

BEFORE THE
PUBLIC SERVICE COMMISSION
OF MARYLAND

IN THE MATTER OF THE APPLICATION OF
MD SOLAR 1, LLC FOR A CERTIFICATE
OF PUBLIC CONVENIENCE AND
NECESSITY TO CONSTRUCT A 32.5 MW
SOLAR PHOTOVOLTAIC GENERATING
FACILITY IN CHARLES COUNTY,
MARYLAND

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Case No.: 9464

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SUPPLEMENTAL DIRECT TESTIMONY
OF
EDWIN C. MOSES
ON BEHALF OF MD SOLAR 1, LLC

April 4, 2018

1 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND TITLE.**

2 A. My name is Edwin C. Moses. My title is Vice President, Project Development, at Origis
3 Energy. My business address is 800 Brickell Avenue, Suite 1100, Miami, Florida 33131.

4 **Q. ARE YOU THE SAME EDWIN C. MOSES THAT PROVIDED DIRECT**
5 **TESTIMONY IN THIS PROCEEDING?**

6 A. Yes, I am.

7 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT TESTIMONY?**

8 A. My supplemental direct testimony supplements the initial Application for a Certificate of
9 Public Convenience and Necessity (the “Application”) to construct the Shugart Valley
10 Place Solar Project (the “Project” or “Shugart”) filed in this proceeding. In particular, I
11 include information on (1) the Project’s interconnection facilities and (2) additional forest
12 mitigation measures designed to address the Project’s impact on forests and associated
13 habitat. Md Solar 1, LLC (the “Applicant” or “MD Solar 1”) intends for both of these
14 items to be explicitly included within its Application.

15 **I. Interconnection Facilities**

16 **Q. WHAT INFORMATION REGARDING INTERCONNECTION FACILITIES DID**
17 **THE APPLICANT INCLUDE IN THE INITIAL APPLICATION IN THIS**
18 **PROCEEDING?**

19 A. The Applicant included information concerning the Project’s interconnection facilities in
20 its Environmental Review Document (“ERD”) in §§ 1, 5.G and 5.H. As explained in the
21 ERD, the Project will interconnect to the Southern Maryland Electric Cooperative
22 (“SMECO”) electric system serving Maryland via an overhead line tap at a new 69 kV
23 switching station to be built adjacent to the Grayton-Ripley 69 kV transmission line

1 circuit. *Id.* The ERD indicated that the Applicant was in negotiations at the time of the
2 Application for a CPCN to enter into an Option to Purchase Agreement with Smith
3 Pointe LLC to acquire a parcel adjacent to the Project site (the “SmithPointe Parcel”).
4 The Project’s interconnection facilities will be located on the SmithPointe Parcel,
5 crossing the SmithPointe Parcel to the adjacent Grayton-Ripley 69 kV transmission line
6 circuit. *Id.* at § 1.

7 **Q. DOES THIS INFORMATION REMAIN ACCURATE?**

8 A. Yes, but I have updated and additional information to provide the Commission.

9 **Q. PLEASE EXPLAIN THIS UPDATED AND ADDITIONAL INFORMATION.**

10 A. The Applicant executed the Option to Purchase Agreement for the SmithPointe Parcel
11 with Smith Pointe LLC on October 26, 2017. The Applicant received the AC2-101
12 System Impact Study (“SIS”) in late February 2018 and executed the required Facility
13 Study Agreement for the purposes of studying and defining the SMECO-owned
14 equipment and facilities for the Project to interconnect to the SMECO transmission
15 system. The Project substation will step up the voltage from 34 kV to 69 kV with
16 associated main transformer, control, and protection systems. At this time, the Project’s
17 collection system and/or generation tie line is expected to extend approximately 0.3 miles
18 from the solar site to the POI, consist of approximately 6 to 8 new poles, routed to
19 minimize environmental impacts, and will be constructed within an approximate 50-foot
20 wide corridor where tree clearing will be required. A new, SMECO-owned, switching
21 station will be installed at the POI by SMECO within the existing SMECO Grayton-
22 Ripley 69 kV transmission line right-of-way and within the SmithPointe Parcel. The

1 SMECO-owned side of the physical interconnection will include a 69 kV line breaker
2 with positive relaying and control circuits, communications, meter and disconnect
3 switches, and any such facilities as determined by SMECO in the Facility Study. The
4 Applicant's side of the interconnection is expected to include, as determined by SMECO
5 in the Facility Study, a self-supporting dead-end structure outside the substation. The
6 physical connection between the dead-end structure and SMECO will be a short overhead
7 line conductor. All facilities will be designed to meet the technical specifications
8 provided by SMECO pursuant to the FERC-jurisdictional PJM interconnect review
9 process.

10 The Applicant will convey the necessary land rights within the SmithPointe Parcel to
11 SMECO to accommodate this expansion. As discussed below, the remainder of the
12 SmithPointe Parcel will be placed into a permanent forest conservation easement.
13 Included as **Attachment A**, please find a map depicting a draft of the Project's proposed
14 interconnection facilities, which will be finalized in accordance with all local site
15 approvals and the Project's Interconnection Agreement.

16 **II. Forest and Habitat Impact Mitigation**

17 **Q. WHAT INFORMATION REGARDING FOREST IMPACTS DID THE**
18 **APPLICANT INCLUDE IN ITS APPLICATION IN THIS PROCEEDING?**

19 A. The Applicant included information concerning the Project's forest mitigation measures
20 in its ERD in § 4.D.1. The Applicant indicated that while the Commission may exempt
21 generating stations from Forest Conservation Act ("FCA") requirements, it would
22 voluntarily comply with the FCA as implemented by Charles County.

1 **Q. DOES THIS INFORMATION REMAIN ACCURATE?**

2 A. Yes, but I now have specific information to provide the Commission on the Project's
3 FCA compliance commitments, as well as on substantial forest mitigation measures that
4 will be above and beyond standard FCA requirements.

5 **Q. PLEASE SUMMARIZE THE FCA MITIGATION MEASURES PROPOSED BY**
6 **THE APPLICANT.**

7 A. The MD Solar 1 Shugart Site (Charles County Tax Map 41, Parcel 24) is located at
8 approximately thirty-eight degrees (38°30'23.8") latitude (North) and seventy-seven
9 degrees (77°08'22.1") longitude (West) and, for reference purposes, the MD Solar 2
10 Ripley Site (Charles County Tax Map 31, Parcel 25, Parcel 258, and Parcel 259) is
11 located at approximately thirty-eight degrees (38°53'44.53") latitude (North) and
12 seventy-seven degrees (77°09'44.99") (collectively the "Projects"). Both Projects are
13 within the Lower Potomac River watershed. The Lower Potomac River drains 730 square
14 miles, including portions of Charles, Saint Mary's, and Prince George's Counties. The
15 River is entirely tidal in the basin. Larger water bodies include Mattawoman Creek,
16 Breton Bay, Nanjemoy Creek, and the Wicomico and Saint Mary's Rivers.

17 Specifically, both of the proposed Sites are within the Wards Run watershed which flows
18 into Nanjemoy Creek and ultimately discharges into the Lower Potomac River. All
19 Maryland stream segments are categorized by sub-basin and are given a "designated use"
20 in COMAR 26.08.02.08. Nanjemoy Creek/Lower Potomac River is protected as a Class
21 IP Use (Use IP: Water Contact Recreation, and Protection of Aquatic Life, and Public
22 Water Supply). The basin is located solely within the Coastal Plain physiographic

1 province. The Projects are not located in the Critical Area. There is no activity proposed
2 on the Site which would in any way contribute to the impairment of these waterways and
3 receiving streams.

4 The Applicant recognizes there is a balance required to provide for clean energy goals
5 and mandates, preservation of important agricultural lands and maintenance of productive
6 forested lands all together. The Applicant takes trees and agricultural lands very seriously
7 and therefore proposes, in addition to full mitigation in accordance with applicable
8 regulations, to provide further offsite mitigation by purchasing a portion of Forest
9 Conservation Easements (“FCEs”) at a beneficial and high quality, forested, candidate
10 property of interest located in the Nanjemoy watershed. Accordingly, on March 5, 2018
11 the Applicant executed a PURCHASE OPTION FOR CONSERVATION EASEMENTS
12 AGREEMENT with Deborah Boyd & David R. Terbush, Co-Trustees and John W.
13 Jarrett Living Trust (the “Candidate Property”).

14 **Q. WHAT IS THE FIRST MITIGATION MEASURE PROPOSED BY THE**
15 **APPLICANT?**

16 A. The first mitigation measure proposed by the Applicant is to meet – and exceed – the
17 acreage mitigation requirements pursuant to the FCA regulatory process, as administered
18 by Charles County. The Applicant proposes using a combination of acreage onsite and
19 shared between the two Projects to meet, and then exceed, 100% of all FCA
20 requirements.

21 The following summarizes FCA compliance figures for both MD Solar 1 (Shugart) and
22 MD Solar 2 (Ripley):

1	Shugart:	
2	Forest Conservation Easement Area Needed Under FCA	151.9 acres
3	Forested Land on Shugart Site for Easement	296 acres
4	Total Used for Shugart FCA Compliance	151.9 acres
5	Excess Acres available for Additional Easements	144.1 acres ¹
6	<i>Shugart Compliance with FCA Requirements:</i>	<i>100%</i>
7	Ripley:	
8	Forest Conservation Easement Area Needed Under FCA	147.9 acres
9	Forested Land on Ripley Site for Easement	45.0 acres
10	Forested Land on Ripley Parcel South for Easement	32.0 acres
11	Forested Land on Shugart Excess for Easement	70.9 acres
12	Total Used for Ripley FCA Compliance	147.9 acres
13	Excess Acres	0 acres
14	<i>Ripley Compliance With FCA Requirements</i>	<i>100%</i>
15	Total Residual Excess Acres from Project Sites	73.2 acres

16 To exceed the FCA requirements the Applicant intends to establish a FCE at the residual
17 73.2 acres remaining at the Shugart Site and on approximately 43 acres of forested land at
18 the SmithPointe parcel, which is the MD Solar 1 gentie land located adjacent and
19 contiguous to the Shugart Site, for a total of **116.2 additional acres** of forest conservation
20 and habitat preservation.²

21 The Applicant has also been working with Charles County and proposes to purchase an
22 **additional 40 acres** of FCEs on the Candidate Property. The Candidate Property consists
23 of high quality forested land adjacent to properties that have already been put into
24 preservation for the protection of the Nanjemoy Creek and, thereby, adds to an important

¹ Out of excess acres, 70.9 acres will be used for Ripley FCA compliance and 73.2 acres will be used for additional forest and habitat conservation measures above and beyond FCA compliance.

² Please see the Draft Forest Conservation Plan included with **Attachment B** for further information.

1 and existing forest, wetland buffer, improving water quality and enhancing wildlife
2 habitat.

3 Therefore, in summary, the Applicant proposes a total of **156.2 additional acres** for
4 Forest Conservation/Habitat Preservation associated with the two Projects above and
5 beyond what is needed for FCA.

6 **Q. AS A SECOND MITIGATION MEASURE, HAS THE APPLICANT MADE ANY**
7 **ADDITIONAL COMMITMENTS ABOVE AND BEYOND WHAT YOU JUST**
8 **SUMMARIZED?**

9 A. Yes. As noted previously, the Applicant has been working with Charles County and has
10 proposed to purchase an additional 40 acres of FCE easements located in the protected
11 Nanjemoy watershed (the “Candidate Property”).³ The Applicant entered into an option
12 agreement with the owner of the Candidate Property on March 5, 2018 to effectuate this
13 commitment. In February 2018, ECS-Mid-Atlantic performed a field assessment of the
14 Candidate Property. The Candidate Property has been managed selectively for timber
15 production, but the assessment also concludes that it will be a valuable addition to
16 Charles County’s forest conservation and wetland habitat preservation efforts. As
17 explained in the field assessment summary:⁴

18 *“Based on these findings, ECS believes that the property would be a valuable*
19 *conservation area. Although the forest onsite is currently in an early to mid-*
20 *successional stage, the wetlands onsite, regrowth potential, and connection to*

³ The Candidate Property for this additional FCE is located at 5305 Benny Gray Point Road, Nanjemoy, MD 20662 and is further known in the title records as “the Woodland.” The entire parcel is approximately 169 acres of land more or less, lying and being in the Third Election District and identified with a Tax Identification Number of 03-020533.

⁴ The summary is included as an appendix to the letter included as Attachment B to my supplemental direct testimony.

1 *contiguous forest areas qualify the site as a priority retention area according to*
2 *the Maryland Forest Conservation Technical Manual.”*

3 To summarize, adding this additional 40 acres of forest mitigation to the Applicant’s
4 commitment means the Applicant (in conjunction in MD Solar 2, LLC in Case No. 9463)
5 has committed to a total of **156.2 additional acres** for forest conservation/habitat
6 preservation above and beyond what is required by the FCA. The Applicant believes this
7 is a significant committment with wide-ranging benefits to the local community, Charles
8 County, and the State.

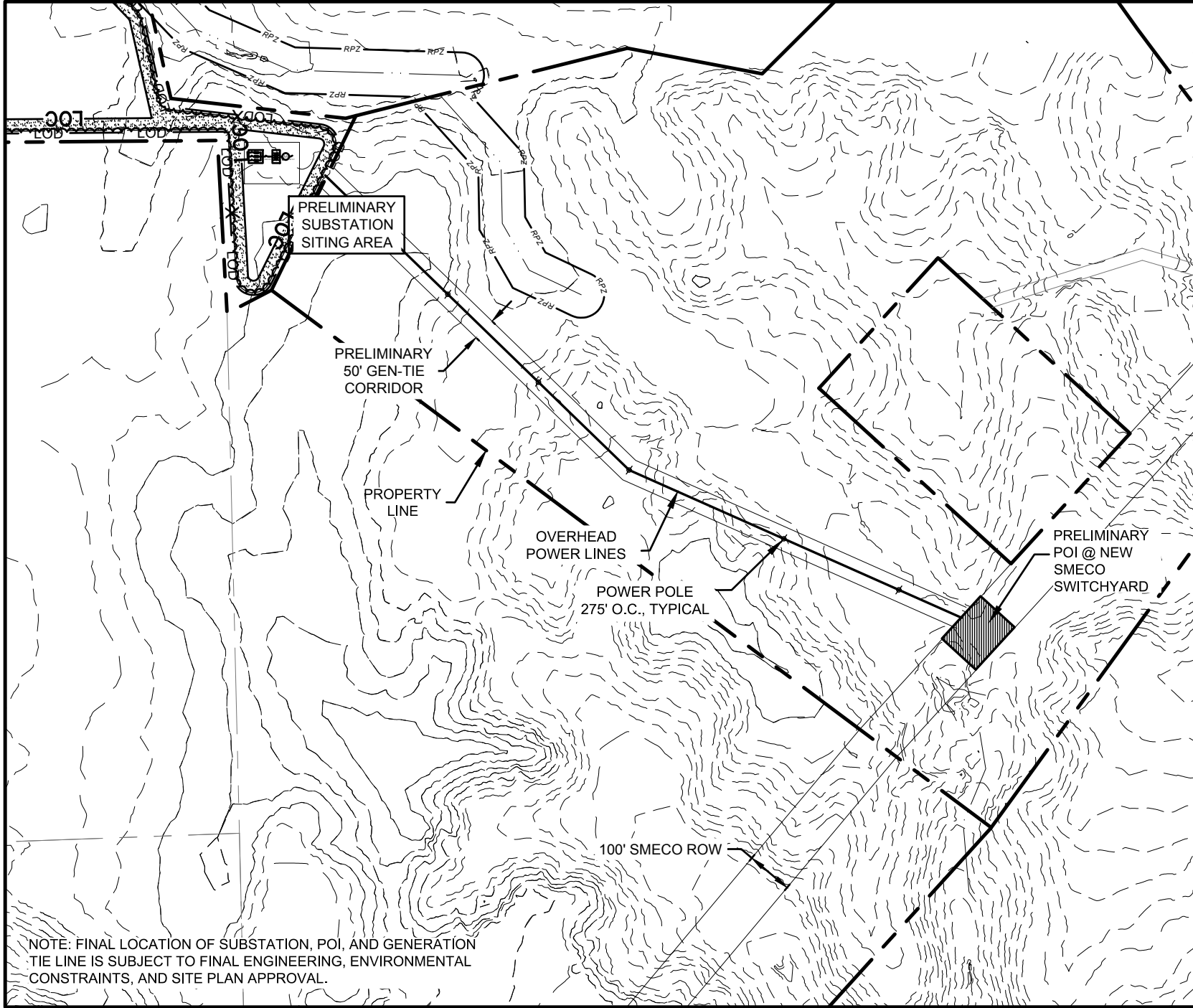
9 **Q. HAS THE APPLICANT PROVIDED THIS INFORMATION TO CHARLES**
10 **COUNTY AND PPRP?**

11 A. Yes. The Applicant provided information on these commitments by letter to Charles
12 County on March 9, 2018. The Applicant also provided a copy to PPRP on the same day.
13 A copy of the letter, and all associated attachments, are included as **Attachment B**. The
14 Applicant intends to receive approval from Charles County of its forest mitigation
15 commitments during Charles County’s site plan review process, which is the standard
16 process utilized by Charles County to enforce the FCA.

17 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?**

18 A. Yes.

Attachment A



NOTE: FINAL LOCATION OF SUBSTATION, POI, AND GENERATION
TIE LINE IS SUBJECT TO FINAL ENGINEERING, ENVIRONMENTAL
CONSTRAINTS, AND SITE PLAN APPROVAL.

dbf
DAVIS, BOWEN & FRIEDEL, INC.
ARCHITECTS, ENGINEERS & SURVEYORS
SALISBURY, MARYLAND (410) 543-9081
MILFORD, DELAWARE (302) 424-1441

SHUGART VALLEY PLACE - MD1
**PROPOSED SMECO
POINT OF INTERCONNECTION**
(PRELIMINARY SUBJECT TO CHANGE)
2ND ELECTION DISTRICT
CHARLES COUNTY, MARYLAND
SCALE: 1"=300'
DWG. 1 of 1

PROJ. NO. : 2390N001
DATE : MARCH 2018

Attachment B

Charles County
Planning and Growth Management
200 Baltimore St.
La Plata, MD 20646

Attention: Charles Rice, Program Manager Environmental Program

RE: MD Solar 1 & MD Solar 2 – Proposed Additional Forest & Habitat Mitigation

Dear Mr. Rice:

MD Solar 1, LLC and MD Solar 2, LLC, both wholly owned subsidiaries of Origis Energy USA, LLC, have proposed two solar energy projects in Charles County (collectively the “Applicant”). The purpose of this letter is to summarize the Applicant’s Forest Conservation Plan and to propose additional Forest Conservation Easements (FCEs) on certain property described below.

Background

The MD Solar 1 “Shugart” Site (Charles County Tax Map 41, Parcel 24) is located at approximately thirty-eight degrees (38°30’23.8”) latitude (North) and seventy-seven degrees (77°08’22.1”) longitude (West) and the MD Solar 2 “Ripley” Site (Charles County Tax Map 31, Parcel 25, Parcel 258, and Parcel 259) is located at approximately thirty-eight degrees (38°53’44.53”) latitude (North) and seventy-seven degrees (77°09’44.99”) (each a “Project” or collectively the “Projects”). Both Projects are located in the Lower Potomac River watershed. The Lower Potomac River drains 730 square miles, including portions of Charles, Saint Mary’s, and Prince George’s Counties. Larger water bodies include Mattawoman Creek, Breton Bay, Nanjemoy Creek, and the Wicomico and Saint Mary’s Rivers.

Specifically, both of the Project sites are within the Wards Run watershed which flows into Nanjemoy Creek and ultimately discharges into the Lower Potomac River. All Maryland stream segments are categorized by sub-basin and are given a “designated use” in the Code of Maryland Regulations 26.08.02.08. Nanjemoy Creek/Lower Potomac River is protected as a Class IP Use (Use IP: Water Contact Recreation, and Protection of Aquatic Life, and Public Water Supply). The Projects are not located in the Critical Area. There is no activity proposed on either Project site that would in any way contribute to the impairment of these waterways and receiving streams.

The Applicant recognizes there is a balance required to provide for clean energy goals and mandates, preservation of important agricultural lands, and maintenance of productive forested lands. The Applicant takes trees and agricultural lands very seriously and therefore proposes, in addition to fully meeting the mitigation requirements of applicable forest conservation regulations, to provide further offsite mitigation by purchasing FCE’s at a beneficial and high quality, forested, candidate property of interest within the Nanjemoy watershed.

Origis Energy USA, Inc.

800 Brickell Avenue
Suite 1100
Miami, FL 33131

Forest Conservation Plan Summary

The first mitigation measure meets the acreage requirements under the Forest Conservation Act (“FCA”) and Chapter 298 of the Charles County Code as administered by Charles County. The Applicant proposes using a combination of acreage onsite and shared between the two Projects to meet, and then exceed, 100% of all FCA requirements.

The following summarizes FCA compliance figures for the Projects:

Ripley:

Forest Conservation Easement Area Needed Under FCA	147.9 acres
Forested Land on Ripley Site for Easement	45.0 acres
Forested Land on Ripley Parcel South for Easement	32.0 acres
Forested Land on Shugart Excess for Easement	70.9 acres
Total Used for Ripley FCA Compliance	147.9 acres
Excess Acres	0 acres

Ripley Compliance With FCA Requirements *100%*

Shugart:

Forest Conservation Easement Area Needed Under FCA	151.9 acres
Forested Land on Shugart Site for Easement	296 acres
Total Used for Shugart FCA Compliance	151.9 acres
Excess Acres available for Additional Easements	144.1 acres ¹

Shugart Compliance with FCA Requirements: *100%*

Total Residual Excess Acres from Project Sites **73.2 acres**

To exceed FCA requirements, the Applicant intends to establish a forest conservation easement at the residual 73.2 acres remaining at the Shugart Site and on approximately 43 acres of forested land at the SmithPointe parcel, which is land located adjacent and contiguous to the Shugart Site for a total of **116.2 additional acres** of forest conservation and habitat preservation. For more information, please refer to the Draft Forest Conservation Plan for the Projects.

¹ Out of excess acres, 70.9 acres will be used for Ripley FCA compliance and 73.2 acres will be used for additional forest and habitat conservation measures above and beyond FCA compliance.

Proposal for Additional Forest Conservation Easements

The Applicant has also been working with Charles County and proposes to protect additional FCEs in excess of those described above. **On March 5th, 2018 the Applicant executed a Purchase Option For Conservation Easements Agreement (Option)** with Deborah Boyd & David R. Terbush, Co-Trustees of the John W. Jarrett Living Trust (herein referred to as the “Candidate Property”).

The property consists of high-quality forested land adjacent to other protected properties that have already been put into preservation for the protection of the Nanjemoy watershed. The effect will be to create a larger swath of contiguous protected land which will thereby add to an important and existing forest, provide a buffer for important wetlands, improve water quality and enhance wildlife habitat.

The Applicant proposes 40 acres of Conservation Easements at this location for further protection of the Nanjemoy and Lower Potomac River watershed.

Therefore, in total, the Applicant is proposing **156.2 additional acres** for Forest Conservation/Habitat Preservation associated with the Projects, above and beyond the requirements of the FCA.

The Candidate Property for this additional FCE is located at 5305 Benny Gray Point Road, Nanjemoy, MD 20662 and is further known in the title records as “the Woodland.” The entire parcel is approximately 169 acres of land more or less, lying and being in the Third Election District and identified with a Tax Identification Number of 03-020533.

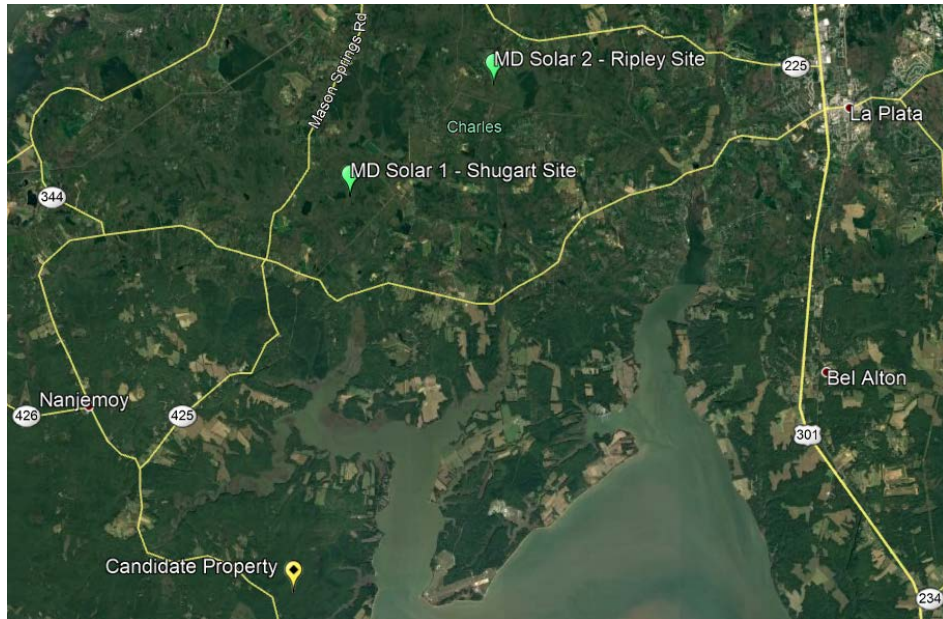


Figure 1: FCE Candidate Property Relative to Project Sites

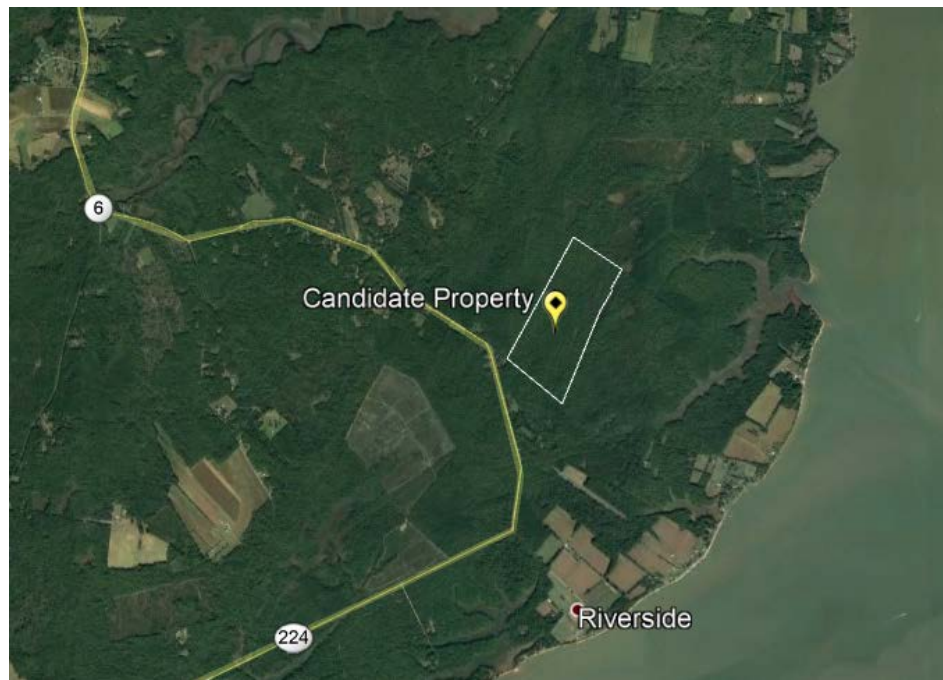


Figure 2: Detailed Location of FCE Candidate Property Parcel

In February 2018, the Applicant commissioned a field assesement of the Candidate Property. The Candidate Property has been managed selectively for timber production, but the assessment also concludes that it will be a valuable addition to Charles County's forest conservation and wetland habitat preservation efforts. Please see the ECS assessment letter attached and excerpt below:

"Based on these findings, ECS believes that the property would be a valuable conservation area. Although the forest onsite is currently in an early to mid-successional stage, the wetlands onsite, regrowth potential, and connection to contiguous forest areas qualify the site as a priority retention area according to the Maryland Forest Conservation Technical Manual."

Origis Energy is committed to supporting our environment. As a long term owner and operator of solar energy projects, we look forward to joining the Charles County neighborhood. We recognize our obligations to preserve forest and habitat under the Forest Conservation Act and more broadly recognize the balance required to support the State of Maryland and Charles County goals of providing clean renewable energy, a healthy economy and the preservation and support of our local community.

Sincerely,



Edwin C. Moses
Vice President, Origis Energy USA, LLC

Cc: Power Plant Research Program, Maryland Department of Natural Resources



March 7, 2018

Mr. Edwin Moses
MD Solar 2, LLC (c/o H&B Solutions)
800 Brickell Avenue
Suite 1100
Miami, Florida

ECS Project No. 47:4209-D

Reference: Forest Stand Assessment, Candidate Property 1, Port Tobacco Road, Charles County, Maryland

Dear Mr. Moses:

ECS Mid-Atlantic (ECS) performed a field assessment and visual observations of the forest stand located on Candidate Property 1 on February 16, 2018. The Candidate Property 1 site consists of approximately 163 wooded acres located northeast of the intersection of Port Tobacco Road and Benny Gray Point Road in Nanjemoy, Charles County, Maryland.

The forest located onsite consists largely of young pines interspersed with medium oaks and maples. Heavy undergrowth of shrubs and brambles is also present, although the site may be navigated by existing trails and logging roads. According to a review of historical aerials and information provided by the site caretaker, the site was timbered approximately 15 years ago. Trees onsite range from approximately 2 to 20 inches diameter at breast height (DBH). One specimen tree, a 31 inch DBH White Oak was observed in the southwestern corner of the property. The site contains numerous forested wetland areas that drain generally to the northeast toward Nanjemoy Creek.

Based on these findings, ECS believes that the property would be a valuable conservation area. Although the forest onsite is currently in an early to mid-successional stage, the wetlands onsite, regrowth potential, and connection to contiguous forest areas qualify the site as a priority retention area according to the Maryland Forest Conservation Technical Manual.

ECS would like to thank MD Solar 2, LLC for the opportunity to provide you with this forest stand assessment. We look forward to assisting you further with this project and other environmental concerns you may have. If you have any questions, please feel free to contact us at any time at 703-471-8400.

Sincerely,

ECS MID-ATLANTIC, LLC

Anna Allie, MEM, ISA-CA
Environmental Project Manager
AAllie@ecslimited.com

Adam M. Meurer, CHMM, PWS
Environmental Principal
AMeurer@ecslimited.com



Photo 1- Wetland and forest located in the southern portion of the site.



Photo 2- Forested area onsite.



Photo 3- Forested wetlands in the northern portion of the site.



Photo 4- Forested trail onsite.



Photo 5- Specimen White Oak observed onsite.