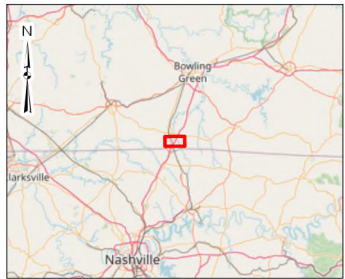
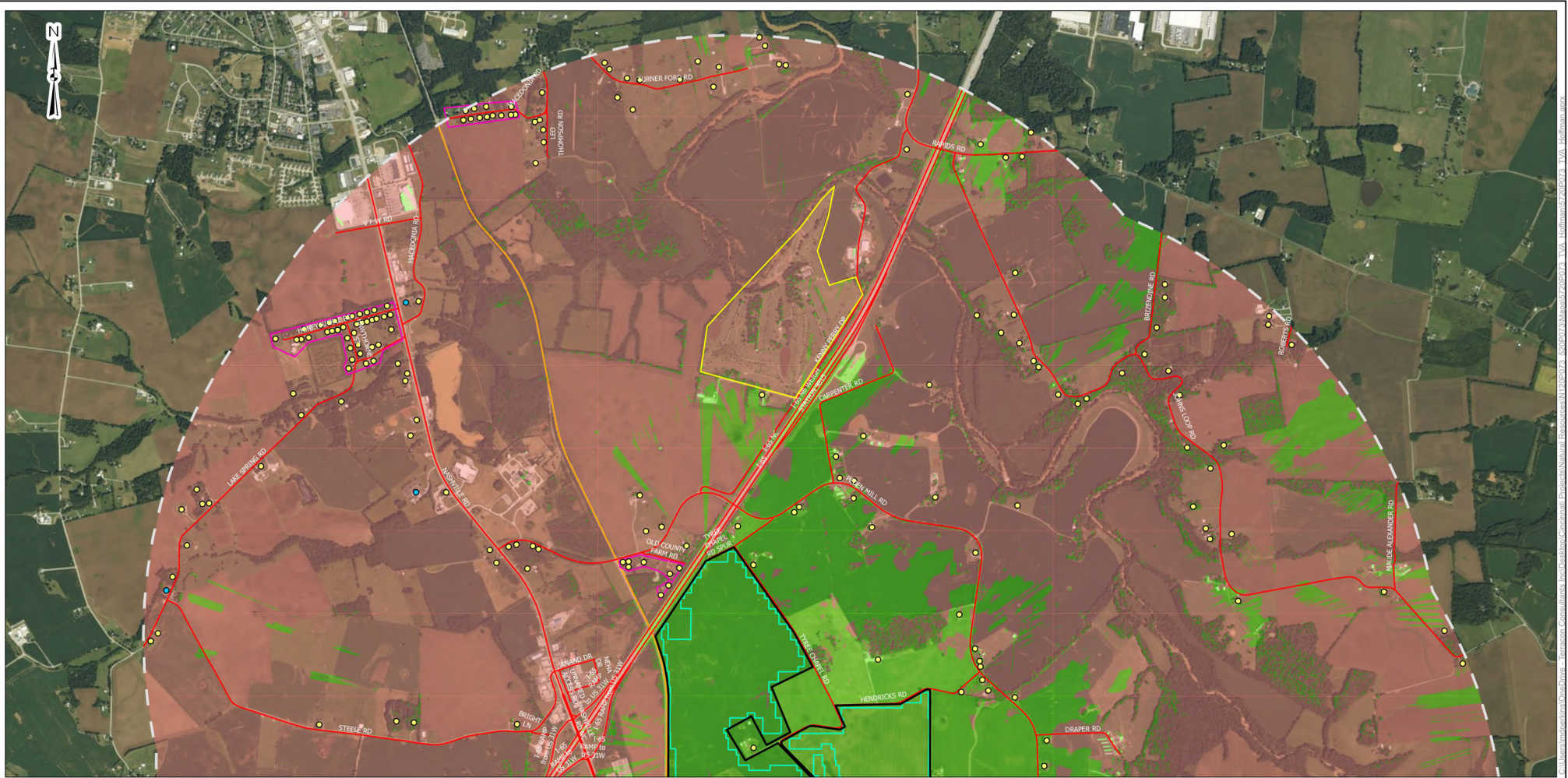


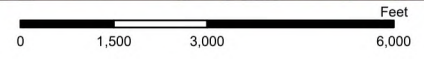
# **Appendix A**

## **Map of Residential Neighborhoods Surrounding Proposed Facility**



- Project Site Boundary
  - PV Panel Area
  - 2-Mile Radius
  - Neighborhoods
  - Parks
  - Roads
  - Railroads
- Sensitive Receptors**
- Residence
  - Church
  - Cemetery
- Viewshed Analysis**
- Visible
  - Not Visible

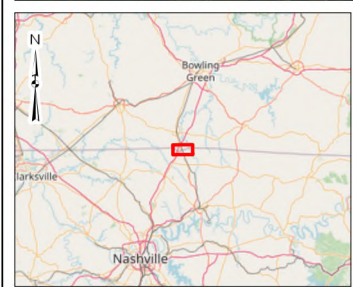
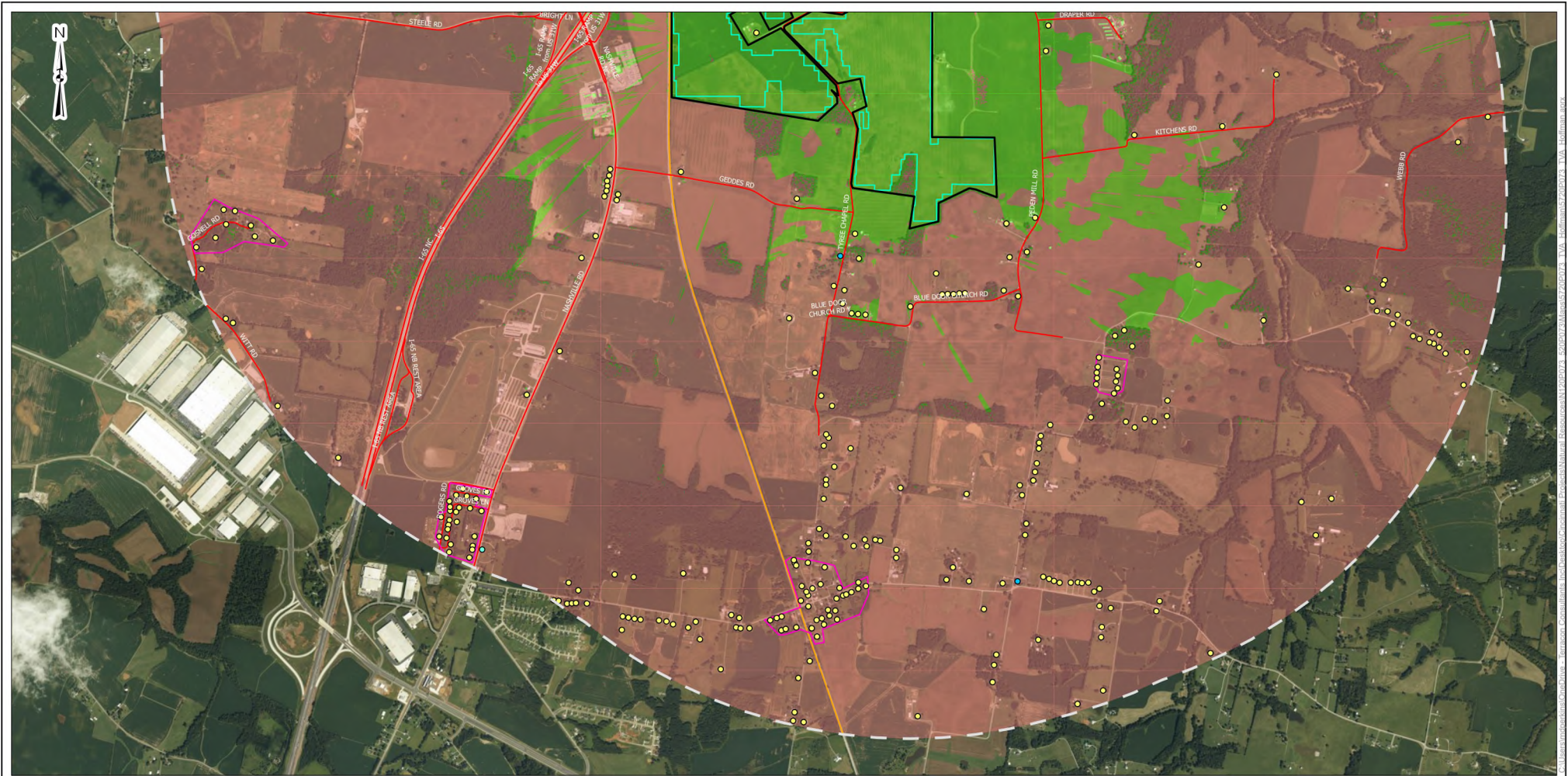
DATA SOURCES:  
ESRI WMS - World Aerial Imagery, OpenStreetMap



Project No.:  
5720P073  
Date:  
Jan 2021  
Drawn By:  
MDP  
Reviewed By:  
SEW

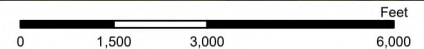
**Terracon**  
611 Lunken Park Drive Cincinnati, OH 45226  
PH: (513) 321-5816 terracon.com

Viewshed Analysis	Exhibit
<p>Horus Renewables TVA Hoffman Solar Tyree Chapel Road Simpson County, Kentucky</p>	1



- Project Site Boundary
- PV Panel Area
- 2-Mile Radius
- Neighborhoods
- Parks
- Roads
- Railroads
- Sensitive Receptors**
- Residence
- Church
- Cemetery
- Viewshed Analysis**
- Visible
- Not Visible

DATA SOURCES:  
ESRI WMS - World Aerial Imagery, OpenStreetMap



Project No.:  
5720P073  
Date:  
Jan 2021  
Drawn By:  
MDP  
Reviewed By:  
SEW

**Terracon**  
611 Lunken Park Drive Cincinnati, OH 45226  
PH: (513) 321-5816 terracon.com

**Viewshed Analysis**  
Horus Renewables  
TVA Hoffman Solar  
Tyree Chapel Road  
Simpson County, Kentucky

**Exhibit**  
  
**2**

# **Appendix B**

## **Public Involvement Process Documents:**

- 1. Affidavit Certifying Mailing of Letters to Adjacent Landowners**
- 2. Sample Letter to Adjacent Landowners**
- 3. List of Adjacent Landowners**
- 4. Certified Receipts**
- 5. Public Notices – Affidavit & Proof of Publication**
- 6. Sample Flier**
- 7. Power Point Presentation**

**COMMONWEALTH OF KENTUCKY  
BEFORE THE KENTUCKY STATE BOARD  
ON ELECTRIC GENERATION AND TRANSMISSION SITING**

**In the Matter of the Application of Horus Kentucky 1 )  
LLC for a Construction Certificate to Construct a ) Case No. 2020-00417  
Merchant Electric Generating Facility )**

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**AFFIDAVIT OF RANDALL L. SAUNDERS**

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Before the undersigned official duly authorized to administer oaths, appeared Randall L. Saunders, who, after being duly sworn, deposes and states as follows:

1. I am over eighteen (18) years of age, legally competent to make this Affidavit, and have personal knowledge of the statements made herein. I make this Affidavit on my own personal knowledge for use in the above-styled matter.

2. I certify that a packet including a notice for public meeting for the above-styled matter (attached hereto as **Exhibit 1**) was mailed to adjacent property owners on March 10, 2021 via U.S. Mail from Huntington, West Virginia. The list of adjacent property owners is attached hereto as **Exhibit 2**.

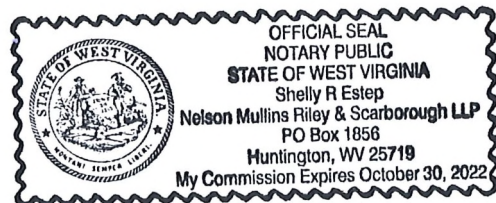
FURTHER AFFIANT SAYETH NOT.

SIGNATURE



SWORN TO AND SUBSCRIBED before me  
This 1<sup>st</sup> day of July, 2021.

Shelly R Estep  
Notary Public for Nelson Mullins  
My Commission Expires: Oct. 30, 2022



## Horus Kentucky 1, LLC

March 10, 2021

Dear Simpson County Property Owner,

My name is Braden Houston, and I am writing to provide you with some information about the Horus Kentucky 1 Solar Project. The Horus Kentucky 1 Solar Project is a 69.3 MW solar project to be developed by Horus Renewables, a division of Opdenenergy, in Simpson County.

We are excited to bring this project to Simpson County and believe the project will have a positive impact on the Simpson County community. The project is an estimated \$80 million dollar project that will create approximately 100 jobs during construction. We will also hire several technicians and maintenance employees for the project's regular operation and maintenance for the life of the project, which we expect to extend for 30 to 40 years, once construction is complete. The Horus Kentucky 1 Project will pay local taxes, which will go to Simpson County to support local schools, first responders and roads.

We have an experienced team that has developed renewable energy projects all over the world. Enclosed is a brochure that provides more information about the project and our company. I am also enclosing a map showing the project area, and an announcement for a public meeting about the project that will be happening on March 25, 2021 from 6-8 p.m.

We are excited to invest in your community and look forward to meeting many of you.

If you have any questions about the Horus Kentucky 1 Project, I encourage you to email me at [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or to call me at (617) 530-0029.

Sincerely,



Braden Houston  
Managing Director - Solar Development  
opdenenergy | Horus Renewables

Enclosures

# Horus Kentucky 1 LLC

## Project Description



## Horus Kentucky 1 “Franklin”

### Project Overview

- Located near the town of **Franklin, Kentucky**, Horus Kentucky 1, LLC is a 90 MW DC/69.3 MW AC Solar Project (“the Project”) being developed by Horus Renewables Corporation (“Horus”)
- Horus is a division of **Opdeenergy**, a Spanish multinational company with a 15-year track record in the development, construction and investment in renewable energy assets
- The Project has been awarded a fifteen-year Power Purchase Agreement (“**PPA**”) in December of 2019 through a Request for Proposals initiated by the **Tennessee Valley Authority** (“TVA”)
- Very few other solar investments of this scale available in **Kentucky**

### Technical Details

- **Location:** Simpson County, Kentucky
- **Total Capacity:** 90.0 MW DC/ 69.3 MW AC
- **Annual Production:** 160,725 MWh (P50)
- **PV Technology:** Single Axis Trackers
- **Environmental:** Environmental (NEPA) Studies in progress
- **Permitting:** Conditional Use Permit in progress; Project complies with all local ordinance.
- **Land:** Two land lease agreements of 307 acres & 250 acres, secured for 41 years



energizing **the future**

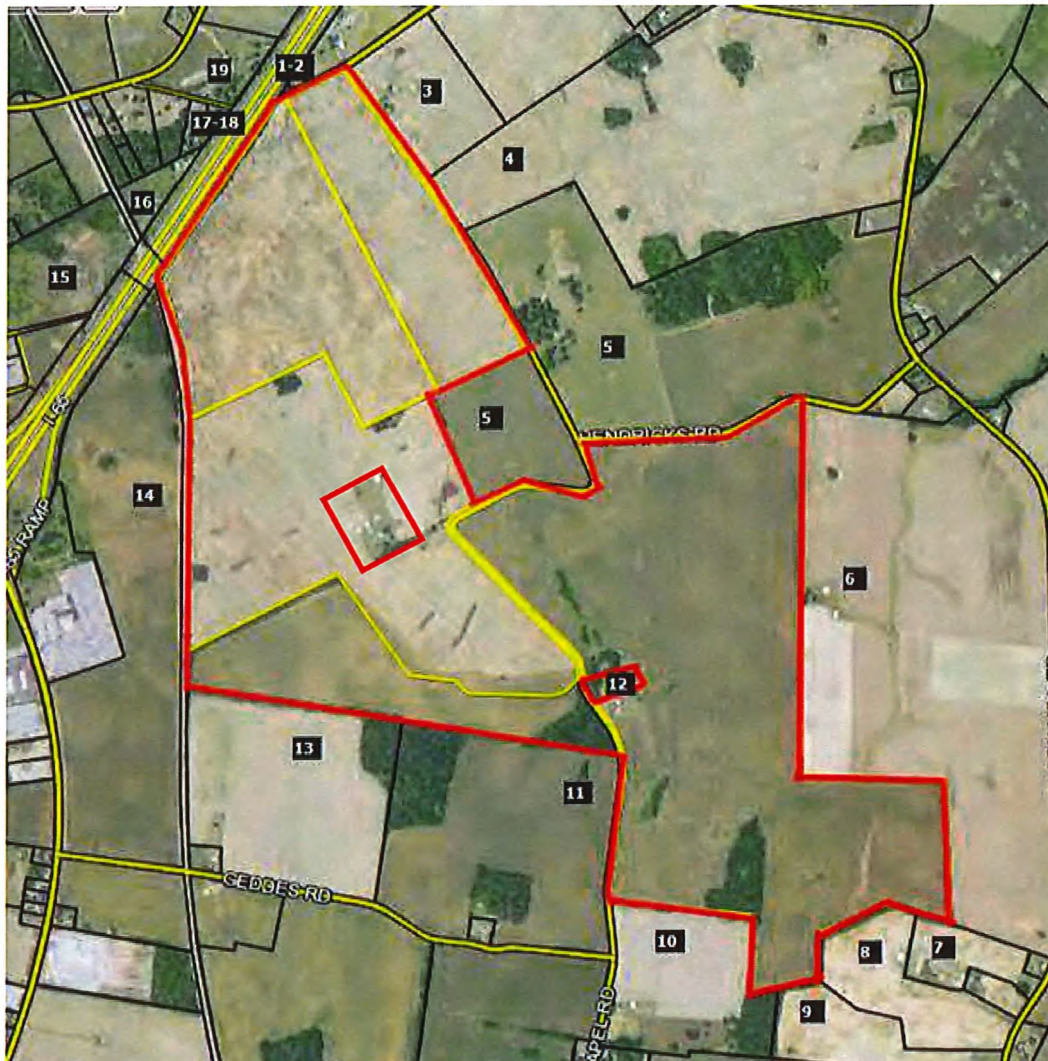
## NOTICE OF PUBLIC MEETING

Horus Kentucky 1 LLC, (Horus Kentucky) is proposing to construct and operate a 69.3 MW solar energy project in Simpson County, Kentucky. The proposed Horus Kentucky project will be located within a project area of approximately 550 acres situated at Tyree Chapel Road, Franklin, Simpson County, Kentucky, with a latitude and longitude of 36° 40' 6.65" North and 86° 32' 37.86" West. A public meeting to inform the community about the project and to answer questions about the project will take place on March 25, 2021 between 6 p.m. and 8 p.m. in the Meeting Room of the Simpson County History Center located at 207 North College Street, Franklin, KY 42134. Due to the ongoing global pandemic, this meeting will be conducted in compliance with guidance from U.S. Centers for Disease Control and guidelines from the Office of the Governor intended to reduce the potential spread of COVID-19. Attendance at this meeting will be limited to allow social distancing, and pre-registration will be required. Per the executive order of the Governor, all in-person attendees will be required to correctly wear masks that will potentially prevent the spread of illness. Seating in the room will be set up to allow social distancing for the duration of the meeting, and attendees will be asked to not move the seats, this due to the meeting being held indoors, in an enclosed space. Hand sanitizer and masks will be available on-site for attendees. Horus Kentucky will make a large-scale (24 inches by 36 inches or larger) layout map of the proposed solar facility, which otherwise would have been made available to the public for inspection at a public meeting, available to the public by displaying the map in the entrance to the History Center on the day of the public meeting. Due to the extraordinary circumstances of this time, the meeting also will be made available for public participation through a digital "virtual" meeting. The digital meeting will be available through a "live" virtual platform (such as Microsoft Teams), which can be accessed through a web browser, and will also be accessible through a call-in number. Given the on-going public health situation and limited attendance cap intended to limit the potential spread of COVID-19, Horus Kentucky strongly encourages participation in this meeting virtually and via the call-in option. Pre-registration will also be required for participation in the virtual meeting and the call-in meeting. Registration is free of charge.

To register, please email [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or call Braden Houston, Senior Director of Solar Development, at 617-530-0029. The proposed photovoltaic solar project will consist of 550 acres of solar photovoltaic panels and associated racking, 22 inverters, associated wiring and balance of system, and a substation transformer. The power generated by the project will be linked to the electric transmission grid via the Tennessee Valley Authority's L5402 – 161kv transmission line near the City of Franklin in Simpson County, Kentucky. Anyone with questions about the March 25, 2021 public meeting or Horus Kentucky may request information by emailing Braden Houston at [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or calling 617-530-0029.

The proposed solar farm is proposed to be constructed on approximately 547.60-acre portion of a 592.06-acre assemblage of land located on Tyree Chapel Road, Franklin, Simpson County, Kentucky, shown on the tax parcel map below.

**Tax Parcel Map**



**Mailing List for Adjacent Property Owners**

Simpson County Water District  
P.O. Box 10180  
Bowling Green, KY 42102

Harold Ratliff  
141 Tyree Chapel Road  
Franklin, KY 42134

Summers Rosdeutscher Farm, LLC  
640 Kenny Perry Drive  
Franklin, KY 42134

Summers Rosdeutscher Farm, LLC  
292 Tyree Chapel Road  
Franklin, KY 42134

Lynn Caudill  
1743 Peden Mill Road  
Franklin, KY 42134

Lynn Caudill  
1595 Peden Mill Road  
Franklin, KY 42134

Steve Baldwin  
P.O. Box 742  
Goodlettsville, TN 37070

Steve Baldwin  
172 Hendricks Road  
Franklin, KY 42134

Bobby Hinton  
555 HWY 259  
Portland, TN 37148

George Rediker  
3865 Peden Mill Road  
Franklin, KY 42134

George Rediker  
3851 Peden Mill Road  
Franklin, KY 42134

George Rediker  
3965 Peden Mill Road  
Franklin, KY 42134

**Mailing List for Adjacent Property Owners (Cont.)**

John P. Crafton, et al. Trustees  
1036 HWY 52 W  
Portland, TN 37148

John P. Crafton, et al. Trustees  
2180 Tyree Chapel Road  
Franklin, KY 42134

Ronald Joe Tyree  
4806 Nashville Road  
Franklin, KY 42134

Roger Hoffman  
1515 Roark Road  
Franklin, KY 42134

Key Development, LLC  
P.O. Box 2809  
Franklin, KY 42135-2809

SAV Investments, LLC  
1105 Woodmont Circle  
Franklin, KY 42134

Nicholas Barnhill  
139 Old County Farm Road  
Franklin, KY 42134

Brent Johns  
111 Old County Farm Road  
Franklin, KY 42134


Ben Johns  
155 Old County Farm Road  
Franklin, KY 42134

Ronnie Webb  
727 Peden Mill Road  
Franklin, KY 42134

John Austin Adams and Shae Lynn  
3735 Peden Mill Road  
Franklin, KY 42134

Deborah Hyatt  
3835 Peden Mill Road  
Franklin, KY 42134

2. Article Number



9414 7266 9904 2057 4034 40

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
George Rediker  
3865 Peden Mill Road  
Franklin, KY 42134

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *C-19 Red* B. Date of Delivery *6-8-21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:  
*3965 Peden Mill Rd.*

053574/09009

Randall L. Saunders, Esq.

PS Form 3811, January 2005 Domestic Return Receipt

**NELSON MULLINS**

NELSON MULLINS RILEY & SCARBOROUGH LLP  
949 Third Avenue | Suite 200  
Huntington, WV 25701  
nelsonmullins.com

**CERTIFIED MAIL®**



9414 7266 9904 2057 4045 60

Hasler FIRST-CLASS MAIL  
06/04/2021  
US POSTAGE \$006.96<sup>00</sup>

ZIP 25701  
011E11682692

ANK

John P. Crafton, et al. Trustees  
2180 Tyree Chapel Road —VAC  
Franklin, KY 42134

JUN 08 2021 *u-15*

NIXIE 372 DC 1 0806/10/21

RETURN TO SENDER  
ATTEMPTED - NOT KNOWN  
UNABLE TO FORWARD

BC: 25701145150 \*0871-04235-05-38

ANK  
257011451  
42134-000000

2. Article Number	<b>COMPLETE THIS SECTION ON DELIVERY</b>	
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9414 7266 9904 2057 4066 63	C. Signature X 	<input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee
3. Service Type <b>CERTIFIED MAIL®</b>	D. Is delivery address different from item 1? If YES, enter delivery address below:	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1. Article Addressed to: Nicholas Barnhill 139 Old County Farm Road Franklin, KY 42134		

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Randall L. Saunders, Esq.

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Domestic Return Receipt


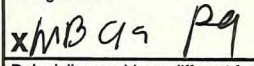
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	A. Received by (Please Print Clearly) Cra Revy	B. Date of Delivery 6-8-21
9414 7266 9904 2057 4067 17	C. Signature X 	<input type="checkbox"/> Agent <input type="checkbox"/> Addressee
3. Service Type <b>CERTIFIED MAIL®</b>	D. Is delivery address different from item 1? If YES, enter delivery address below:	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1. Article Addressed to: Ben Johns 155 Old County Farm Road Franklin, KY 42134		

053574/09009

Randall L. Saunders, Esq.

PS Form 3811, January 2005

Domestic Return Receipt


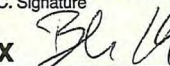
2. Article Number	<b>COMPLETE THIS SECTION ON DELIVERY</b>	
	A. Received by (Please Print Clearly) J Crafton	B. Date of Delivery 6/8/21
9414 7266 9904 2057 4045 53	C. Signature X 	<input type="checkbox"/> Agent <input type="checkbox"/> Addressee
3. Service Type <b>CERTIFIED MAIL®</b>	D. Is delivery address different from item 1? If YES, enter delivery address below:	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1. Article Addressed to: John P. Crafton, et al. Trustees 4036 HWY 52 W Portland, TN 37148		

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2. Article Number	<b>COMPLETE THIS SECTION ON DELIVERY</b>	
	A. Received by (Please Print Clearly) Cra Revy	B. Date of Delivery 6-8-21
9414 7266 9904 2057 4067 24	C. Signature X 	<input type="checkbox"/> Agent <input type="checkbox"/> Addressee
3. Service Type <b>CERTIFIED MAIL®</b>	D. Is delivery address different from item 1? If YES, enter delivery address below:	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	<input type="checkbox"/> Yes <input type="checkbox"/> No	
1. Article Addressed to: Ronnie Webb 727 Peden Mill Road Franklin, KY 42134		

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Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4066 70

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *C-19 KODY* B. Date of Delivery *6-8-21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

1. Article Addressed to:  
Brent Johns  
111 Old County Farm Road  
Franklin, KY 42134

2. Article Number



9414 7266 9904 2057 4074 17

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *C-19 KODY* B. Date of Delivery *6-8-21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:  
*1743 Peden Mill Rd*

1. Article Addressed to:  
Lynn Caudill  
1595 Peden Mill Road  
Franklin, KY 42134

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Randall L. Saunders, Esq.

PS Form 3811, January 2005

Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4074 86

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *C-19 KODY* B. Date of Delivery *6-8-21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

1. Article Addressed to:  
Steve Baldwin  
172 Hendricks Road  
Franklin, KY 42134

2. Article Number



9414 7266 9904 2057 4067 62

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *C-19 KODY* B. Date of Delivery *6-8-21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

1. Article Addressed to:  
Summers Rosdeutscher Farm, LLC  
640 Kenny Perry Drive  
Franklin, KY 42134

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Randall L. Saunders, Esq.

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053574/09009

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Domestic Return Receipt



2. Article Number		<b>COMPLETE THIS SECTION ON DELIVERY</b>	
		A. Received by (Please Print Clearly) <i>C-19 Kove</i>	B. Date of Delivery <i>6-8-21</i>
9414 7266 9904 2057 4067 31		C. Signature <i>[Signature]</i>	
3. Service Type <b>CERTIFIED MAIL®</b>		<input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		D. Is delivery address different from item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1. Article Addressed to: John Austin Adams and Shae Lynn 3735 Peden Mill Road Franklin, KY 42134			

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2. Article Number		<b>COMPLETE THIS SECTION ON DELIVERY</b>	
		A. Received by (Please Print Clearly) <i>C-19 Kove</i>	B. Date of Delivery <i>6-8-21</i>
9414 7266 9904 2057 4067 55		C. Signature <i>[Signature]</i>	
3. Service Type <b>CERTIFIED MAIL®</b>		<input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		D. Is delivery address different from item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1. Article Addressed to: Harold Ratliff 141 Tyree Chapel Road Franklin, KY 42134			

053574/09009

Randall L. Saunders, Esq.

PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number		<b>COMPLETE THIS SECTION ON DELIVERY</b>	
		A. Received by (Please Print Clearly) <i>C-19 Kove</i>	B. Date of Delivery <i>6-8-21</i>
9414 7266 9904 2057 4067 48		C. Signature <i>[Signature]</i>	
3. Service Type <b>CERTIFIED MAIL®</b>		<input type="checkbox"/> Agent <input type="checkbox"/> Addressee	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		D. Is delivery address different from item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1. Article Addressed to: Deborah Hyatt 3835 Peden Mill Road Franklin, KY 42134			

053574/09009

Randall L. Saunders, Esq.

PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number		<b>COMPLETE THIS SECTION ON DELIVERY</b>	
		A. Received by (Please Print Clearly) <i>C-19 Kove</i>	B. Date of Delivery <i>6-8-21</i>
9414 7266 9904 2057 4067 86		C. Signature <i>[Signature]</i>	
3. Service Type <b>CERTIFIED MAIL®</b>		<input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	
4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes		D. Is delivery address different from item 1? If YES, enter delivery address below: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
1. Article Addressed to: Lynn Caudill 1743 Peden Mill Road Franklin, KY 42134			

053574/09009

Randall L. Saunders, Esq.

PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4074 93

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) IG R6 C19 B. Date of Delivery 6/8/21

C. Signature B Hinton  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
Bobby Hinton  
555 HWY 259  
Portland, TN 37148

053574/09009 Randall L. Saunders, Esq.  
PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4045 46

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) C19 R04 B. Date of Delivery 6-8-21

C. Signature [Signature]  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
George Rediker  
3965 Peden Mill Road  
Franklin, KY 42134

053574/09009 Randall L. Saunders, Esq.  
PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4067 79

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) [Signature] B. Date of Delivery 6-8-21

C. Signature C-19 R04  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:  
640 Kemper Farm Dr.

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
Summers Rosdeutscher Farm, LLC  
292 Tyree Chapel Road  
Franklin, KY 42134

053574/09009 Randall L. Saunders, Esq.  
PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4045 39

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) C-19 R04 B. Date of Delivery 6-8-21

C. Signature [Signature]  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:  
3965 Peden Mill Rd.

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
George Rediker  
3851 Peden Mill Road  
Franklin, KY 42134

053574/09009 Randall L. Saunders, Esq.  
PS Form 3811, January 2005 Domestic Return Receipt

2. Article Number



9414 7266 9904 2057 4066 25

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *Joe Tyree Ex* B. Date of Delivery *06/12/2021*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type **CERTIFIED MAIL®**


4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
Ronald Joe Tyree  
4806 Nashville Road  
Franklin, KY 42134

053574/09009

Randall L. Saunders, Esq.

2. Article Number



9414 7266 9904 2057 4066 56

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery *6/9/21*

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
SAV Investments, LLC  
1105 Woodmont Circle  
Franklin, KY 42134

053574/09009

Randall L. Saunders, Esq.

2. Article Number



9414 7266 9904 2057 4066 49

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) *Jessica Jordan* B. Date of Delivery

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

3. Service Type **CERTIFIED MAIL®**

4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
Key Development, LLC  
P.O. Box 2809  
Franklin, KY 42135-2809

053574/09009

Randall L. Saunders, Esq.

2. Article Number



9414 7266 9904 2057 4045 77

**COMPLETE THIS SECTION ON DELIVERY**

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature *[Signature]*  Agent  Addressee

D. Is delivery address different from item 1?  Yes  No  
If YES, enter delivery address below:

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4. Restricted Delivery? (Extra Fee)  Yes

1. Article Addressed to:  
Simpson County Water District  
P.O. Box 10180  
Bowling Green, KY 42102

053574/09009

Randall L. Saunders, Esq.

9414 7266 9904 2057 4066 32

**TO:** Roger Hoffman  
1515 Roark Road  
Franklin, KY 42134

**Certified Article Number**

9414 7266 9904 2057 4066 32

**SENDER'S RECORD**

**SENDER:**

**REFERENCE:** Randall L. Saunders, Esq.  
053574/09009

PS Form 3800, January 2005

RETURN RECEIPT SERVICE	Postage	
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**TO:** Steve Baldwin  
P.O. Box 742  
Goodlettsville, TN 37070

**Certified Article Number**

9414 7266 9904 2057 4074 79

**SENDER'S RECORD**

**SENDER:**

**REFERENCE:** Randall L. Saunders, Esq.  
053574/09009

PS Form 3800, January 2005

RETURN RECEIPT SERVICE	Postage	
	Certified Fee	
	Return Receipt Fee	
	Restricted Delivery	
	Total Postage & Fees	6.96

**USPS®**  
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6-4-21

No Insurance Coverage Provided  
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AFFP

Horus Kentucky 1 LLC, (Horus K

# Affidavit of Publication

STATE OF KY }  
COUNTY OF SIMPSON } SS


Bobbie Fisher, being duly sworn, says:

That she is Accounting Clerk of the Franklin Favorite, a daily newspaper of general circulation, printed and published in Franklin, Simpson County, KY; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:


March 11, 2021

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

  
\_\_\_\_\_  
Accounting Clerk

Subscribed to and sworn to me this 18th day of March 2021.

  
\_\_\_\_\_  
Melanie Miller, , Simpson County, KY

My commission expires: September 26, 2023

00160353 00764641

Paige Looney

Horus Kentucky 1 LLC, (Horus Kentucky) is proposing to construct and operate a 69.3 MW solar energy project in Simpson County, Kentucky. The proposed Horus Kentucky project will be located within a project area of approximately 550 acres situated at Tyree Chapel Road, Franklin, Simpson County, Kentucky, with a latitude and longitude of 36° 40' 6.65" North and 86° 32' 37.86" West. A public meeting to inform the community about the project and to answer questions about the project will take place on March 25, 2021 between 6 p.m. and 8 p.m. in the Meeting Room of the Simpson County History Center located at 207 North College Street, Franklin, KY 42134. Due to the ongoing global pandemic, this meeting will be conducted in compliance with guidance from U.S. Centers for Disease Control and guidelines from the Office of the Governor intended to reduce the potential spread of COVID-19. Attendance at this meeting will be limited to allow social distancing, and pre-registration will be required. Per the executive order of the Governor, all in-person attendees will be required to correctly wear masks that will potentially prevent the spread of illness. Seating in the room will be set up to allow social distancing for the duration of the meeting, and attendees will be asked to not move the seats, this due to the meeting being held indoors, in an enclosed space. Hand sanitizer and masks will be available on-site for attendees. Horus Kentucky will make a large-scale (24 inches by 36 inches or larger) layout map of the proposed solar facility, which otherwise would have been made available to the public for inspection at a public meeting, available to the public by displaying the map in the entrance to the History Center on the day of the public meeting. Due to the extraordinary circumstances of this time, the meeting also will be made available for public participation through a digital "virtual" meeting. The digital meeting will be available through a "live" virtual platform (such as Microsoft Teams), which can be accessed through a web browser, and will also be accessible through a call-in number. Given the on-going public health situation and limited attendance cap intended to limit the potential spread of COVID-19, Horus Kentucky strongly encourages participation in this meeting virtually and via the call-in option. Pre-registration will also be required for participation in the virtual meeting and the call-in meeting. Registration is free of charge.



AFFP

Horus Kentucky 1 LLC, (Horus K

# Affidavit of Publication

STATE OF KY }  
COUNTY OF SIMPSON } SS


Bobbie Fisher, being duly sworn, says:

That she is Accounting Clerk of the Franklin Favorite, a daily newspaper of general circulation, printed and published in Franklin, Simpson County, KY; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

March 18, 2021

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

  
Accounting Clerk

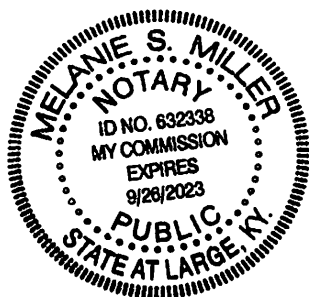
Subscribed to and sworn to me this 18th day of March 2021.

  
Melanie Miller, , Simpson County, KY

My commission expires: September 26, 2023

00160353 00764641

Paige Looney



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To register, please email [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or call Braden Houston, Senior Director of Solar Development, at 617-530-0029. The proposed photovoltaic solar project will consist of 550 acres of solar photovoltaic panels and associated racking, 22 inverters, associated wiring and balance of system, and a substation transformer. The power generated by the project will be linked to the electric transmission grid via the Tennessee Valley Authority's L5402 – 161kv transmission line near the City of Franklin in Simpson County, Kentucky. Anyone with questions about the March 25, 2021 public meeting or Horus Kentucky may request information by emailing Braden Houston at [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or calling 617-530-0029.

# CHAMPS

FROM PAGE A7

the number one seed in the district," Miller said. "We got to do a better job in closing games out. We need to keep putting our foot on their neck to come away with wins."

"I really like that we don't give up. We keep playing," Kadyr Lowe said. "I've been on teams that we would get down and not be able to get going, get it back. When we get hit with adversity, we respond well."

Landon Larson scored a game high of 14 points with Anthony Woodard adding 13 points and Blake Wood with 10.

"We contained (Anthony) Woodard pretty well but at the end of the day, we didn't play like a team. We left everybody else

with open shots," Jalen Briscoe said. "Rebounding is what got us back in the game. We will have to work on that if we play them again in the district tournament."

"Woodard is tough to cover," Spencer said. "When he gets the ball, he does a good job in attacking. Give his other players credit as they made shots to keep them in the game."

F-5 60

**Todd County Central 48**  
The Rebels jumped out to a hot start as junior Mareke Johnson, who scored 10 straight points, accounted for 12 of the team's 14 1st Quarter points. Seniors Isaac Marshall and Andreas Miller each drained a 3-pointer for the Wildcats. Junior Jalen Briscoe scored a basket along with two free throws from sophomore Connor Vincent as

they cut their early seven point deficit to trail by two, 14-12 at the end of one.

"(Mareke) Johnson did cause us some problems early on," Wildcat head coach Dee Spencer said. "He didn't play the first time against us but give our guys credit. They didn't quit and stayed especially on our defense. Our focus has to be defending and rebounding and with that, that gets our offense going."

Sophomore Preston Rager's 3-pointer along with a basket from freshman Anthony Johnson kept the lead for Todd County central. But it didn't last long as Miller, who knocked down his second 3-pointer of the game, scored 13 points in a row. Sophomore DeMarcus Hogan made two free throws in the 2nd Quarter as Franklin-Simp-

son took a 27-25 lead into halftime.

Just like he did to start the game, Marshall buried his second 3-pointer of the game to get the Wildcats going in the 3rd Quarter. Hogan also made a 3-pointer for a 37-30 lead. The Rebels had four different players score a basket for an 8-0 run to lead 38-37. Hogan's basket at the end of the 3rd quarter gave Franklin-Simpson a 39-38 lead.

Johnson's basket gave Todd County Central the lead temporarily as Briscoe and Stutzman's 3-pointers ignited an 11-0 run for the Wildcats to lead 50-40. With great team defense during the sequence, Franklin-Simpson went on a 10-4 run that put the game and the perfect district regular season record in hand as they defeated the

Rebels 60-48.

"That's the first time in four years that we have finished undefeated in the district and we are the top seed," Marshall said. "Winning the district tournament is always nice but to win it on our home floor makes it even more special."

"Came in with energy to help the team out," DeMarcus Hogan said. "Todd County Central played really well but we just had to step it up and play better. Winning this game and now being the number one seed in the district tournament is really big."

Miller led all scorers with a game high of 28 points with Hogan adding 10 points for the Wildcats. Johnson led the Rebels with 15 points with Amari Andrews adding 10.

"Got to give Todd County Central credit," Spen-

cer said. "That's the first time in four years that we have finished undefeated in the district and we are the top seed," Marshall said. "Winning the district tournament is always nice but to win it on our home floor makes it even more special."

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**DEADLINE FOR THURSDAY PUBLICATION: 4:00 P.M. FRIDAY**

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# CLASSIFIEDS

**0955 Legal**  
**IN THE CIRCUIT COURT OF THE THIRTIETH JUDICIAL CIRCUIT, COUNTY, FLORIDA.**  
 Case No. 20-06-000456  
 Division 1  
 THOMAS M. MACK & RUTH D. MACK, Petitioner and JOSE G. MIRANDA (ADOPTION OF MAM QI MACK), Respondent.  
**NOTICE OF ACTION FOR PETITION FOR ADOPTION BY STEPCHILD**  
 YOU ARE NOTICED that an action for ADOPTION BY STEPCHILD has been filed against you and that you are required to serve a copy of your written defenses, if any, to it on THOMAS M. MACK & RUTH D. MACK, whose address is 238 E. DAVID BLVD., STE. 207, TAMPA, FL 33606, on or before 03/02/2021, and file the original with the clerk of this Court at 605 N. GORRISON ST., TAMPA, FLORIDA 33602, before service on Petitioner or immediately thereafter, if you do so, a default may be entered against you for the relief demanded in the petition.  
 Copies of all court documents in this case, including orders, are available at the Clerk of the Circuit Court's office. You may review these documents upon request.  
 Court files reflect the office of the current address. (You may file Designation of Current Mailing and Child Address, Florida Supreme Court Approved Family Law Form 12.915.) Future papers in this lawsuit will be filed at the address on file with the Florida Department of Banking and Information. Failure to comply can result in sanctions, including dismissal or striking of pleadings. Dated: 02/05/2021.  
 Cindy Stuart  
 Clerk of the Circuit Court  
 P.O. Box 2000  
 Deputy Clerk

**0955 Legal**  
**Horus Kentucky 1 LLC** (Horus Kentucky) is proposing to construct and operate a 69.8 MW solar energy project in Simpson County, Kentucky. The proposed Horus Kentucky project will be located within a project area of approximately 550 acres situated at Lynne Chapel Road, Franklin Simpson County, Kentucky, with a latitude and longitude of 36° 49' 6.85" North and 86° 27' 39.58" West, a public meeting to inform the community will be held on March 25, 2021 between 9 a.m. and 8 p.m., in the Meeting Room of the Simpson County History Center located at 207 North College Street, Franklin, KY 42134. Due to the ongoing global pandemic, this meeting will be conducted in compliance with guidance from the U.S. Centers for Disease Control and guidelines from the Office of the Governor intended to reduce the potential spread of COVID-19. Attendance at this meeting will be limited to allow social distancing, and pre-registration will be required. For the executive order of the Governor, all in-person attendees will be required to correctly wear masks that will potentially prevent the spread of illness. Seating in the room will be set up to allow social distancing for the duration of the meeting, and attendees will be asked to not move the chairs. This due to the meeting being held indoors, in an enclosed space, hand sanitizer and masks will be available on-site for attendees. Horus Kentucky will make a large-scale (24 inches by 36 inches or larger) layout map of the proposed solar facility, which otherwise would have been made available to the public for inspection at a public meeting, available to the public by displaying the map in the entrance to the History Center on the day of the public meeting. Due to the extraordinary circumstances at this time, the meeting also will be made available for public participation through a "digital" virtual meeting (such as Microsoft Teams), which can be accessed through a web browser, and will also be accessible through a call-in number. Given the ongoing public health situation and limited attendance capacity to limit the potential spread of COVID-19, Horus Kentucky strongly encourages participation in this meeting virtually via the call-in meeting. Those who are unable to participate for participation in the virtual meeting and the call-in meeting, registration is free of charge.

**0955 Legal**  
**Public Notice**  
 The Franklin-Simpson Planning and Zoning Board of Adjustments has scheduled a meeting to hear public comments on March 22, 2021 at 5:30 pm in the Fiscal Court Meeting Room, 2nd Floor of Historic Courthouse, Courthouse Square, Franklin, KY. Tim B. Jackie Summers are requesting a variance of five feet to the required front-side setback on the left side of Lot 17, located View Blvd in Oak Ridge Subdivision, Franklin, KY. Anyone interested may attend this public hearing.

Julie Freeman, Administrative Assistant  
 Franklin-Simpson Planning and Zoning

**0955 Legal**  
**Public Notice**  
 The Authority reserves the right to receive any bids and to waive any informality in bids. The Authority reserves the right to negotiate with a responsible bidder on terms and conditions of the construction. The construction project shall be embodied in a written construction agreement between the Authority and the successful bidder.

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**Affidavit of Publication**

STATE OF KY }  
COUNTY OF SIMPSON } SS

Alicia Chambers, being duly sworn, says:

That she is Accounting Clerk of the Franklin Favorite, a newspaper of general circulation, printed and published in Franklin, Simpson County, KY; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

June 10, 2021  
June 10, 2021

Publisher's Fee: \$ 61.00

That said newspaper was regularly issued and circulated on those dates.

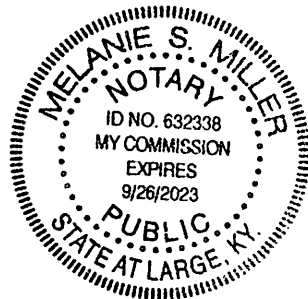
SIGNED:

*Alicia Chambers*

Subscribed to and sworn to me this 10th day of June 2021.

*[Signature]*

70029985 70073478



Jonah Samples  
Nelson Mullins  
949 Third Ave  
Huntington, WV 25701

NOTICE OF APPLICATION

Horus Kentucky 1 LLC is proposing to construct and operate a 69.3-Megawatt solar facility located at Tyree Chapel Road, Franklin, Simpson County, Kentucky. The proposed Horus Kentucky 1 Project will consist of up to 550 acres of solar photovoltaic panels and associated racking (approximately 69.3 MW), 22 inverters, and a project substation transformer which will connect to the Tennessee Valley Authority's L5402-161kv transmission line.

Horus Kentucky 1, LLC is required to file an application for construction and operation of the proposed facility. This application is subject to the approval of the Kentucky State Siting Board on Electric Generation and Transmission Siting, 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 40602-0615.

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.

Any questions related to the application or its process may be directed to the Kentucky State Siting Board, which can be reached at P.O. Box 615, 211 Sower Boulevard, Frankfort, Kentucky 40602-0615, or via phone at (502) 564-3940.



# **NOTICE OF PUBLIC MEETING**

**Regarding the construction of a solar farm  
in Franklin, Kentucky**

**Simpson County Historical Society Event Room**

**207 North College Street**

**March 25<sup>th</sup>, 2021**

**6:00 – 8:00 PM**

or

**REGISTER TO PARTICIPATE ONLINE:**

Email [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or  
Call Braden Houston at 617-530-0029

# Horus Kentucky 1 LLC

## Project Description



## Horus Kentucky 1 “Franklin”

### Project Overview

- Located near the town of **Franklin, Kentucky**, Horus Kentucky 1, LLC is a 90 MW DC/69.3 MW AC Solar Project (“the Project”) being developed by Horus Renewables Corporation (“Horus”)
- Horus is a division of **Opdeenergy**, a Spanish multinational company with a 15-year track record in the development, construction and investment in renewable energy assets
- The Project has been awarded a fifteen-year Power Purchase Agreement (“**PPA**”) in December of 2019 through a Request for Proposals initiated by the **Tennessee Valley Authority** (“TVA”)
- Very few other solar investments of this scale available in **Kentucky**

### Technical Details

- **Location:** Simpson County, Kentucky
- **Total Capacity:** 90.0 MW DC/ 69.3 MW AC
- **Annual Production:** 160,725 MWh (P50)
- **PV Technology:** Single Axis Trackers
- **Environmental:** Environmental (NEPA) Studies in progress
- **Permitting:** Conditional Use Permit in progress; Project complies with all local ordinance.
- **Land:** Two land lease agreements of 307 acres & 250 acres, secured for 41 years

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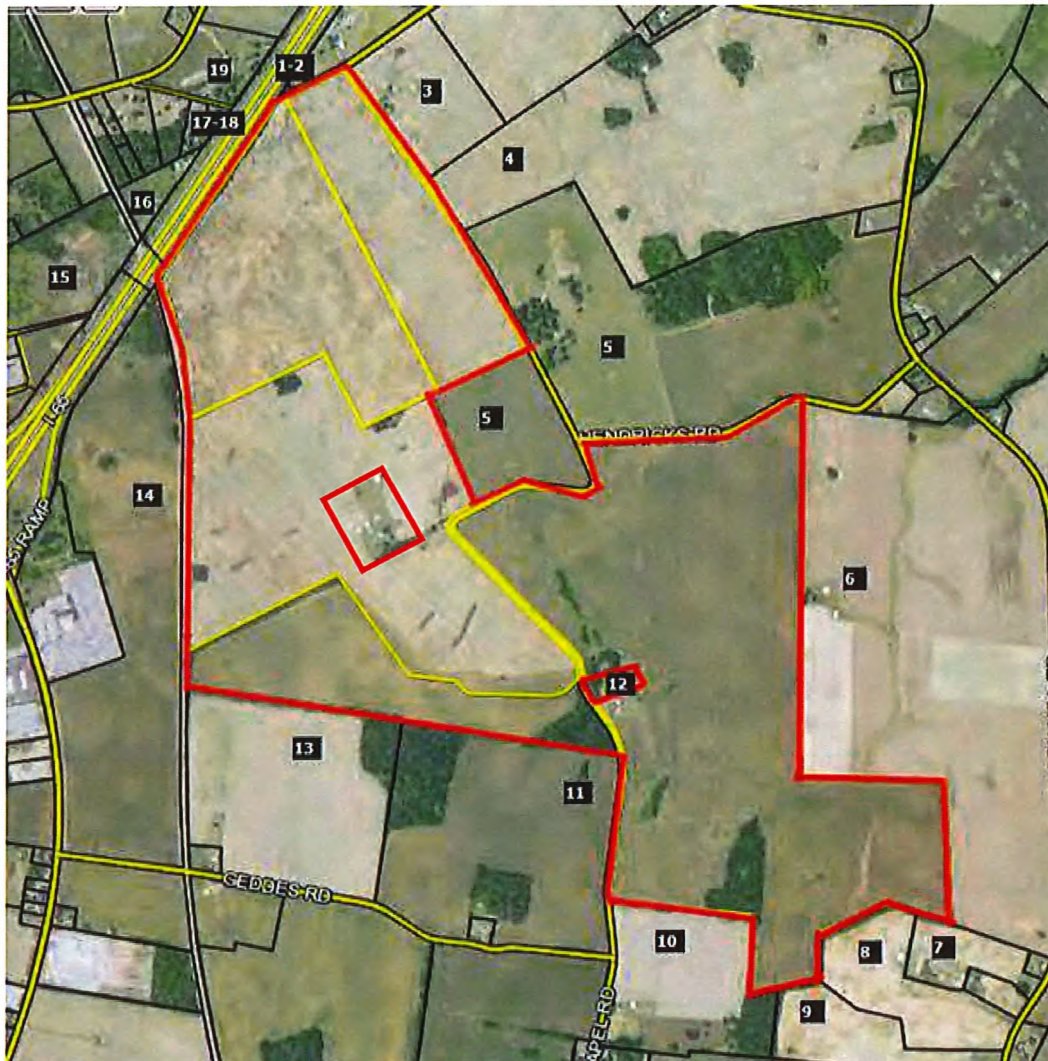
## NOTICE OF PUBLIC MEETING

Horus Kentucky 1 LLC, (Horus Kentucky) is proposing to construct and operate a 69.3 MW solar energy project in Simpson County, Kentucky. The proposed Horus Kentucky project will be located within a project area of approximately 550 acres situated at Tyree Chapel Road, Franklin, Simpson County, Kentucky, with a latitude and longitude of 36° 40' 6.65" North and 86° 32' 37.86" West. A public meeting to inform the community about the project and to answer questions about the project will take place on March 25, 2021 between 6 p.m. and 8 p.m. in the Meeting Room of the Simpson County History Center located at 207 North College Street, Franklin, KY 42134. Due to the ongoing global pandemic, this meeting will be conducted in compliance with guidance from U.S. Centers for Disease Control and guidelines from the Office of the Governor intended to reduce the potential spread of COVID-19. Attendance at this meeting will be limited to allow social distancing, and pre-registration will be required. Per the executive order of the Governor, all in-person attendees will be required to correctly wear masks that will potentially prevent the spread of illness. Seating in the room will be set up to allow social distancing for the duration of the meeting, and attendees will be asked to not move the seats, this due to the meeting being held indoors, in an enclosed space. Hand sanitizer and masks will be available on-site for attendees. Horus Kentucky will make a large-scale (24 inches by 36 inches or larger) layout map of the proposed solar facility, which otherwise would have been made available to the public for inspection at a public meeting, available to the public by displaying the map in the entrance to the History Center on the day of the public meeting. Due to the extraordinary circumstances of this time, the meeting also will be made available for public participation through a digital "virtual" meeting. The digital meeting will be available through a "live" virtual platform (such as Microsoft Teams), which can be accessed through a web browser, and will also be accessible through a call-in number. Given the on-going public health situation and limited attendance cap intended to limit the potential spread of COVID-19, Horus Kentucky strongly encourages participation in this meeting virtually and via the call-in option. Pre-registration will also be required for participation in the virtual meeting and the call-in meeting. Registration is free of charge.

To register, please email [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or call Braden Houston, Senior Director of Solar Development, at 617-530-0029. The proposed photovoltaic solar project will consist of 550 acres of solar photovoltaic panels and associated racking, 22 inverters, associated wiring and balance of system, and a substation transformer. The power generated by the project will be linked to the electric transmission grid via the Tennessee Valley Authority's L5402 – 161kv transmission line near the City of Franklin in Simpson County, Kentucky. Anyone with questions about the March 25, 2021 public meeting or Horus Kentucky may request information by emailing Braden Houston at [bhouston@opdenenergy.com](mailto:bhouston@opdenenergy.com) or calling 617-530-0029.

The proposed solar farm is proposed to be constructed on approximately 547.60-acre portion of a 592.06-acre assemblage of land located on Tyree Chapel Road, Franklin, Simpson County, Kentucky, shown on the tax parcel map below.

**Tax Parcel Map**



# **Appendix C**

## **Certificate of Service**

**COMMONWEALTH OF KENTUCKY  
BEFORE THE KENTUCKY STATE BOARD  
ON ELECTRIC GENERATION AND TRANSMISSION SITING**

**In the Matter of the Application of Horus Kentucky 1     )  
LLC for a Construction Certificate to Construct a     ) Case No. 2020-00417  
Merchant Electric Generating Facility                     )**

---

**CERTIFICATE OF SERVICE**

---

I certify that a true and correct copy of this Application has been served via e-mail on July 5, 2021, and a paper copy will be served upon the following:

Simpson County Judge/Executive Mason Barnes  
P.O. Box 242  
Franklin, KY 42135-0242  
mbarnes@simpsoncounty.us

Carter Munday  
Planning & Zoning Administrator  
P.O. Box 1025  
Franklin, KY 42135-1025  
carter.munday@franklinky.org



---

Randall L. Saunders, Esq. (KY Bar No. 90911)  
Counsel for Horus Kentucky 1 LLC



# **Appendix D**

## **Interconnection System Impact Study**

# **Interconnection System Impact Study**

Requester: OPD Energy

#388 – Horus Kentucky 1

Study Performed By:

Interconnection Planning & Special Studies



**FINAL R2**

**February 26, 2020**

**CRITICAL ENERGY INFRASTRUCTURE INFORMATION (CEII)  
CONFIDENTIAL  
BUSINESS SENSITIVE**



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## Executive Summary

The Tennessee Valley Authority (TVA) conducted an Interconnection System Impact Study (SIS) at the request of OPD Energy to interconnect a solar Generating Facility with a maximum generating capability of 69.7 MW (net) to the TVA system in Simpson County, KY (see Appendix B).

The objective of the SIS is to identify all Adverse System Impacts on TVA’s transmission system in order to maintain system reliability as a result of the Interconnection Request. The SIS will also determine the facility additions, modifications, and upgrades that are needed to maintain a reliable interconnection.

In addition to identifying all Adverse System Impacts on the TVA transmission system, TVA monitors its Local Power Companies (LPCs) as well as neighboring transmission systems for impacts. No Potentially Affected Systems were identified as a result of the proposed Interconnection.

The SIS was performed with and without prior requesters within the local study area. Prior requester queue numbers include: Q359, Q362, and Q364.

Revision 1, dated January 29, 2020, removes the 10 MW battery from the project.

Revision 2, dated February 26, 2020, removes the cost for Wilson – Lebanon 161 kV TL uprate.

### Without Priors

The study included steady-state (thermal & voltage) analysis, short circuit analysis, transient stability, and reactive capability.

- Steady-state loadflow analysis determined that the proposed interconnection will cause thermal violations on the TVA transmission system. These violations will be explained in section 4.1.2 of this report.
- Short circuit analysis determined that the proposed interconnection did not cause any breaker duty issues on the TVA transmission system.
- Transient stability analysis determined that the proposed interconnection did not cause any new transient stability issues on the TVA transmission system.
- The evaluation of the reactive capability requirement of a 95% power factor (injecting and absorbing) at the POI did not identify the need for additional reactive support.



The study identified a need for the following system improvements:

**Table ES-1: Direct Assignment Facilities & Required Network Upgrades without Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).
Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL
161 kV transmission line and terminal work (see Table 4-3 for details).

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facilities and the TVA tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.

With Priors

The study included steady-state (thermal & voltage) analysis, short circuit analysis, transient stability, and reactive capability.

- Steady-state loadflow analysis determined that the proposed interconnection will cause thermal violations on the TVA transmission system. These violations will be explained in the section 4.2.2 of this report.
- Short circuit analysis determined that the proposed interconnection did not cause any breaker duty issues on the TVA transmission system.
- Transient stability analysis determined that the proposed interconnection did not cause any new transient stability issues on the TVA transmission system.
- The evaluation of the reactive capability requirement of a 95% power factor (injecting and absorbing) at the POI did not identify the need for additional reactive support.



The study identified a need for the following system improvements:

**Table ES-2: Direct Assignment Facilities & Required Network Upgrades with Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).
Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL
161 kV transmission line and terminal work at various locations (see Table 4-6 for details).

Notes:

1. Costs provided for SIS are based on planning level estimates (±50%).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facilities and the TVA tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.
4. A TVA project is scheduled to uprate the line to where the listed overload would no longer be valid. However, if the TVA project’s in-service date is delayed or is not completed, OPD Energy may be required to fund the upgrade.



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### 1.0 Introduction

The purpose of this SIS is to determine all Adverse System Impacts on TVA’s transmission system caused by this OPD Energy Interconnection Request. This report identifies the required Network Upgrades and Direct Assignment Facilities in order to maintain the reliability of the TVA system as a result of a new interconnection in Simpson County, Kentucky.

Table 1-1: Requester OPD Energy

Interconnection Location	Requested ISD	Number of Units	Gross AC Max Capacity	Net AC Max Capacity
Franklin – Portland 161 kV TL	05/30/2022 <sup>(1)</sup>	22 inverters	70.6 MW/74.36 MVA	69.7 MW

Notes:

1. Based on the estimated project completion timeline, it is unlikely that the Interconnection Customer’s Requested ISD will be achievable. A more refined project schedule will be completed during the Facilities Study process, should the Interconnection Customer elect to proceed.

### 2.0 Model Development

The power flow models utilized in this study originated from the Eastern Interconnection Reliability Assessment Group (ERAG), Multi-Regional Modeling Working Group (MMWG), and the SERC Long Term Working Group (LTWG) 2019 series of power flow base cases. These models are created as part of the ERAG and SERC regional modeling process. The most up-to-date TVA load forecast and generation plans available at the time of case creation were used in the cases, including any projected transmission upgrades. Deviations from the normal generation dispatch may be made, if the request is found to be sensitive to local generation. All confirmed prior Interconnection Requests have priority over TVA’s available transmission capacity. Offline generators that have existing Interconnection Rights on the TVA system may be dispatched at the output that was studied through the interconnection process in order to necessarily reflect those rights.

The short circuit models utilized in this study originated from the SERC Short Circuit Database Working Group (SCDWG) 2019 series of short circuit models. The most up-to-date transmission and generation plans, including prior Interconnection Requests were considered during the process of case creation.

The transient stability model used in this study was based on the most recent SERC dynamically reduced base cases with a TVA system model updated in 2017. Studies were performed using a 2029 Summer Peak base case. In addition to summer peak loads, other demand levels were considered such as shoulder peak and light load. However, impacts due to FIDVR are most significant under summer peak conditions.

A notice concerning assumptions made in the model development process is contained in Appendix A.





### 3.0 Study Criteria and Methodology

This study was conducted consistent with TVA SIS processes and practices. All studies performed in the SIS are designed to meet applicable reliability standards and TVA's planning practices and procedures. Information regarding contingencies, monitored elements, generation dispatch, and load profiles evaluated in this study are provided upon request.

The analysis of the Interconnection Request was conducted using a combination of software including PTI PSS/E, PowerWorld Simulator, and PowerGEM TARA.

OPD Energy provided modeling details regarding the proposed interconnection to Transmission Planning.

The interconnection arrangement used for this study can be seen in the interconnection diagram included in Appendix C of this report. Any changes to the proposed interconnection arrangement could result in the need for a new study and/or a change in the estimated costs.



## 4.0 Study Results

The following sections summarize the facilities required for the interconnection based on the results of steady state, short circuit, transient stability, and reactive capability studies.

### 4.1 Without Prior Requesters

#### 4.1.1 Direct Assignment Facilities

##### 4.1.1.1 Interconnection

The table below describes the necessary Direct Assignment Facilities on the TVA system in order to support the interconnection arrangement shown in Appendix C and includes cost estimates.

**Table 4-1: Direct Assignment Facilities without Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facility and the TVA tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.

##### 4.1.1.2 Fault Study

The short circuit analysis determined that the proposed interconnection did not cause any breaker duty issues on the TVA transmission system.

##### 4.1.1.3 System Protection

Dual digital pilot protection on the Franklin – Portland 161 kV TL will be required for interconnection. Transfer trip protection will be required from Franklin to the Generating Facility and from Portland to the Generating Facility. TVA reserves the right to disconnect the Generating Facility for loss of communications between Franklin and the Generating Facility or Portland and the Generating Facility.



To provide relay sensitivity for the line relaying scheme, a neutral reactor connecting to the 161 kV side of the 161/34.5 kV transformer will be required in the Interconnecting Customer’s design.

**4.1.1.4 Power Quality**

TVA will require the Generating Facility to meet harmonic limits of IEEE 519, flicker limits of IEEE 1453, and unbalance limits of IEC 61000-3-13 at the metering point. The power quality of the Generating Facility will be monitored by the meter installed under the Direct Assignment Facilities of this Interconnection. If the power quality does not meet IEEE 519, IEEE 1453, or IEC 61000-3-13 then TVA reserves the right to disconnect the Generating Facility. A TVA-owned PQ relay may be required to trip for harmonic voltage distortion and/or excessive harmonic currents. Specific details including time delay settings will be outlined in the interconnection agreement.

TVA calculated the Short Circuit Ratio (SCR) to be 11.83 at the POI with the strong source out, using the traditional calculation method.

Following construction of the interconnecting facilities, TVA will require OPD Energy to set their inverters such that they remain connected during defined frequency and voltage excursions. Exact settings will be documented in the Interconnection Agreement.

**4.1.1.5 Transient Stability**

Transient stability analysis identified no stability issues due to the proposed Horus Kentucky 1 Solar project without prior requesters.

**4.1.1.6 Reactive Power Capability and Voltage Control**

In compliance with FERC Order No. 827, nonsynchronous generators are required to provide dynamic reactive power to ensure 95% power factor (injecting and absorbing) at the generator bus. TVA enforces FERC Order No. 827 and requires 95% power factor (injecting and absorbing) operation at the POI. Static capacitors may be used only to compensate for system losses between the generator bus and the POI. Therefore, TVA will evaluate the dynamic power capability at the generator bus and also confirm that the 95% power factor (injecting and absorbing) is able to be met at the POI.

**Table 4-2: Reactive Power Evaluation without Priors**

At Generator				At POI			Additional Reactive Power Needed
MW	MVA	Operating PF (Leading & Lagging)	MVAR (injecting & absorbing)	MW (injecting)	MVAR (injecting)	MVAR Needed	MVAR
70.64	74.36	0.95	23.22	69.7	27.8	22.9	0



The evaluation of the reactive capability requirement of a 95% power factor (leading and lagging) at the POI did not identify the need for additional reactive support.

The installed inverters must be capable of controlling voltage. Voltage control capability may not be enabled, but is required for interconnection.

In accordance with NERC guidance, TVA asks that the requester designs the inverter controls such that momentary cessation of current injection is avoided.

### 4.1.2 Network Upgrades

**Table 4-3: Network Upgrades without Priors**

Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).

#### 4.1.2.1 Loadflow

Steady-state loadflow analysis determined that the proposed interconnection will cause thermal violations on the TVA transmission system.



**Table 4-4: Thermal Overload Violations without Priors**

Season	Contingency	Overload	Rating (MVA)	Loading % Before	Loading % After	Fix
Spring	Gallatin F2 – N. Nashville 161 kV + Gallatin F2 – Cairo Bend 161 kV	Wilson – Gallatin F1 161 kV	445.1	100.0 <sup>(2)</sup>	103.6 <sup>(2)</sup>	Reconductor 7.35 miles to ACSS 795.0 - 26/7 at 150°C. Upgrade bus jumper at Wilson to withstand 1800 A minimum. Upgrade breaker and switch at Gallatin F1 to withstand 1800 A minimum.

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. Percent loadings include local generation redispatch.



## 4.2 With Prior Requesters

### 4.2.1 Direct Assignment Facilities

#### 4.2.1.1 Interconnection

The table below describes the necessary Direct Assignment Facilities on the TVA system in order to support the interconnection arrangement shown in Appendix D and includes cost estimates.

**Table 4-5: Direct Assignment Facilities with Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facility and the TVA tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.

#### 4.2.1.2 Fault Study

The short circuit analysis determined that the proposed interconnection did not cause any breaker duty issues on the TVA transmission system.

#### 4.2.1.3 System Protection

Dual digital pilot protection on the Franklin – Portland 161 kV TL will be required for interconnection. Transfer trip protection will be required from Franklin to the Generating Facility and from Portland to the Generating Facility. TVA reserves the right to disconnect the Generating Facility for loss of communications between Franklin and the Generating Facility or Portland and the Generating Facility.

To provide relay sensitivity for the line relaying scheme, a neutral reactor connecting to the 161 kV side of the 161/34.5 kV transformer will be required in the Interconnecting Customer’s design.



#### 4.2.1.4 Power Quality

TVA will require the Generating Facility to meet harmonic limits of IEEE 519, flicker limits of IEEE 1453, and unbalance limits of IEC 61000-3-13 at the metering point. The power quality of the Generating Facility will be monitored by the meter installed under the Direct Assignment Facilities of this Interconnection. If the power quality does not meet IEEE 519, IEEE 1453, or IEC 61000-3-13 then TVA reserves the right to disconnect the Generating Facility. A TVA-owned PQ relay may be required to trip for harmonic voltage distortion and/or excessive harmonic currents. Specific details including time delay settings will be outlined in the interconnection agreement.

TVA calculated the Short Circuit Ratio (SCR) to be 11.92 at the POI with the strong source out, using the traditional calculation method.

Following construction of the interconnecting facilities, TVA will require OPD Energy to set their inverters such that they remain connected during defined frequency and voltage excursions. Exact settings will be documented in the Interconnection Agreement.

#### 4.2.1.5 Transient Stability

Transient stability analysis identified no stability issues due to the proposed Horus Kentucky 1 Solar project with prior requesters.

#### 4.2.1.6 Reactive Power Capability and Voltage Control

In compliance with FERC Order No. 827, nonsynchronous generators are required to provide dynamic reactive power to ensure 95% power factor (injecting and absorbing) at the generator bus. TVA enforces FERC Order No. 827 and requires 95% power factor (injecting and absorbing) operation at the POI. Static capacitors may be used only to compensate for system losses between the generator bus and the POI. Therefore, TVA will evaluate the dynamic power capability at the generator bus and also confirm that the 95% power factor (injecting and absorbing) is able to be met at the POI.

**Table 4-6: Reactive Power Evaluation with Priors**

At Generator				At POI			Additional Reactive Power Needed
MW	MVA	Operating PF (Leading & Lagging)	MVAR (injecting & absorbing)	MW (injecting)	MVAR (injecting)	MVAR Needed	MVAR
70.64	74.36	0.95	23.22	69.7	28.1	22.9	0

The evaluation of the reactive capability requirement of a 95% power factor (leading and lagging) at the POI did not identify the need for additional reactive support.



The installed inverters must be capable of controlling voltage. Voltage control capability may not be enabled, but is required for interconnection.

In accordance with NERC guidance, TVA asks that the requester designs the inverter controls such that momentary cessation of current injection is avoided.

#### 4.2.2 Network Upgrades

**Table 4-7: Network Upgrades with Priors**

Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).

##### 4.2.2.1 Loadflow

Steady-state loadflow analysis determined that the proposed interconnection will cause the following thermal violations on the TVA transmission system:





**Table 4-8: Thermal Overload Violations with Priors**

Season	Contingency	Overload	Rating (MVA)	Loading % Before	Loading % After	Fix
Spring	Gallatin F2 – N. Nashville 161 kV + Gallatin F2 – Cairo Bend 161 kV	Wilson – Gallatin F1 161 kV	445.1	100.0 <sup>(2)</sup>	103.6 <sup>(2)</sup>	Reconductor 7.35 miles to ACSS 795.0 - 26/7 at 150°C. Upgrade bus jumper at Wilson to withstand 1900 A minimum. Upgrade breaker and switch at Gallatin F1 to withstand 1900 A minimum.
Spring	Gallatin F2 – Cairo Bend 161 kV + Wilson – Gallatin F1 161 kV	Wilson – Gladeville Tap	177.4	100.0 <sup>(2)</sup>	103.6 <sup>(2)</sup>	Uprate 0.51 miles of ACSR 477.0 - 26/7 to 100°C.
Spring	Gallatin F2 – Cairo Bend 161 kV + Wilson – Gallatin F1 161 kV	Lebanon – Gladeville Tap	177.4	100.0 <sup>(2)</sup>	103.6 <sup>(2)</sup>	Uprate 5.75 miles of ACSR 477.0 - 26/7 to 100°C.

Notes:

1. Costs provided for SIS are based on planning level estimates (±50%).
2. Percent loadings include local generation redispatch.
3. A TVA project is scheduled to uprate the line to where the listed overload would no longer be valid. However, if the TVA project’s in-service date is delayed or is not completed, OPD Energy may be required to fund the upgrade.



---

### 4.3 Project Schedule

#### With and Without Priors

Typical project completion time for this scope of work with priors is approximately 2.5 years after completion of the Facilities Study and TVA receives authorization to begin work. Based on this estimated timeline, it is unlikely that Interconnection Customer's Requested In-Service Date is achievable; however, a refined project schedule will be developed during the Facilities Study, should the Interconnection Customer elect to proceed.

The interconnection of this OPD Energy Horus Kentucky 1 project to the TVA system shall at all times be in accordance with the terms and conditions of the interconnection agreement. Subject to (a) the completion of all required studies, (b) execution of an appropriate interconnection agreement, and (c) the completion of all TVA and OPD Energy Horus Kentucky 1's facilities (including the direct assignment facilities identified in this study) required for a safe and reliable interconnection, no such interconnection shall occur without the prior approval of TVA.



### 5.0 Conclusion

In conclusion, the identified Direct Assignment Facilities and Network Upgrades on the TVA transmission system (as shown below) are required in order for OPD Energy to interconnect the Horus Kentucky 1 Solar 69.7 MW (net) solar generating facility to the TVA transmission system.

#### Without Priors

**Table 5-1: Direct Assignment Facilities & Required Network Upgrades without Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).
Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL
161 kV transmission line and terminal work (see Table 4-3 for details).

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facilities and the tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.



With Priors

**Table 5-2: Direct Assignment Facilities & Required Network Upgrades with Priors**

Direct Assignment Facilities
Provide new 161 kV tap point on the existing Franklin - Portland 161 kV line. The two main line switches will be motor operated disconnect (MOD) switches. Provide generation meters, associated instrument transformers, and required communications path. Includes needed system protection upgrades for required transfer trip and pilot protection.
Provide communications equipment for required transfer trip and SCADA at new Generating Facility.
System protection and communications work at remote sites for pilot protection and communications path (Franklin and Portland).
Network Upgrades
Install approximately 12.5 miles of OPGW on the Franklin – Portland 161 kV TL
161 kV transmission line and terminal work at various locations (see Table 4-6 for details).

Notes:

1. Costs provided for SIS are based on planning level estimates ( $\pm 50\%$ ).
2. OPD Energy is responsible for the construction and cost of the 161 kV TL and fiber communication path needed between the solar facilities and the TVA tap point, built to TVA’s specifications.
3. Typical project completion time for this scope of work is approximately 2.5 years after the completion of the Facilities Study and TVA receives authorization to begin work; however, a refined project schedule will be developed during the Facilities Study.
4. A TVA project is scheduled to uprate the line to where the listed overload would no longer be valid. However, if the TVA project’s in-service date is delayed or is not completed, OPD Energy may be required to fund the upgrade.

With and Without Priors

In addition to identifying all Adverse System Impacts on the TVA transmission system, TVA monitors its Local Power Companies (LPCs) as well as neighboring transmission systems for impacts. No Potentially Affected Systems were identified as a result of the proposed interconnection.

If OPD Energy decides to pursue a Facilities Study for Horus Kentucky 1, TVA will conduct the Facilities Study consistent with TVA’s LGIP and at the requester’s expense. All costs in this report are planning estimates; however, the requester is responsible for actual installed costs of the required system upgrades.

TVA will require the Generating Facility to meet harmonic limits of IEEE 519, flicker limits of IEEE 1453, and unbalance limits of IEC 61000-3-13 at the metering point. The power quality of the Generating Facility will be monitored by the meter installed under the Direct Assignment Facilities of this Interconnection. If the power quality does not meet IEEE 519, IEEE 1453, or IEC 61000-3-13 then TVA reserves the right to disconnect the Generating Facility. A TVA-owned PQ relay may be required to trip for harmonic voltage distortion and/or excessive harmonic currents. Specific details including time delay settings will be outlined in the interconnection agreement.



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This SIS only evaluates the impacts of interconnecting OPD Energy’s Horus Kentucky 1 Solar Generating Facility to the TVA transmission system. Transmission service may be requested from TVA in accordance with TVA’s Transmission Service Guidelines to transfer power from the solar PV project. However, if transmission service is available, service will be contingent on an Interconnection Agreement (which will provide only for the interconnection of the project to the TVA transmission system and will not in any way guarantee the ability of the transmission system to deliver, transmit, or otherwise transfer power from the project) being executed and all TVA and OPD Energy Horus Kentucky 1 facilities (including the direct assignment facilities identified in this study) required for a safe and reliable interconnection being completed.



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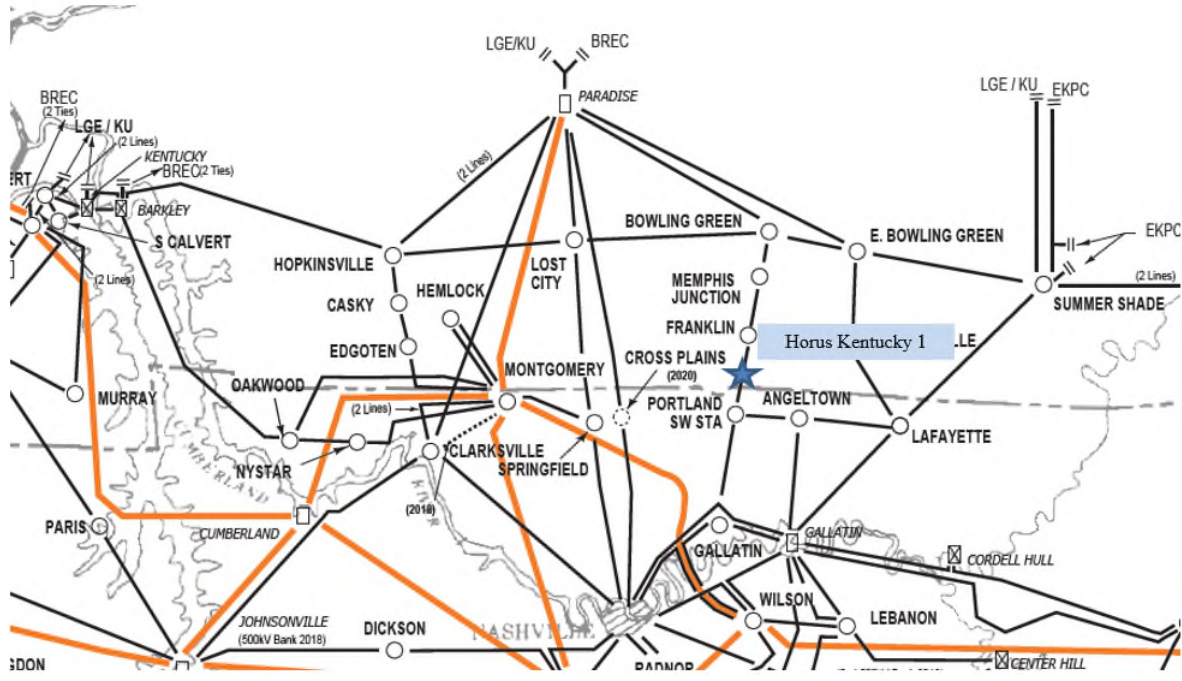
## Appendix A: Notice Regarding Transmission Planning Study Information

This information has been derived utilizing power flow models of projected future system conditions. These planning models incorporate many assumptions concerning loads, transmission system configuration, generation dispatch, firm transactions, and other information pertinent to building power flow models. TVA uses available information about transmission and generation additions and upgrades that may subsequently change. The system models external to TVA were either obtained from the applicable control area, or from the most recent SERC base cases. TVA is not responsible for the information provided by others in the development of these models. The cases represent TVA's best effort in developing power flow models for use within TVA as a starting point for interconnection studies, at the point in time when the analysis is done. TVA retains the right to update the models as additional information becomes available or as additional possible scenarios are needed. The decision to use the study or underlying assumptions for any particular purpose other than to obtain the requested Interconnection Rights is the sole responsibility of the user.

Scheduling and cost estimates provided in this report do not include time or money to resolve unforeseen issues such as those that may be identified during TVA's review of environmental impacts as required by the National Environmental Policy Act (NEPA).



### Appendix B: Interconnection Map

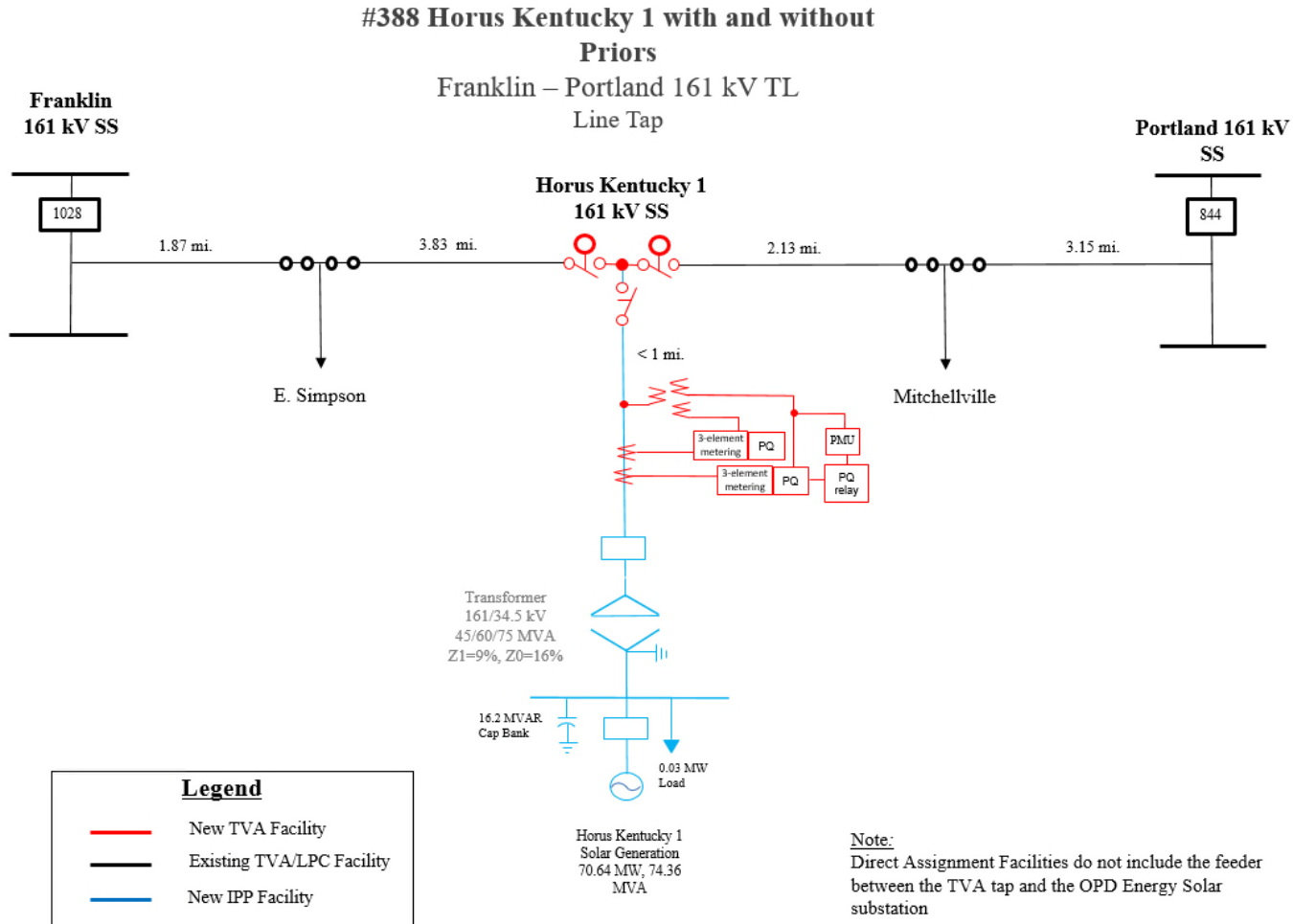


#### Legend

- 161 kV
- 500 kV



Appendix C: Interconnection Arrangement with and without Priors







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**Appendix D: Definitions**

**Glossary of Terms**

**Adverse System Impact** – The negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** – An electric system other than TVA’s transmission system that may be affected by the proposed interconnection.

**Direct Assignment Facility** – Any additions, modifications, or upgrades that are necessary to physically and electrically interconnect the specified Generating Facility, and are solely for the benefit of the specified Generating Facility.

**Direct Transfer Trip (DTT)** – Used by TVA to provide remote primary protection for power equipment or remote backup protection for a failed breaker.

**ERAG** – Eastern Interconnection Reliability Assessment Group

**Facilities Study** – Process in which TVA (with input from requester) further refines project scope, schedule and cost estimates ( $\pm 20\%$ ).

**Generating Facility** – Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but not including the Interconnection Customer's Interconnection Facilities.

**Interconnection Customer** – Any entity, including TVA, that proposes to interconnect its Generating Facility with TVA's transmission system.

**Interconnection Facilities** – All facilities and equipment between the Generating Facility and the Point of Interconnection, as well as any other modifications, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to TVA’s transmission system. Interconnection Facilities are sole use facilities and shall not include Network Upgrades.

**Interconnection Request** – An Interconnection Customer's request, to interconnect a new Generating Facility, or to increase the capacity of, or make a material modification to the operating characteristics of, an existing Generating Facility that is interconnected with TVA’s transmission system.



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**Interconnection Right** – A right to interconnect a specified Generating Facility into TVA’s transmission system, contingent upon completion of all required system additions, modifications, and upgrades to accommodate the maximum capacity of the specified Generating Facility.

**In-Service Date** – The date upon which the Interconnection Customer reasonably expects it will be ready to begin use of TVA's Interconnection Facilities to obtain back feed power.

**MMWG** – Multi-Regional Modeling Working Group

**NERC** – North American Electric Reliability Corporation or its successor organization.

**Network Upgrades** – Any additions, modifications, and upgrades that are required to accommodate the specified Generating Facility, and to enhance either the capacity or the reliability of TVA’s transmission system.

**SCDWG** – Short Circuit Database Working Group

**SERC** – SERC Reliability Corporation - a regional entity with delegated authority from NERC for the purpose of proposing and enforcing reliability standards.

**SIS** – Interconnection System Impact Study

# **Appendix E**

## **Economic Impact Analysis**

# Horus Kentucky 1 LLC

## Economic Impact Analysis

Application Documents  
Case No. 2020-00417  
July 2021

**Prepared for:**

Kentucky State Board on Electric Generation and Transmission Siting  
Kentucky Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, Kentucky 40602

**Prepared by:**

Terracon Consultants, Inc.  
13050 Eastgate Parkway  
Louisville, Kentucky 40223

c/o

Horus Kentucky 1 LLC  
110 Front Street, Suite 330  
Juniper, Florida 33477

[terracon.com](http://terracon.com)

**Terracon**

Environmental



Facilities



Geotechnical



Materials

## Economic Impact Analysis

Horus Kentucky 1 LLC ■ Franklin, Simpson County, Kentucky

July 2021 ■ Case No. 2020-00417

## ECONOMIC IMPACT ANALYSIS

The Project will involve the construction of a 69.3-megawatt (MW) alternating current (AC) solar energy project in Franklin, Simpson County, Kentucky. The Project will be located within a project area of approximately 550-acres, situated off of Tyree Chapel Road in Franklin, Simpson County, Kentucky, with a latitude and longitude of 36° 40' 6.65" North and 86° 32' 37.86" West. The Project has historically been used for agriculture and farming. Project components will include solar PV panels, associated ground-mounted racking structure, access roads, 22 inverters, security fencing, laydown areas, and a project substation transformer which will connect to the Tennessee Valley Authority's (TVA) L5402 – 161-kilovolt (kV) transmission line. Approximately 500 acres of the 550 acres would be occupied by PV panels, and the remaining approximate 50 acres would be occupied by ancillary equipment and infrastructure to support the Project or would remain undeveloped. The PV panels would be mounted on motor-operated axis tracker structures, which are commonly referred to as single-axis trackers. These single-axis trackers are designed to pivot the panels along their north-south axes to follow the path of the sun across the sky from the east to west direction. The tracker assemblies would be constructed in parallel north-south rows using steel piles installed at an average of 7.5 feet off ground to the top of the panel at 55 degree full-tilt. The perimeter of the Project Site would be enclosed with security fencing. An Operations & Maintenance (O&M) building is not proposed to be constructed for the Project. The site development plan for the Project is provided in **Appendix F**.

**KRS 278.706(2)(j):** An analysis of the proposed facility's economic impact on the affected region and the state.

Horus Renewables used the current web-based version of IMPLAN (<https://implan.com/>) to model impacts to Simpson County's local economy using Simpson County and Kentucky datasets. The current economic dataset uses 2019 data, with calculated dollars for 2021. It should be noted that there are no 2019 economic statistics for Kentucky for the construction of a solar facility, as the solar energy industry is just beginning to develop in Kentucky. Therefore, the IMPLAN outputs were predicted from the construction of power and communication facilities in Kentucky and locally in Simpson County using site specific information where available.

<b>Simpson County Statistics – IMPLAN Model Year 2019</b>	
Gross Region Product	\$1,007,605.886.10
Total Personal Income	\$839,354.999.79
Total Employment	11,925.99
Number of Industries	201
Total Households	7,209.68
Total Population	18,572
Land Area (Square Miles)	236.20

## Economic Impact Analysis

Horus Kentucky 1 LLC ■ Franklin, Simpson County, Kentucky

July 2021 ■ Case No. 2020-00417

IMPLAN is an economic impact assessment software system. The system was originally developed and is now maintained by the Minnesota IMPLAN Group (MIG). It combines a set of extensive databases concerning economic factors, multipliers and demographic statistics with a highly refined and detailed system of modeling software. The model accomplishes this by identifying direct impacts by sector, then developing a set of indirect and induced impacts by sector through the use of industry-specific multipliers, local purchase coefficients, income-to-output ratios, and other factors and relationships.

Horus Renewables anticipates capital construction costs of \$80 million. The Project is estimated to provide approximately 100 full-time jobs during construction for over a 12 to 18-month period. In addition, Horus Renewables anticipates hiring local technicians and maintenance employees for the Project's regular operation and maintenance for the life of the Project, which is expected to extend for 30 to 40 years once construction is complete. The construction work force will include solar panel installers, electricians, equipment operators, fencing installers, and general laborers. Local contractors may be used for equipment rental, fencing, site work, and landscaping. Following Project construction, permanent positions supported during the operations of the Project to include routine maintenance such as periodic motor replacement, inverter air filter replacement, fence repair, vegetation control, array inspection, repairs, and maintenance. The Project will impact the local economy through the construction of the facility and also provide ongoing beneficial impacts from local and state taxes over the life of the Project.

The following industries are predicted for direct impact from the Project with the following estimated growth percentages:

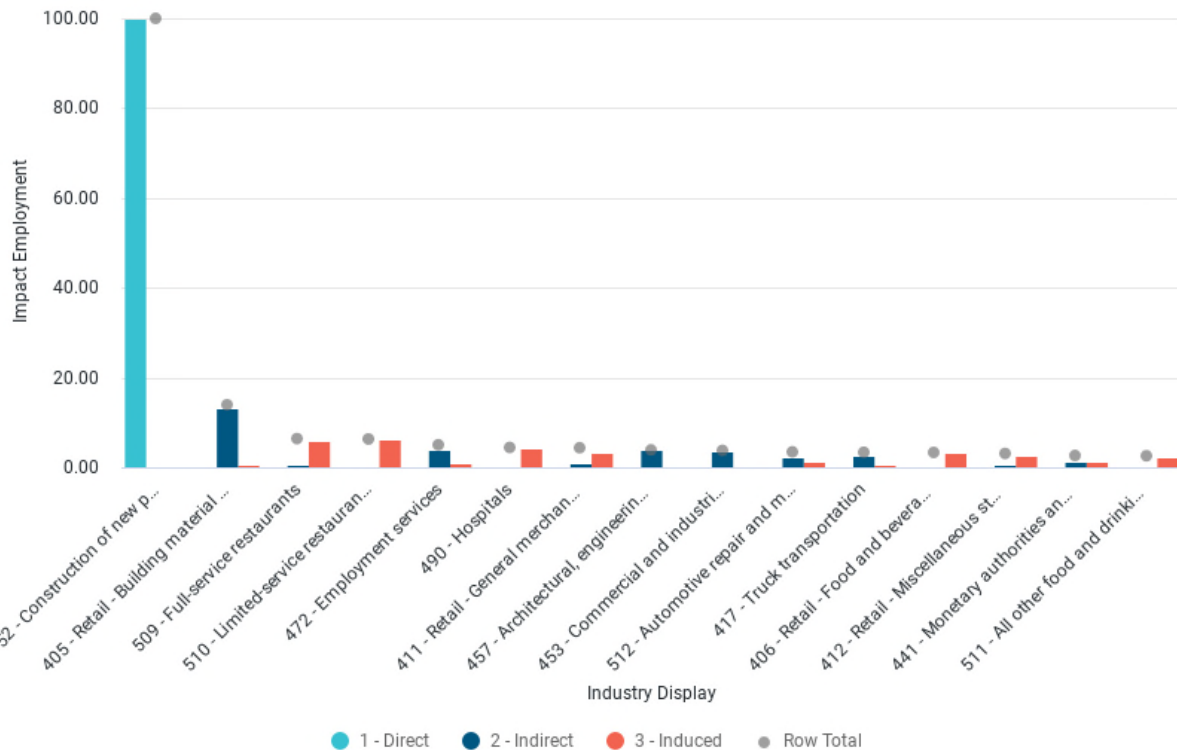
	Display Code	Display Description	Industry Total Output	Impact Output	Estimated Growth ...
1	52	Construction of new po...	\$6,935,732.53	\$80,000,000.00	1153.45%
2	453	Commercial and indus...	\$2,377,244.20	\$882,042.81	37.10%
3	457	Architectural, engineeri...	\$2,735,657.51	\$362,245.94	13.24%
4	405	Retail - Building materi...	\$21,879,582.88	\$1,687,217.75	7.71%
5	515	Commercial and indus...	\$1,791,057.91	\$110,750.76	6.18%
6	451	General and consumer ...	\$1,468,259.05	\$71,653.10	4.88%
7	523	Business and professio...	\$785,058.39	\$34,946.24	4.45%
8	516	Personal and househol...	\$1,181,584.95	\$52,217.92	4.42%
9	514	Electronic and precisio...	\$1,431,512.19	\$62,552.45	4.37%
10	394	Wholesale - Household...	\$2,899,396.31	\$121,955.29	4.21%
11	455	Legal services	\$2,657,840.45	\$103,973.01	3.91%
12	470	Office administrative se...	\$576,478.29	\$21,519.89	3.73%
13	512	Automotive repair and ...	\$9,656,689.05	\$332,107.93	3.44%
14	472	Employment services	\$8,842,771.15	\$296,767.06	3.36%
15	476	Services to buildings	\$1,832,165.53	\$61,379.17	3.35%
16	494	Child day care services	\$718,464.53	\$22,609.75	3.15%
17	456	Accounting, tax prepar...	\$1,898,956.96	\$57,534.95	3.03%
18	413	Retail - Nonstore retai...	\$8,110,072.46	\$239,080.35	2.95%
19	449	Owner-occupied dwelli...	\$63,906,069.77	\$1,840,722.59	2.88%
20	399	Wholesale - Petroleum ...	\$28,065,588.95	\$794,835.27	2.83%
21	412	Retail - Miscellaneous s...	\$3,787,277.51	\$106,446.89	2.81%
22	490	Hospitals	\$26,654,600.26	\$745,038.47	2.80%
23	493	Individual and family s...	\$2,631,312.58	\$73,079.25	2.78%
24	505	Fitness and recreation...	\$378,133.89	\$10,359.17	2.74%

## Economic Impact Analysis

Horus Kentucky 1 LLC ■ Franklin, Simpson County, Kentucky

July 2021 ■ Case No. 2020-00417

The following top 15 industries are predicted for direct impact in employment from the Project:



The IMPLAN model predicts direct, indirect, and induced impacts from the Project. IMPACT predicts that with a **100-full time employee (FTE)** employment increase, the area will see an increase of **\$29,726,216.25 in labor income** with **\$46,847,880.93 value added impacts** to the local community.

### IMPLAN Economic Indicators by Impact – Simpson County:

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	100.00	\$29,726,216.25	\$46,847,880.93	\$80,000,000.00
2 - Indirect	55.24	\$2,385,437.11	\$4,432,228.21	\$8,072,075.26
3 - Induced	71.94	\$2,524,182.30	\$5,241,803.83	\$9,669,779.23
<b>Totals</b>	<b>227.18</b>	<b>\$34,635,835.66</b>	<b>\$56,521,912.97</b>	<b>\$97,741,854.49</b>

### IMPLAN Tax Results – Simpson County:

Impact	Sub County ...	Sub County S...	County	State	Federal	Total
1 - Direct	\$248,794.21	\$361,804.59	\$161,260.72	\$2,377,463.81	\$5,025,153.95	\$8,174,477.28
2 - Indirect	\$69,077.88	\$150,898.76	\$40,193.44	\$747,452.22	\$492,093.00	\$1,499,715.29
3 - Induced	\$48,283.81	\$99,120.70	\$28,308.85	\$518,026.39	\$515,385.12	\$1,209,124.87
<b>Totals</b>	<b>\$366,155.90</b>	<b>\$611,824.05</b>	<b>\$229,763.01</b>	<b>\$3,642,942.42</b>	<b>\$6,032,632.07</b>	<b>\$10,883,317.44</b>

Local and State government will see a direct increase in tax revenue during construction of the Project from payroll. The increased employment will bring additional dollars to the wider community as workers spend dollars locally for transportation, food, accommodations, and entertainment.

# **Appendix F**

## **Site Development Plan**





# **Appendix G**

## **Legal Boundaries**

## PROPERTY DESCRIPTION

### PARCEL 2:

#### Tract I:

Beginning at a set iron pin in the western line of the 30' right-of-way of the Tyree Chapel Road, a common corner with Tyree, said pin being located N 01° 58' 13" W, 1757.00 feet from the centerline intersection of the Geddes Road and said Tyree Chapel Road; thence leaving said right-of-way with a line of said Tyree and then Rosdeutscher N 84° 44' 13" W, 3860.41 feet to a set iron pin in the eastern line of the 66' right-of-way of the CSX Railroad, a common corner with Rosdeutscher, thence with said railroad right-of-way N 02° 53' 26" W, 319.71 feet to a set iron pin, a common corner with Gillespie; thence leaving the right-of-way with six (6) lines of Gillespie to found iron pins as follows: N 60° 26' 44" E, 1521.38 feet; thence S 48° 56' 56" E, 1193.29 feet; thence N 84° 46' 06" E, 207.95 feet; thence N 82° 26' 45" E, 128.63 feet; thence S 71° 22' 36" E, 166.52 feet; thence N 79° 28' 20" E 757.96 feet to a found iron pin in the west right-of-way of the Tyree Chapel Road; thence with said right-of-way six (6) calls to points as follows: in a curve to the right having a Chord Bearing S 14° 34' 58" E, 28.95 feet; an R = 237.65 feet; Arc = 28.97 feet and a Delta = 06° 59' 03", thence S 07° 20' 26" E, 74.24 feet; thence in a curve to the left having a Chord Bearing S 23° 24' 10" E, 200.67 feet, an R = 362.64 feet; Arc = 203.32 feet and a Delta = 32° 07' 28"; thence S 39° 27' 55" E, 298.19 feet; thence in a curve to the right having a Chord Bearing S 30° 16' 29" E, 115.11 feet; an R = 360.34; Arc = 115.60 and Delta = 18° 22' 51", thence S 21° 05' 04" E, 127.42 feet; thence in a curve to the right having a Chord Bearing S 19° 17' 06" E, 28.63 feet; an R = 455.85', Arc = 28.63 feet and Delta = 03° 35' 56" to a set iron pin being the point of beginning containing 59.80 acres as per survey conducted under the direction and supervision of Shane N. Van Meter, PLS #3111 in March, 1995.

#### Tract II:

Beginning at a set iron pin in the east line of the 30' right-of-way of the Tyree Chapel Road, said pin being a common corner with Kitchens and located 448' northerly of the centerline intersection of the Geddes Road and Tyree Chapel Road; thence following the eastern right-of-way of the Tyree Chapel Road 18 calls to points as follows: N 08° 59' 48" W, 43.90 feet; thence in a curve to the right having a Chord Bearing N 02° 31' 16" W, 205.44 feet; an R = 910.82 feet, Arc = 205.87 feet and Delta = 12° 57' 02"; thence N 03° 57' 15" E, 894.21 feet; thence in a curve to the left having a Chord Bearing N 08° 33' 55" W, 210.63 feet; an R = 435.85 feet; Arc = 212.32 feet and a Delta = 25° 02' 19"; thence N 21° 05' 04" W, 127.42 feet; thence in a curve to the left having a Chord Bearing N 30° 15' 29" W 124.69 feet; an R = 390.34 feet; Arc = 125.22 feet and a Delta = 18° 22' 51"; thence N 39° 27' 55" W, 298.19 feet; thence in a curve to the right having a Chord Bearing N 23° 24' 10" W, 134.07 feet; an R = 332.64 feet; Arc = 136.50 feet and a Delta = 32° 07' 28"; thence N 07° 20' 26" W, 75.19 feet; thence in a curve to the left having a Chord Bearing N 30° 11' 07" W, 177.02 feet; an R = 267.65 feet, Arc = 180.42 feet and Delta = 38° 37' 20"; thence N 48° 40' 07" W, 1486.53 feet; thence in a curve to the right having a Chord Bearing N 04° 50' 12" E, 125.41 feet; an R = 78.00 feet; Arc = 145.68 feet and a Delta = 107° 00' 39"; thence N 58° 20' 32" E, 528.34 feet; thence in a curve to the right

having a Chord Bearing N 76° 57' 17" E, 239.71 feet; a R = 375.52 feet; Arc = 243.98 feet and a Delta = 37° 13' 30"; thence S 84° 25' 59" E, 296.29 feet; thence in a curve to the left having a Chord Bearing N 88° 12' 08" E, 128.07 feet; an R = 499.54 feet; Arc = 128.42 feet and a Delta = 14° 43' 46"; thence N 80° 50' 16" E, 55.03 feet; thence in a curve to the left having a Chord Bearing N 26° 23' 51" E, 113.89 feet; an R = 70.00 feet; Arc = 133.02 and a Delta = 108° 52' 49"; thence N 28° 02' 33" W, 396.92 feet to a set iron pin at the right of way intersection of the Tyree Chapel Road and the southern line of the 30' right-of-way of the Independence Road; thence with the southern right-of-way line of the Independence Road three (3) calls to points as follows: N 84° 52' 38" E, 1217.44 feet; thence in a curve to the left having a Chord Bearing N 71° 09' 30" E, 195.83 feet; an R = 412.86 feet; Arc = 197.71 feet and a Delta = 27° 26' 17"; thence N 57° 26' 22" E, 434.90 feet; thence in a curve to the right having a Chord Bearing N 75° 26' 45" E, 203.20 feet, an R = 328.67', Arc = 206.59 feet and a Delta = 36° 00' 47" to a set iron pin, a corner to Hinton and being approximately 10 feet west of the centerline of a gravel drive, thence leaving said right-of-way and with three (3) lines of Hinton as follows: S 03° 23' 37" E, 3341.74 feet to a found steel fence post; thence N 88° 31' 53" E, 1281.43 feet to a found steel fence post; thence S 06° 12' 08" E, 1253.41 feet to a found stone at the base of a 24" cedar, a common corner with Hinton and Denning, thence with Denning five (5) lines as follows: N 74° 57' 28" W, 587.71 feet to a set iron pin; thence S 62° 06' 09" W, 698.17 feet to an 8" fence post; thence S 05° 15' 23" E, 388.73 feet to a set iron pin; thence S 71° 41' 48" W, 381.68 feet to a 36" Oak; thence S 03° 02' 45" W, 602.46 feet to a found steel fence post; a common corner to R. Kitchens; thence N 87° 47' 51" W, 294.19 feet to a 8" fence post, a common corner with J. Kitchens; thence with three (3) lines of Kitchens as follows: N 04° 02' 05" E, 496.15 feet to a set iron pin; thence N 04° 55' 56" E, 724.85 feet to a 8" fence post; thence N 86° 55' 50" W, 1300.40 feet to a set iron pin being the point of beginning containing 249.34 acres as per survey conducted under the direction and supervision of Shane N. Van Meter, PLS #3111 in March, 1995.

Being the same property conveyed to Roger Hoffman by Freddie Higgins and his wife, Jamie G. Higgins, by deed dated April 7, 1995, of record in Deed Book 195, Page 655, Simpson County Clerk's Office. Nancy Kinkade, unmarried, conveyed all of her right, title and interest to this part of the subject property to Roger D. Hoffman by quitclaim deed dated July 18, 2006, of record in Deed Book 266, Page 101, Simpson County Clerk's Office.

## PROPERTY DESCRIPTION

### TRACT I:

Beginning at a stone in the middle of a public road, corner to Hendricks in the line of Lester Hammond; running thence S  $58\frac{1}{4}^{\circ}$  W 30.53 chains to a stake, corner to V.M. Hammond; thence S  $59\frac{3}{4}^{\circ}$  W 12.68 chains to a stone, another of his corners in the line of the right-of-way of the Louisville and Nashville Railroad Company; thence with the line of said right-of-way N  $7\frac{3}{4}^{\circ}$  W  $23\frac{1}{2}$  chains to a stake; thence N  $6\frac{1}{2}^{\circ}$  W 7.24 chains to a stone, corner to R.L. Mayes' thence N  $58\frac{3}{4}^{\circ}$  E 20.3 chains to a stone, corner of R.L. Mayes and W. H. Hughes; thence S  $34\frac{1}{4}^{\circ}$  E 11.03 chains to a stone, corner to Hughes; thence N  $60\frac{1}{4}^{\circ}$  E 10.1 chains to a stake, corner to Hughes and Hendricks; thence S  $27\frac{3}{4}^{\circ}$  E 16.04 chains to the place of beginning, containing 92 acres, more or less, reserving therefrom one (1) acre for graveyard as now located.

Being the same property conveyed by G. William Leach, Jr., Trustee, to C.A. Gillespie, III and wife, Beverly M. Gillespie by deed dated March 21, 2014, of record in Deed Book 308, Page 572, Simpson County Clerk's Office.

### TRACT II:

A certain parcel of land located on the Tyree Chapel Road, near the community of Geddes, in Simpson County, Kentucky, and more particularly described as follows, to-wit:

Beginning at an iron pin corner on the west right-of-way of Tyree Chapel Road approximately 0.8 mile northwesterly of the Geddes Road, said iron pin being the southeasterly corner of McCall and the northeasterly corner of herein-described property; thence from said iron pin and leaving the right in line with McCall S  $60^{\circ} 11' 21''$  W 637.02 feet to an iron pin corner with McCall; thence with McCall's line N  $29^{\circ} 48' 39''$  W 200.00 feet to an iron pin corner common with McCall in the line of Gillespie; thence with the Gillespie line S  $60^{\circ} 10' 27''$  W 425.58 feet to an iron pin corner with the Higgins parent tract of herein-described property; thence with a new line with Higgins S  $48^{\circ} 13' 19''$  E 1193.29 feet to an iron pin; thence with Higgins four (+) calls as follows: (1) N  $35^{\circ} 24' 43''$  E 207.95 feet to an iron pin, (2) N  $83^{\circ} 05' 22''$  E 128.53 feet to an iron pin, (3) S  $70^{\circ} 43' 59''$  E 166.52 feet to an iron pin, (4) N  $80^{\circ} 06' 57''$  E 757.96 feet to an iron pin in the western right-of-way of Tyree Chapel Road; thence with a curve to the left with the right-of-way as arc length = 130.54 feet, Radius = 237.65 feet, Delta =  $31^{\circ} 28' 22''$  to an iron pin; thence with right-of-way N  $48^{\circ} 01' 30''$  W 1397.22 feet to the point of beginning, containing 29.8284 acres, being a portion of the lands conveyed to Fred and Ralph Higgins in Deed Book 128, Page 24, Simpson County Clerk's Office.

Being the same property conveyed to C.A. Gillespie, III and wife, Beverly M. Gillespie by Freddie Higgins and wife, Jamie G. Higgins by deed dated February 18, 1993, of record in Deed Book 184, Page 200, Simpson County Clerk's Office.

TRACT III:

Beginning at an iron pin on the west 30 foot right-of-way line of the Tyree Chapel Road on a corner with C.A. Gillespie, said corner being northernmost point of the property and located in curve of said road; thence with right-of-way along curve arc 143.22 feet to a set iron pin, curve has a 108.00 foot radius and a 133.03 foot chord on a bearing of S 19° 41' 24" E; thence from pin along right-of-way S 45° 44' 13" E 71.79 feet to a set iron pin, said iron pin being a corner common to the parent tract belonging to Fred and Ralph Higgins; thence with Higgins property S 60° 11' 21" W 637.02 feet to a set iron pin common with Higgins; thence N 29° 48' 39" W 200 feet to a set iron pin in the C.A. Gillespie property line; thence N 60° 11' 21" E 640.70 feet with Gillespie property to the point of beginning, containing 123.595.13 square feet o 2.8374 acres according to September 2, 1992, survey of Van Meter Engineering, Inc.

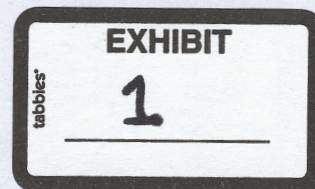
Being the same property conveyed o C.A. Gillespie III and wife, Beverly M. Gillespie by Mary Belle McCall, unmarried, by deed dated September 17, 1993, of record in Deed Book 187, Page 308, Simpson County Clerk's Office.

Being the same property conveyed to Summers Hodges Farm, LLC by C. A. Gillespie, III and wife, Beverly M. Gillespie, by deed dated September 14, 2016, of record in Deed Book 323, Page 205, Simpson County Clerk's Office.

Being a certain parcel or tract of land situated in Simpson County, Kentucky, adjoining the CSX Railroad Property (Formerly L & N Railroad) on the southeastern side of Interstate 65 on the south side of Peden Mill Road where it dead ends at Interstate 65, being approximately 4 miles south of Franklin, Kentucky, being more particularly described as follows:

Beginning on a five-eighths inch iron re-bar found (capped Dunning) N 28 degrees 03 minutes 37 seconds W 2.70 feet from a wooden fence post on the south margin of Peden Mill Road at its dead end at Interstate 65, being the northwest corner of the Summers Rosdeutscher Farm, LLC. (D.B. 305 P. 43), being the northeast corner of the herein described tract, thence running with the western line of Summers Rosdeutscher Farm, LLC. (D.B. 305 P. 43) along a general fence line S 28 degrees 03 minutes 37 seconds E 2,929.34 feet to a railroad Crosstie Post found at the southwest corner of the Summers Rosdeutscher Farm, LLC. (D.B. 305 P. 43) in the northern line of Steven B. Baldwin (D.B. 244 P. 137), thence running with the northern line of Steven B. Baldwin (D.B. 244 P. 137) and picking up a northern line of C. A. Gillespie, III, et ux (D.B. 308 P. 572) S 63 degrees 23 minutes 40 seconds W 755.39 feet to a half inch iron re-bar set at a disturbed wooden corner post at a corner of C. A. Gillespie, III, et ux (D.B. 308 P. 572), thence continuing to run and corner with C. A. Gillespie, III, et ux (D.B. 308 P. 572) for the next two calls: N 28 degrees 20 minutes 35 seconds W 730.43 feet with a net wire fence to a half inch iron re-bar set at the base of a disturbed wooden fence post, thence S 63 degrees 44 minutes 58 seconds W 1,338.96 feet along a partial staked and partial old net wire fence to a half inch iron re-bar set on the eastern right-of-way of the CSX Railroad Property (formerly L & N Railroad), being set 33.00 feet (as referenced in a previous deed dated April 6<sup>th</sup>, 1883 in Deed Book 4 Page 325) from the center of the tracks, thence running with the eastern right-of-way of the CSX Railroad Property (formerly L & N Railroad) along a curve segment to the left having a delta of 19 degrees 25 minutes 22 seconds, a radius of 3,889.03 feet, a tangent of 665.56 feet, a chord of N 11 degrees 59 minutes 23 seconds W 1,312.04 feet, running along the curve segment for an arc length of 1,313.34 feet to a half inch iron re-bar set on the eastern right-of-way of the CSX Railroad Property (formerly L & N Railroad), being set 33.00 feet from the center of the tracks on the southeastern right-of-way of Interstate 65, being 105.00 feet from the centerline of the Interstate, thence running and cornering with the southeastern right-of-way of Interstate 65 for the next four calls: N 34 degrees 02 minutes 42 seconds E 759.98 feet to a half inch iron re-bar set 150.00 feet from the centerline of the Interstate, thence N 50 degrees 44 minutes 39 seconds E 104.40 feet to a half inch iron re-bar set 180.00 feet from the centerline of the Interstate, thence N 34 degrees 02 minutes 42 seconds E 800.00 feet to a half inch iron re-bar set 180.00 feet from the centerline of the Interstate, thence N 21 degrees 21 minutes 53 seconds E 192.00 feet to a half inch iron re-bar set on the southeastern right-of-way of Interstate 65, being set 138.00 feet from the centerline of Interstate 65 on the southern margin of Peden Mill Road at its dead end, thence running with the southern margin of Peden Mill Road N 61 degrees 01 minute 33 seconds E 106.89 feet to the beginning, containing 86.17 acres more or less. The above description was prepared from a survey, performed by Richard D. Graves, Kentucky Registered Land Surveyor No. 3228, on the 18<sup>th</sup>, 27<sup>th</sup>, 29<sup>th</sup>, and 30<sup>th</sup> day of December, 2014, and completed on the 30<sup>th</sup> day of December, 2014.

All half inch iron re-bars set are capped with a yellow plastic cap stamped R.D. GRAVES KYLS3228 unless otherwise noted.



The above described tract is subject to any right-of-ways, easements - including a waterline easement of record in Deed Book 191, Page 174, and another waterline easement in favor of Simpson County of record in Deed Book 109, Page 45, a 20.00 foot utility easement running along the Interstate of record in Deed Book 150 Page 219, and a permanent telecommunications utility easement adjoining CSX Railroad of record in Deed Book 310 Page 514 - all being in the Simpson County Court Clerk's Office, encroachments, liens, and leases including an unrecorded lease for advertising signs in favor of Kentucky Outdoor Advertising, Inc.

The right-of-way for the CSX Railroad Property (formerly L & N Railroad) was called out in a previous deed of title to be 33.00 feet from the center of the tracks. See Deed Book 4 Page 325.

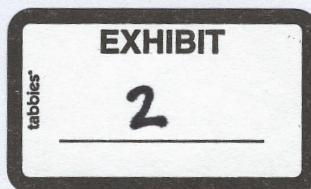
Being the same property conveyed to Summers Hodges Farm, LLC by Sherry A. Hodges, unmarried; Audra Carter and Robert Carter, wife and husband; and Charity Elizabeth Hodges, unmarried, by deed dated February 12, 2015, of record in Deed Book 313, Page 652, Simpson County Clerk's Office.



TRACT II:

Beginning at an iron pin set in the southerly right-of-way of County Farm Road (15 feet from centerline), the northwest corner to the subject owners, the Howard Rosdeutscher heirs as originally appears in Deed Book 68, Page 61 at a corner of the Mark Hodges property as described in Deed Book 165, Page 257; thence along the meanders of the southerly right-of-way of County Farm Road the following three (3) calls: (1) N 57° 59' 26" E 34.11 feet, (2) N 59° 48' 32" E 206.13 feet, (3) N 59° 36' 37" E 306.67 feet to an iron pin set at the intersection of said right-of-way with the westerly right-of-way of Tyree Chapel Road at a bend in Tyree Chapel Road; thence along the meanders of the westerly right-of-way of Tyree Chapel Road the following 12 calls: (1) S 59° 56' 25" E 63.13 feet to an iron pin set, (2) S 39° 23' 27" E 370.74 feet, (3) S 39° 24' 41" E 147.01 feet to a witness iron pin set, (4) S 39° 21' 10" E 657.89 feet, (5) S 39° 39' 52" E 151.99 feet, (6) S 38° 52' 17" E 213.82 feet to a witness iron pin set, (7) S 38° 18' 24" E 334.56 feet, (8) S 37° 56' 49" E 158.32 feet, (9) S 34° 34' 14" E 98.27 feet, (10) S 33° 54' 58" E 184.03 feet to a witness iron pin set, (11) S 32° 12' 35" E 348.53 feet, (12) S 31° 40' 27" E 235.79 feet to an iron pin set at a corner with Steve Baldwin (DB 244 Pg 137 Tr II); thence leaving said road on the line of the subject owners with Steve Baldwin, generally with a fence, S 59° 49' 25" W 842.41 feet to a PK nail set in the top of a king post; a corner to Mark Hodges; thence along the line of the subject owners with Mark Hodges, N 31° 53' 42" W 2929.34 feet to the point of beginning, containing 50.06 acres, more or less, and subject to all legal conditions and easements of record, according to November 2011, survey by Gary Lee Dunning, Kentucky Registered Land Surveyor No. 3290. Basis of bearing for this description is a magnetic observation on the traveled centerline of Tyree Chapel Road. Unless stated otherwise, all iron pins set this survey are 5/8" x 18" iron pins with plastic identification cap stamped "Dunning #3290."

Being a portion of the same property conveyed to Summers Rosdeutscher Farm, LLC, by Gary L. Summers and wife, Lucinda Summers, by deed dated June 28, 2013, of record in Deed Book 305, Page 43, Simpson County Clerk's Office.



# **Appendix H**

## **Site Assessment Report**

# Horus Kentucky 1 LLC

## Site Assessment Report

Application Documents  
Case No. 2020-00417  
July 2021

**Prepared for:**

Kentucky State Board on Electric Generation and Transmission Siting  
Kentucky Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, Kentucky 40602

**Prepared by:**

Terracon Consultants, Inc.  
13050 Eastgate Parkway  
Louisville, Kentucky 40223

c/o

Horus Kentucky 1 LLC  
110 Front Street, Suite 330  
Juniper, Florida 33477

[terracon.com](http://terracon.com)

**Terracon**

Environmental



Facilities



Geotechnical



Materials

## Site Assessment Report

Horus Kentucky 1 LLC ■ Franklin, Simpson County, Kentucky  
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# SITE ASSESSMENT REPORT

**KRS 278.706(2)(I):** A site assessment report as specified in KRS 278.708 or a request that the Board accept documentation of compliance with the National Environmental Policy Act (NEPA) in lieu of a site assessment report, in which case documentation of NEPA compliance is included in the application.

While a Site Assessment Report has been provided for the Project in **Appendix F**, a NEPA Draft Environmental Assessment has also been filed by TVA for public comment and can be found in the following link: <https://www.tva.com/environment/environmental-stewardship/environmental-reviews/nepa-detail/horus-kentucky-solar-project>.

**KRS 278.708(3)(a):** A site assessment report shall include a description of the proposed facility, including 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 in KRS 278.704(2), (3), or (5);
8. Evaluation of noise levels expected to be produced by the facility.

The Project will involve the construction of a 69.3-megawatt (MW) alternating current (AC) solar energy project in Franklin, Simpson County, Kentucky. The Project will be located within a project area of approximately 550-acres, situated off of Tyree Chapel Road in Franklin, Simpson County, Kentucky, with a latitude and longitude of 36° 40' 6.65" North and 86° 32' 37.86" West. The Project has historically been used for agriculture and farming. Project components will include solar PV panels, associated ground-mounted racking structure, access roads, 22 inverters, security fencing, laydown areas, and a project substation transformer which will connect to the Tennessee Valley Authority's (TVA) L5402 – 161-kilovolt (kV) transmission line. Approximately 500 acres of the 550 acres would be occupied by PV panels, and the remaining approximate 50 acres would be occupied by ancillary equipment and infrastructure to support the Project or would remain undeveloped. The PV panels would be mounted on motor-operated axis tracker structures, which are commonly referred to as single-axis trackers. These single-axis trackers are designed to pivot the panels along their north-south axes to follow the path of the sun across the sky from the east to west direction. The tracker assemblies would be constructed in parallel north-south rows using steel piles installed at an average of 7.5 feet off ground to the top of the panel at 55 degree full-tilt. The perimeter of the Project would be enclosed with security fencing. An Operations &

## **Site Assessment Report**

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Maintenance (O&M) building is not proposed to be constructed for the Project. The site development plan for the Project is provided in **Appendix F**.

### **Land Use – KRS 278.708(3)(a)(1)**

The Project's surrounding land is primarily agricultural farmland with scattered residential structures. A detailed description of the Project's surrounding land uses is included in the Property Value Impact Study included in **Appendix I**. In addition, an Architectural Survey has been conducted to identify and evaluate above-ground historic resources within the Project's surrounding area and is included in **Appendix K**.

### **Legal Boundaries – KRS 278.708(3)(a)(2)**

The legal boundaries for the Project are provided in **Appendix G**.

### **Proposed Access Control – KRS 278.708(a)(3)**

Access to the Project will be controlled through a secure access points and the perimeter of the property will be enclosed by a security fence. **Appendix F** provides the site development plan which shows the location of the site entrance as well as control fences.

### **Site Plan – KRS 278.708(3)(a)(4-7)**

The site development plan is included in **Appendix F**, which shows the details for the proposed Project to include: high-voltage (HV) line, fencing, solar array racking, electrical equipment, parcel boundaries, transmission line, roads, excluded zones, substation, access roads, inverters, forested land, wetlands, and avoidance areas ranked by high risk, medium risk, and lower risk areas. The majority of the land use for the Project is for the installation of PV solar panels. In addition to PV solar panels, inverters and project substation transformer are proposed to be installed throughout the Project location. An O&M building is not proposed to be constructed for the Project. The Project will be constructed complying with the following local set-back requirements:

1. 50 feet from public road right-of-way.
2. 100 feet from any abutting agricultural properties.
3. 250 feet from any residential-zoned properties, churches, cemeteries, nursing homes, and schools.

**KRS 278.708(3)(d):** (3) Evaluation of anticipated peak and average noise levels associated with the facility's construction and operation at the property boundary;

### **Noise Assessment - KRS 278.708(3)(a)(8); KRS 278.708(3)(d)**

Noise generated from construction activities and solar panel installation as well as operational activities should have minimal impact on the nearest residential receptors. Impacts from construction noise will be intermittent, temporary and will diminish as construction activities progress and move further away from a given receptor. Once the Project is operational, noise sources such as inverters, transformers, and tracking system motors are not expected to be

## Site Assessment Report

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significant contributors to local noise levels. Project Construction Noise and Project Operation Noise assessments are provided below:

### Project Construction Noise

The Project is expected to start in late 2021, and it is expected that the weekly construction schedule will occur Monday through Friday between 7:00AM and 7:00PM, however some construction activities could also occur on weekends if necessary. The Project will be constructed in several phases as it is expanded from one area to another. The beginning of construction in each phase will generate the most noise as this is when the heavy machinery will be operated.

Noise level is measured in A-weighted decibels (dBA) and indicates the amount of raw pressure, in Pascals, that a sound source generates. Noise level is dependent on several factors including distance and number of sources. In an open field, noise level dissipates at a rate of 6 dBAs every time the distance from the source doubles. If a source generates 100 dBA 3 feet from the source, then the source generates 94 dBA at 6 feet away and 88 dBA at 12 feet away and so on. Equation 1 can be used to calculate the difference in sound pressure level<sup>1</sup>.

$$\text{Equation 1: } dL=10*\log(R_2 / R_1)^2$$

Where;

dL: change in sound pressure level (dBA)

R<sub>1</sub>: distance from source to location 1 (ft, m)

R<sub>2</sub>: distance from source to location 2 (ft, m)

In order to calculate the increase in the sound level from multiple sources the pressure from each sound source at the point of interest is summed and converted to decibels. Equation 2 is used to calculate the total raw pressure at a location from multiple sources using the raw pressure from each sound source<sup>2</sup>.

$$\text{Equation 2: } P_T=(P_A^2+P_B^2+\dots+P_F^2)^{0.5}$$

Where;

P<sub>T</sub>: Total combined pressure at location 1 (μPa)

P<sub>A</sub>: Pressure from source A at location 1 (μPa)

P<sub>B</sub>: Pressure from source B at location 1 (μPa)

P<sub>F</sub>: Pressure from the last source at location 1 (μPa)

The construction activities that will generate the most noise will take place during the construction phase are due to pile driving, potential rock drilling, vehicular traffic, and dozer grading work. The U.S. Department of Transportation Federal Highway Administration has measured noise impacts

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<sup>1</sup> Equation 1 from *Estimating Sound Levels with the Inverse Square Law on HyperPhysics*, an online reference book for physics by Georgia State University

<sup>2</sup> Equation 2 from *Adding Decibels on Engineering Toolbox*, an online reference book for engineering equations.

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from construction activities and the expected noise associated with the potential equipment to be used during construction can be seen in Table 1.

**Table 1: Common Construction Equipment<sup>3</sup>**

Equipment Description	Actual Measured L <sub>max</sub> @ 50 feet (dBA, slow) (Samples Averaged)
Dozer	82
Excavator	81
Front End Loader	79
Impact Pile Driver	101
Man Lift	75
Pickup Truck	75
Vibratory Pile Driver	101

Neighbors in close proximity to the construction activities likely will be able to notice the noises associated with the machinery required for construction. However, according to the study *Farm Noise Emissions During Common Agricultural Activities* done by Depczynski, Franklin, Challinor, Williams, and Fragar, the machinery required for construction has similar noise levels as farm equipment that are currently used in the area. Dozers, combines, tractors, irrigation pumps, semi-trucks, and chainsaws used by farmers can generate noise levels between 80 and 110 dBA. The specific farm related sources and noise levels as predicted in the study can be seen in Table 2.

**Table 2: Common Farm Sound Levels<sup>4</sup>**

Machinery	Average Noise Level at Operators ear (dBA)	Noise Level Range at Operators ear (dBA)
Air Compressor	86	72-95
All-Terrain Vehicle	86	84-87
Angle Grinder	98	96-100
Auger	93	89-96
Bulldozer	99	97-100
Chainsaw	106	104-107
Farm Truck	85	83-88
Fork Lift	84	81-88
Harvester	83	75-91
Irrigation Pump	100	96-104
Tractor	92	90-93

<sup>3</sup> Knauer, H., & Pederson, S. U.S. Dept. of Transportation, Federal Highway Administration, *Highway Construction Noise Handbook*. Jan. 2006.

<sup>4</sup> Depczynski, J., Franklin, R. C., Challinor, K., Williams, W., & Fragar, L. J.. *Farm Noise Emissions During Common Agricultural Activities* (Tech.). National Center for Biotechnology Information. 2005.

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Any noise generated by the transport of equipment in and out of the Project will be comparable to the sound levels generated by the hauling of crops each season. Although construction noise levels will vary from day to day during construction depending on the activity being performed, the overall generated noise levels during construction are expected to be similar to noise levels generated from typical farm activities. The sound levels indicated by the construction activities in Table 1 range from 75-101 dBA at a distance of 50 feet. The anticipated setbacks are 250 feet from any residential-zoned properties, churches, cemeteries, nursing homes, and schools. Intermittent ranges at the nearest property boundary are estimated to range from 61-87 dBA, when construction is within the closest range of the property boundary.

The noise impacts from constructing a solar farm on existing farmland will be temporary. The construction process will last 12 to 18 months and will primarily occur during daylight hours during weekdays. Construction activities will not occur in a single location for the total duration but will occur in various locations around the project area. Most of the project area is large enough that noise sources would be sufficiently far from sensitive receptors to avoid impacts. The noise impacts from construction equipment is expected to be similar to the operation of typical farm equipment; as such, the construction of the solar project is not anticipated to have a significant impact on surrounding community noise levels or sensitive receptors.

### Project Operational Noise

The operation of solar farms primarily generate noise from two main sources; inverters and transformers. The emissions are generally not audible at the property line when the proper setback distances are used from sensitive receptors. The project will have inverters and transformers. Inverters are used on solar farms to turn the direct current (DC) power generated by the solar panels into alternating current (AC). Transformers are used on solar farms to increase the alternating voltages generated by the inverters and help facilitate the transmission, distribution, and utilization of AC for electrical energy. The solar farm also uses a motorized tracking system in order to keep the panels facing the sun and optimize output during different times of the day and year. The motors used to move the panels are small and are inaudible when in close proximity. The other source of noise will be from the substation transformer.

The Project is anticipated to use 22 inverter/transformer located throughout the property. Each individual noise source adds to the total measurable noise level, however as stated above, the doubling of the distance from the previous reference measuring point decreases the number of decibels registered. The inverters are rated by the manufacturer at <79 dBA at 3' and will be scattered throughout the solar array. Each inverter would produce 31 dBA using the 250' setback from any residential-zoned properties, churches, cemeteries, nursing homes, and schools. Rural ambient background levels during the day are generally 40-45 dBA depending on the proximity to existing noise sources. The inverters will not be audible over the background sound levels at sensitive receptors assuming the 250' setback. Similar propagation would also reduce the substation levels below ambient conditions at the 250' setback.



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Anticipated operational maintenance operations will include grass mowing and general solar panel maintenance. The upkeep and small fixes are not anticipated to generate any loud or distinguishable noise from off the Site. The site will have the grass mowed three to four times a year, this will be done during the day. Riding lawn mowers typically operate around 90 dBA. Due to the large area being mowed, the distance from the mower to anywhere offsite would create an environment where the sound generated from mowing would largely go unnoticed. Secondly, the mowing of grass already takes place at each resident's household and is generally accepted as a common noise. Finally, the last potential for increasing the ambient noise level of the Site would be an increase in traffic into and around the site. The estimated number of vehicles needed to service the solar farm amounts to 10 vehicles on days when the panels are serviced, and the grass needs mowing which is not expected to have any significant noise impacts.

Based on the above, noise generator sources (inverters and transformers within the solar farm) were found to not result in sound levels of significance beyond the site boundary and the solar project is not anticipated to have a significant impact on surrounding community noise levels or sensitive receptors.

Typical farming equipment like dozers, combines, tractors, irrigation pumps, semi-trucks, and chainsaws used by farmers can generate noise levels between 80 and 110 dBA. The current agricultural operations surrounding the Project location likely already produces ambient sounds that would help make effects from the Project more minimal. Additionally, construction would primarily occur during daylight hours, between sunrise and sunset; therefore, the Project would not affect ambient noise levels at night during most of the construction period. Most of the proposed equipment would not be operating on site for the entire construction period but would be phased in and out according to the progress of the Project. Following completion of construction activities, the ambient sound environment on and surrounding the Project would be expected to return to existing levels or below, by eliminating some seasonal use of agricultural equipment. The moving parts of the PV arrays would be electric-powered and produce little noise. The periodic mowing of the Project to manage the height of vegetation surrounding the solar panels would produce sound levels comparable to those of commercial and agricultural operations in the Project; however, Project-related mowing would occur at less frequent quarterly intervals than typical agricultural operations.

**KRS 278.708(3)(b):** A site assessment report shall also include the following: (1) an evaluation of the compatibility of the facility with scenic surroundings;

**KRS 278.708(3)(c):** (2) The potential changes in property values resulting from the siting, construction, and operation of the proposed facility for property owners adjacent to the facility;

### **Scenic Surroundings & Property Values – KRS 278.708(3)(b-c)**

The Project's surrounding land is primarily agricultural farmland with scattered residential structures. A detailed description of the Project's surrounding land uses is included in the Property Value Impact Study included in **Appendix I**. In addition, an Architectural Survey has been

## Site Assessment Report

Horus Kentucky 1 LLC ■ Franklin, Simpson County, Kentucky

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conducted to identify and evaluate above-ground historic resources within the Project's surrounding area and is included in **Appendix K**.

**KRS 278.708(3)(e):** (4) 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.

### **Traffic Assessment – KRS 278.708(3)(e)**

Traffic in the Project vicinity is expected to temporarily increase during the construction phase of the Project (estimated at 12-18 months). The largest increase in traffic will occur in mornings and evenings when construction workers are arriving and departing from the site during Project construction. Once the Project is constructed, the traffic for operation and maintenance of the facility will typically be less than a typical single-family home and will have little to no effect on surrounding traffic.

The Project is bounded to the north by I-65 and Old County Farm Road; to the east by Tyree Chapel Road and Hendricks Road; to the south by Tyree Chapel Road; and to the west by railroad tracks. Traffic in the vicinity of the Project is expected to temporarily increase during the construction phase of the Project. The largest increase in traffic will occur in mornings and evenings when construction workers are arriving and departing from the site during Project construction. There will be an increase of Class 9 freight trucks in the Project vicinity as deliveries are made to the site. Most of the traffic to the Project will travel via I-65, which is the principal arterial road adjacent to the Project and designed to handle high levels of traffic. Local roads will experience the most significant changes in traffic volumes. Available data collected from the Kentucky Transportation Cabinet (KYTC) Traffic Counts portal and other entities were used to assess the existing roadway networks around the subject location and impacts that may occur due to development of the Project. Utilizing the KYTC website, existing traffic, projected traffic, heavy vehicle volumes, distances and specific routes to and from the National Truck Network were assessed. Two annual average daily traffic (AADT) stations were located nearby the Project along I-65. Data for the several local roads (such as Tyree Chapel Road and Hendricks Road) were not available through KYTC database. I-65 Station 107P91 (Route #107-I-0065-000) located directly adjacent to the north of the Project and I-65 Station 107256 (Route #107-US-0031W-000) is located approximately 1,300 feet west of the Project. The historical and current AADT for the two stations are listed in the below table:

#### **AADT Counts from Two Traffic Stations**

<b>Year</b>	<b>107P91</b>	<b>107256</b>
<b>2020</b>	43,007	-
<b>2019</b>	49,388	-
<b>2018</b>	48,187	10,841
<b>2017</b>	48,143	-
<b>2016</b>	46,778	-
<b>2015</b>	45,234	10,341

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<b>2014</b>	41,040	-
<b>2013</b>	43,773	-
<b>2012</b>	-	10,037
<b>2011</b>	-	-
<b>2010</b>	-	-

Several local roads extend through and, thus, provide access to the Project. There are also several unnamed, gravel local roads that extend through the Project as well. The closest rail line operated by CSX bounds the Project directly to the west. The closest general aviation airport is the Portland Municipal Airport located approximately 5.5 miles southeast of the Project.

The construction crew, estimated at 100 people, would commute to the Project between sunrise and sunset. A majority of these workers would likely come from the local area or region. Other workers would come from outside the region, and many would likely stay in local hotels in the vicinity. Traffic flow around the Project would be heaviest at the beginning of the work day, at lunch, and at the end of the work day. The construction phase would last at least 12 to 18 months and would only take place during working hours, leading to a minimal increase in traffic for those months. This traffic would include cars, trucks, equipment taxiing, and larger construction vehicles. The primary phase of construction would include any necessary clearing and grading. The secondary phase of construction would include the construction.

Construction activities would temporarily increase traffic through the area and along the three main roads with one primary entrance and exit to the site. Construction traffic impacts would be temporary and minor, and not result in the need for special traffic routes or road enhancements to accommodate construction equipment. However, should substantial traffic congestion occur, Horus Renewables would implement staggered work shifts during daylight hours to assist traffic flow near Project access locations. Implementation of such mitigation measures would minimize potential adverse impacts to traffic and transportation to negligible levels. The construction and operation of the Project would have no effect on operation of the airports in the region. The operation of the Project would not affect commercial air passenger traffic or freight traffic in the region and would not adversely affect any aerial crop dusters operating in the vicinity of the Project.

Appropriate signage and traffic control will be implemented to increase driver safety and reduce the risk of accidents on all roads that will be used for construction traffic. Upon the completion of the construction phase of the Project, traffic levels will return to their pre-construction levels for the operational phase. Traffic for operation and maintenance of the facility will typically be less than a typical single-family home and will have little to no effect on traffic. Horus Renewables does not anticipate significant degradation to the local roads. After construction is complete, Horus Renewables will assess the same area and mitigate as necessary.

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**KRS 278.708(4):** The site assessment report shall also suggest any mitigating measures to be implemented by the applicant including planting trees, changing outside lighting, erecting noise barriers, and suppressing fugitive dust.

### **Mitigation Measures & Conditions – KRS 278.708(4)**

A Phase I Environmental Site Assessment (Phase I ESA) was completed for the parcels that comprise the Project. The Phase I ESA is provided in **Appendix J**. The Phase I ESA provides a baseline for returning the property to its current condition after Project decommissioning. In addition, a Wetland Delineation and Threatened & Endangered Species Surveys were conducted for the Project. Identified wetlands and jurisdictional waters will be avoided during construction and operation of the Project. It is not anticipated that the Project will utilize U.S. Army Corps of Engineers (USACE) Nationwide Permits. The presence of potential habitat for the Indiana and Northern Long-Eared Bats requires that any tree clearing would need to be performed during the off-season or additional investigations and consultation with regulatory agencies may be necessary. However, as denoted on the site development plan, the forested areas are denoted as “avoidance areas” and tree clearing is not proposed for the construction or operation of the Project. In addition, geotechnical exploration (including karst survey) was conducted which included the use of diesel-powered all-terrain vehicle (ATV) or track-mounted drill rig for drilling to determine the general subsurface conditions and soil properties. The study delineated visible surface karst features (e.g., sinkholes and subsidence, closed depressions, and sinking and losing streams). Particular emphasis was on features inferred to have direct communication with the phreatic zone such as “open-throat” sinkholes, karst windows, cave entrances, and sinking streams. The geotechnical survey included subsurface exploration using Geophysical and air-track probe (ATP) drilling methods and Geophysical exploration using Electrical Resistivity Imaging (ERI) with an emphasis on karst features identified during the desktop review and field reconnaissance. Drilling exploration by ATP was performed at areas delineated with possible karst activity and along the ERI lines to calibrate the resistivity profiles, investigate anomalies revealed by the ERI, determine depth to bedrock, and explore for soil filled solution channels or voids. The additional due diligence studies conducted for the Project are included in **Appendix K**.

Based on the scope of the proposed construction activities, the Project would likely require a Kentucky Pollutant Discharge Elimination System (KPDES) construction general permit issued by the Kentucky Energy and Environment Cabinet. A general KPDES permit would require the development of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of approved pollution prevention measures. The SWPPP would address the design, inspection, and maintenance of Best Management Practices (BMPs) utilized during construction activities. In addition, a Conditional Use Permit (CUP) issued by the Franklin-Simpson County Zoning Board of Kentucky would be required for the Project. Wherever possible, the Project will maintain natural vegetative screening. However, due to the historical operations of the Project location for agricultural and farming practices, the Project could be visible from a roadway or neighboring residence. In these cases, Horus Renewables will add a vegetative buffer in order to mitigate potential viewshed impacts.