ") magnetic fields in most homes, away from appliances and electrical panels, range from 0.5 to 5.0 milligauss (NIEHS 2002).⁷⁸ PPRP presented a table reflecting the typical magnetic field levels associated with common appliances.⁷⁹

PPRP explained that the PV solar panel arrays convert solar energy into DC electricity, producing power frequency magnetic fields, and a solar inverter converts the DC power to AC electricity, producing static magnetic fields.⁸⁰ According to PPRP, humans are constantly exposed to EMF throughout daily life; EMF can cause negative health effects if exposure exceeds certain health-based thresholds.⁸¹ PPRP represented that the International Commission on Non-ionizing Radiation Protection ("ICNIRP") has

⁷⁵ PAR at 56.

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ PAR at 56.

⁸¹ *Id.*

established a threshold for acute exposure of 830 milligauss for power frequency magnetic fields and 4 million milligauss for static magnetic fields.⁸²

According to PPRP, solar energy systems produce magnetic fields significantly below the minimum thresholds established by the ICNIRP. PPRP stated that a typical solar PV inverter may produce a power frequency magnetic field of about 3 milligauss at a distance of 10 feet, comparable to the levels produced by common household appliances at a distance of 3 feet.⁸³ PPRP noted the solar panels will be located at least 50 feet from any property boundary and therefore EMF levels will be insignificant at these distances.⁸⁴ PPRP presented an example of calculated EMF levels for a solar PV energy system in Oregon, which it said was a typical solar system, and these actual calculations were well below the ICNIRP static and power frequency thresholds.⁸⁵ Additionally, pursuant to a study conducted by the National Renewable Energy Laboratory (“NREL”), on solar panels' emission of EMF (DOE 2009), NREL found that the magnitude of EMF measured at the perimeter of PV installations has been shown to be indistinguishable from background EMF and is lower than that from any household appliances such as televisions and refrigerators.⁸⁶ PPRP determined that EMF levels from the solar energy systems are not anticipated to pose a potential health risk to nearby residents.⁸⁷

⁸² *Id.*

⁸³ *Id.*

⁸⁴ PAR at 44.

⁸⁵ PAR at 43.

⁸⁶ PAR at 56.

⁸⁷ *Id.*

Accordingly, I find that no health risk will be posed by the Project to nearby residential properties from EMF.

5. Transportation

During construction of the Project, the Applicant will have all the major materials and equipment delivered by tractor-trailers and offloaded by construction vehicles.⁸⁸ Additionally, it expects the daily construction traffic to include cars, pickup trucks and other personnel vehicles.⁸⁹ Further, Applicant said it will use excavation and other equipment during the construction, such as dump trucks, trenching equipment, concrete trucks, front loaders, backhoes, etc.⁹⁰

During operations, the Applicant anticipates limited traffic to and from the Project.⁹¹ Traffic associated with quarterly to yearly maintenance of the solar array components and any site visits for any operational issues is the expected type of periodic traffic.⁹²

In its PAR, PPRP reviewed the type and amount of construction traffic that may access the Project site from Kieffer Funk Road, an unmarked, nominal two-lane road with a 14 to 16 foot bituminous surface and no shoulders.⁹³ PPRP recommended Condition Nos. 18 through 22 to require coordination with MDOT, submission of a routing and a traffic management plan, compliance with all permit requirement and restrictions for use,

⁸⁸ ERD at 26.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ PAR at 28.

crossing, and occupancy, and to require correction of any road damage within 48 hours of detection or reporting.

Subject to Condition Nos. 18 through 22, I find that the Project will not contribute significantly to or impact road traffic during the construction period on nearby minor and major roads.

6. Public Services and Safety

In its PAR, PPRP considered the impact of the construction and operation of the Project on public services and safety. PPRP concluded that no additional public services will be required to support the Project under normal conditions.⁹⁴ Should a fire or accident occur at the Project site, the Washington County Division of Emergency Services will dispatch the emergency responders.⁹⁵ There are two Fire Departments within 6 miles of the site, including Hagerstown Fire Department Engine 1 and the Smithsburg Volunteer Fire Company Station 7 and Smithsburg EMS.⁹⁶

According to PPRP, solar panels and associated equipment are largely free of flammable materials. The Project will use crystalline solar cells, which are primarily made of silicon, and are not considered to be hazardous to the environment, but respiratory exposure to combustion products associated with PV components should be avoided.⁹⁷ If the Project employs transformers using mineral oil as a coolant, the flashpoint of mineral oil is 335 degrees, which is significantly higher than the US Occupational Safety and

⁹⁴ PAR at 48.

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ PAR at 32.

Health Administration standard that defines a flammable liquid as any liquid having a flashpoint at or below 199.4 degrees Fahrenheit.⁹⁸

PPRP notes, although finding that the likelihood of fire is low, firefighters may be exposed to the risk of electrical shock should firefighting operations be required at the Project. PPRP noted that the Fire Protection Research Foundation recommends the use of respiratory protection during fireground operations involving PV systems.⁹⁹

PPRP recommended two conditions, Condition Nos. 32 and 33, to address the safety of emergency responders. Condition No. 32 requires the Company to install and maintain the Project to meet at least the minimum requirements of the National Fire Protection Association's NFPA1 Fire Code Handbook (NFPA 2015) and NFPA 70 National Electrical Code (NFPA 2014). Condition No. 33 requires the Company contact the Hagerstown Fire Department, Smithsburg Volunteer Fire Company and the Washington County Division of Emergency Services to review appropriate protocols for addressing on-site emergencies, to provide a map of the location of solar collection devices and panel disconnect, and to provide additional training if necessary.

I find that Condition Nos. 32 and 33 are warranted to ensure that any emergency events at the Project will be handled appropriately.

7. Other Biological Resources

a. Flora Resources

The Project site is made up of rolling agricultural fields of grass. The biological Assessment Summary letter indicated no information regarding threatened or

⁹⁸ PAR at 33.

⁹⁹ *Id.*

endangered species within the Project boundaries, thus the Applicant asserts that there will be no adverse impacts to any species.¹⁰⁰

b. Fauna Resources

The DNR Wildlife and Heritage Service (“WHS”) indicated that there are no State or Federal records for rare, threatened, or endangered species within the delineated Project area. Thus, the Applicant asserted that the Project is not anticipated to impact significant fauna or critical habitat.¹⁰¹

PPRP concluded that there are no known federal or state listed rare, threatened or endangered (“RTE”) species at the site. Nevertheless, PPRP recommended Condition No. 15 which requires the Applicant to contact and coordinate with WHS should any RTE species be identified prior to or during construction.

Subject to Condition No. 15, I find that there will be no significant impact on the flora or fauna resources on or near the Project site.

VI. Request for Waiver

In its Application, the Applicant requests a waiver of the two-year notice requirement set forth in PUA § 7-208(c). According to the Applicant, there will be no emissions that will impact adjacent properties and the installation of solar PV panels will not materially impact property values for nearby residents. Consequently, I conclude that the Applicant has shown good cause to support the waiver of the requirement to provide a two-year notice pursuant to PUA §7-208.

¹⁰⁰ ERD Appendix 11.

¹⁰¹ ERD at 36.

VII. Conclusion

I find that, subject to the PPRP Revised Recommended License Conditions, and subject to the Staff recommended License Conditions, (collectively, "Final License Conditions"), a grant of a CPCN to construct the Project is in the public interest. The Applicant's compliance with the Final License Conditions will result in the Project satisfying the federal and State environmental laws and the County's zoning ordinances governing utility-size solar arrays located in the County. Accordingly, I hereby grant Kieffer Funk, LLC a CPCN, subject to the Final License Conditions attached hereto and incorporated hereby, to construct an 11.80 MW solar photovoltaic generating facility in Washington County, Maryland.

IT IS THEREFORE, this 15th day of October, in the Year Two Thousand Nineteen,

ORDERED (1) That the application of Kieffer Funk, LLC, is hereby granted.

(2) That a Certificate of Public Convenience and Necessity, subject to the Final License Conditions attached hereto as Attachments A and B, and incorporated herein, is hereby granted.

(3) That this Proposed Order will become a final order of the Commission on November 14, 2019, unless before that date an appeal is noted with the Commission by any party to this proceeding as provided in Section 3-113(d)(2) of the Public Utilities Article, or the Commission modifies or reverses the Proposed Order or initiates further proceedings in this matter as provided in Section 3-114(c)(2) of the Public Utilities Article.

/s/ Jennifer J. Grace

Jennifer J. Grace
Public Utility Law Judge
Public Service Commission of Maryland

Attachments

Attachment A:

PPRP Revised Recommended License Conditions and State Secretarial Letter.

Attachment B:

Staff Recommended License Conditions