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

In the Matter of:

Electronic Application of Golden Solar, LLC for Certificate of Construction for an approximately 100 Megawatt Merchant Electric Solar Generating Facility in Caldwell County, Kentucky	)))))	Case No. 2020-00243

Motion for Deviation from Setback Requirements

Comes now Golden Solar, LLC ("the Applicant" or "Golden"), by counsel, and requests that the Kentucky State Board on Electric Generation and Transmission Siting ("the Board") grant a deviation for its proposed project in Caldwell County ("the Project") from the setback requirements of KRS 278.704(2) as allowed under KRS 278.704(4). In support of this motion, Golden states as follows:

STATUTORY AUTHORITY

1. KRS 278.704(2) establishes setback requirements for merchant generating facilities such as the Project by requiring that "all proposed structures or facilities used for generation of electricity [be] two thousand (2,000) feet from any residential neighborhood, school, hospital or nursing home facility." Because Caldwell County has no planning and zoning ordinances governing relevant setback requirements, these statutory setback requirements apply. KRS 278.704(4) authorizes the Board to grant a deviation from setback requirements to allow a shorter distance upon "a finding that the proposed facility is designed to and, as located, would meet the goals of KRS 224.10-280, 278.010, 278.212, 278.214, 278.216, 278.218, and 278.700 to 278.716 at a distance closer than [statutorily prescribed]."

NEIGHBORHOOD WITHIN 2000 FEET

2. Application Exhibit D, Figure 1 shows buffers of varying distance from the proposed siting of Project generating equipment, including a buffer distance of 2000 feet. There are no schools, hospitals, or nursing homes within 2000 feet of Applicant's proposed location of Project structures or facilities used for generating electricity.

3. KRS 278.700(6) defines "residential neighborhood" as "a populated area of five (5) or more acres containing at least one (1) residential structure per acre." There is a grouping of residences within 2000 feet of proposed generating equipment that meets the acreage and density criteria for a residential neighborhood. This populated area is adjacent to the southeastern portion of the Project at the intersection of Marion Road with Crider and Goodsprings Roads. The Neighborhood boundary shown in blue on the attached Figure 1 encompasses approximately 11 acres and includes 13 residences and 1 church. The nearest Project proposed structures or facilities used for the generation of electricity (specifically, solar panel arrays) will be at least 300 feet from the closest residence in the Neighborhood.

4. The drawn Neighborhood boundary circumscribes an area that meets the KRS 278.700(6) criterion of "five (5) or more acres containing at least one (1) residential structure per acre," although the residences northeast of Marion Road, closest to the Project, would not meet that criterion, standing alone.[1] Their inclusion in the Neighborhood extends to those properties the special protection accorded under KRS 278.706(2) to a residential neighborhood without diluting the protection to the "core" neighborhood properties. The Neighborhood depicted in Figure 1 is the same as "Residential Group 1" in the 10/28/21 Motion for Deviation from

[1] The bounded area to the northeast of Marion Road encompasses approximately 3.5 acres, fewer than the minimum five (5) acres required for a KRS 278.700(6) "residential neighborhood."

Setback Requirements filed in Case No. 2020-00244 for the Caldwell Solar project. In the final order granting a construction certificate in that case, the Siting Board also granted the motion for deviation, and required a setback of 300 feet from residential neighborhoods. Case No. 2020-00244, 4/8/22 Order p.23 (ordering ¶2) and Appx. p.4 (condition #16).

5. There are no other clusters of residences that meet the statutory definition of residential neighborhood and are within 2000 feet of Project structures or facilities to be used for the generation of electricity.

REQUEST FOR DEVIATION

6. Golden requests a deviation from the 2000-foot setback requirement for the one Neighborhood identified, and a ruling that there are no other neighborhoods within 2000 feet of the Project boundaries for which a deviation might be required. The setbacks apply to "structures or facilities used for the generation of electricity," KRS 278.704(2), and not security or perimeter fencing, vegetative buffers or enhancements (such as pollinator plantings), or roads used to access the Project site or within the site.[2]

7. The Board should grant a deviation from the 2000-foot setback requirement as to the residential neighborhood because the Project "is designed to and, as located, would meet the goals of [the cited provisions in KRS Ch. 224 and 278] at a distance closer than those provided" by statute. KRS 278.704(4) (emphases added).

8. Several requests for deviations from setback requirements were considered in the first 15 years of KRS 278.704(4).[3] More recently, Siting Board orders have granted deviations

[2] See*, e.g.*, Case No. 2020-00190, *Horseshoe Bend Solar,* 6/11/21 Order Apx. A (condition #20).

[3] See Case No. 2002-00149, *Application of Kentucky Mountain Power, LLC/Enviropower, LLC for a Merchant Power Plant Construction Certificate in Knott County, Kentucky* (9/5/02 Final Order); Case No. 2009-00530, *Application of ecoPower Generation-Hazard, LLC for a Certi-*

from the statutory setback requirements for merchant solar energy projects like the Golden Project, subject to certain mitigation measures.[4] To allow a deviation, the Board must make a finding that the proposed facility is designed to and, as located, would meet the goals of designated statutes. KRS 278.704(4). Included in the designated statutes are the setback requirements themselves. The 2010 *ecoPower* decision, Case No. 2009-00530, describes the similar setback requirements found in KRS 278.704(2) as "enacted to afford some level of protection for persons occupying a property adjacent to a property where a merchant generating plant is to be constructed and operated."[5] Therefore, "it is the effects of the planned facility on adjoining residents that the Siting Board must consider when determining whether to grant a deviation pursuant to KRS 278.704(4)."[6]

9. By its express words, KRS 278.704(4) simply requires a showing that the goals of the statutes cited therein can be met with facilities at a distance less than what is statutorily provided in KRS 278.704(2). On the attached Figure 1, a black dashed line circumscribes the area — approximately 68 Project acres — within 2000 feet of the Neighborhood. In the circumstances presented by the proposed Project, the question is whether the statutory goals are met even though some generating facilities will be closer to a residential neighborhood than the

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ficate to Construct and Operate a Merchant Electric Generating Facility and a 69kV Transmission Line in Perry County (4/22/10 Order denying and 5/18/10 Final Order granting deviation request); Case No. 2014-00162, *Application of SunCoke Energy South Shore, LLC for a Certificate to Construct a Merchant Electric Generating Facility and Non-Regulated Transmission Line* (2/20/15 Final Order).

[4] See, *e.g.*, Case No. 2020-00040, *Turkey Creek* 9/23/20 Final Order and 7/22/21 reconsideration Order; Case No. 2020-00190, *Horseshoe Bend* 6/11/21 Final Order; Case No. 2020-00280, *Ashwood Solar* 6/21/2021 Final Order; Case No. 2020-00272, *Flat Run* 9/29/21 Final Order; Case No. 2021-00029, *Martin County* 11/15/21 Final Order; Case No. 2020-00244, *Caldwell Solar* 4/8/22 Final Order.

[5] Case No. 2009-00530, *ecoPower,* 5/18/10 Order at 31.

[6] *Id.* at 32 (referring specifically to the 1000-foot standard, which is inapplicable here).

2000 feet otherwise specified. Golden respectfully submits that the answer to that question is "Yes."

COMPLIANCE WITH STATUTORY GOALS

10. **KRS 224.10-280** requires submission of a cumulative environmental assessment (CEA) to the Kentucky Energy and Environment Cabinet ("the Cabinet") before beginning construction of an electric power plant. Golden included a copy of its CEA as part of its Application filed with the Board, as an attachment to Exhibit G, and submitted it to the Cabinet on August 30, 2022. Golden's CEA includes a detailed discussion of potential impacts and mitigation plans for air pollutants, water pollutants, wastes, and water withdrawal, which are briefly discussed below. By submitting a CEA to the Cabinet, the goals of KRS 224.10-280 have been met. As examples of steps the Applicant is taking to protect nearby property owners from any negative impacts from the Project, the elements of the CEA are briefly discussed as follows:

a. Regarding air pollutants, the CEA concludes that air quality impacts from construction would occur during daylight hours over the approximately 12- to 18-month construction period. However, anticipated emissions generated by construction are expected to be minor due to the scale and duration of operations, and that no air permit is required for the project. Temporary fugitive air pollutant emissions (dust and other suspended particulates) will be mitigated using Best Management Practices (BMPs) so that ambient air quality standards will not be exceeded. Any emissions from the operation of the Project would be generated by worker vehicles and maintenance equipment and would be negligible. By providing a zero-emissions source of energy for the region, the Project will yield an overall benefit to air quality at both the local and regional levels.

b. Regarding water pollutants, as discussed in more detail in the CEA, wetlands, ponds and creeks are present within the project boundary, but none of the water bodies inside or directly adjacent to the site have been designated as Kentucky Special Waters by the Kentucky Division of Water (DoW).

i. The Project will follow BMPs to limit surface water pollution from dust and sediment from erosion during construction, including the use of existing roads as much as possible. Golden will mitigate the effects of construction activities that may result in storm-water discharges through the use of silt fences, sediment basis, 25-foot buffer zones and other BMPs. BMPs will also be used to minimize the spill risk of any hazardous materials (fuel, lubricants, fluids) related to construction that may potentially contaminate groundwater. Once construction is complete, locally-appropriate vegetation cover will be planted and safely maintained to stabilize disturbed soil.

ii. Any impacts to jurisdictional waters will be permitted through the Army Corps of Engineers, which will be obtained prior to construction, and all construction and operational activities will comply with the Clean Water Act.

iii. Golden will work with DoW to design and implement a storm-water pollution prevention plan (SWPPP) and comply with a DoW Construction Storm Water Discharge General Permit.

iv. Similarly, with respect to groundwater, any hazardous materials (including but not limited to fuel, lubricants, hydraulic fluids, herbicides, and fertilizers) will be limited to essential use only, be properly stored, and will be used following proper techniques. Proper maintenance of machinery, spill prevention protocols, and readily available spill kits will be used to reduce the risk of groundwater contamination.

v. Since much of the current land use is dedicated to cultivated crops and pasture, which introduces fertilizers, herbicides, and pesticides into the local water system, surface water conditions may improve over the life of the project by converting the land to solar fields. The conversion of the Project area from agricultural land use to solar energy production will produce a net reduction in fertilizer, herbicide, and pesticide application to the land, and minor benefits to groundwater systems are also anticipated.

c. Regarding wastes, Golden's CEA notes that project construction will generate small quantities of waste, including hazardous waste, during construction and operation. To avoid any on- and off-site impacts, all waste will be stored, handled, and disposed of in accordance with local, state, and federal regulations. Golden will develop a hazardous materials business plan to ensure materials are handled, used, and stored using BMPs, with resources and operating procedure guidelines in place in case of a spill. Waste materials will be monitored daily during construction to ensure proper handling and will be stored in containers most appropriate for each type of waste, acquired from certified waste disposal contractors. Solid construction wastes will be recycled if possible, and non-recyclable solid materials will be removed from the Project site and disposed of at an appropriate facility.

d. Finally, regarding water withdrawal, as the CEA discusses more fully, construction and operation of Golden's solar electric generating facilities are not anticipated to be water intensive. If existing wells within the Project area are not sufficient for construction and operation needs, then a new well may be developed. However, water withdrawal for the Project is not expected to create negative effects on regional water resources.

11. **KRS 278.010** sets forth definitions to be used for KRS 278.010 to 278.450, 278.541 to 278.544, 278.546 to 278.5462, and 278.990 — none of which are directly applicable

to Golden or the Project. To the extent relevant,[7] Golden has satisfied any goals of KRS 278.010 by preparing and presenting its Project proposal and Application in terms consistent with the statutory definitions.

12. **KRS 278.212** requires the filing (by a utility) of plans and specifications for electrical interconnection with merchant electric generating facilities and imposes the obligation upon a merchant electric generating developer for any costs or expenses associated with upgrading the existing electricity transmission grid as a result of the additional load caused by the merchant electric generating facility. Golden will construct a substation within the Project boundary to connect to the North Princeton Switching Station owned by LG&E/KU. An analysis of the Project's projected effect on the electricity transmission system in Kentucky is provided in Application Exhibit E, including the relevant Feasibility studies. As designed and as located, the Project therefore meets the goals of KRS 278.212.

13. **KRS 278.214** governs the curtailment of service and establishes the progression of entities whose service may be interrupted or curtailed pursuant to an emergency or other event. To the extent this section applies to operation of the proposed Project, Golden commits to following all appropriate and legally binding operating procedures. Applicant's project is thus designed and located to meet the goals of KRS 278.214.

14. **KRS 278.216** requires utilities under the jurisdiction of the Kentucky Public Service Commission to obtain a site compatibility certificate before beginning construction of an electric generating facility capable of generating more than 10 megawatts. As with Siting Board certificates, applications for utility site compatibility certificates must include a site assessment

[7] As the first section in the chapter, KRS 278.010 may have been mistaken for a "purposes and goals" statement for Chapter 278. Or its inclusion in the KRS 278.704(4) list may have been to help discern the goals of the other Chapter 278 sections listed.

report as specified in KRS 278.708(3) and (4) or show compliance with the National Environmental Policy Act. Golden's filing of a site assessment report as part of its Application (Exhibit H) in the present proceeding satisfies the goals of KRS 278.216.

15. **KRS 278.218** governs certain transfers of utility assets having an original book value of $1 million or more. Golden is not a utility as defined in 278.010(3), and therefore this statute does not apply to the Applicant. However, to the extent approval may at some time be required for change of ownership or control of Project assets owned by Golden or its parent company, Golden will comply with the rules and regulations applicable thereto.

16. **KRS 278.700 – .716** governs the Board's jurisdiction and process. Golden's Application and timely participation in the present proceeding demonstrates that the proposed facility is designed to, and as located, would meet the goals of KRS 278.700 *et seq*., including the allowance for deviation from setback requirements in KRS 278.704(4). Moreover, the mitigation measures discussed in the Application relative to noise, traffic, scenic, and other impacts of the proposed project are additional steps the Applicant has committed to take in order to minimize the effects of the planned facility on, *inter alia*, the Neighborhood for which most of its area is closer than 2000 feet to proposed Project structures or facilities used for generation of electricity.

MITIGATION EFFORTS

17. The Sound Emissions Assessment presented as Exhibit H, Attachment B to the Application ("Sound Study") concludes that "no significant adverse noise impact is anticipated from the project during normal operation." Appl. Exh. H, Attachment B p.11. During normal sunny day operation, the expected sound levels at the nearest residences are well below the daytime design goal of 55 dBA. Nighttime levels are even lower and also well below the

nighttime 45 dBA design goal. In addition, no prominent tones are expected from any of the equipment at any potentially sensitive receptors. *Id.* To reduce any adverse effect, Golden will use the mitigation measures listed in its Site Assessment Report, Appl. Exh. H, Section 6, Table 2. As more fully reported in the Site Assessment Report and Sound Study:

a. It is anticipated that construction activity will be audible at times to nearby residences or other sensitive receptors. See Sound Study p. 11. Golden will mitigate the sound impacts of construction by limiting noise-creating construction activities to take place only Monday – Saturday, 8 A.M. to 6 P.M. local time, reserving Sunday as a makeup day in the event of inclement weather. Golden also proposes a mitigation measure limiting pile driving within 1000 feet of a residence to take place only Monday – Friday, 9 A.M. to 5 P.M. local time.

b. Site visits and maintenance activities, such as mowing, will take place during daylight hours and will not significantly contribute to noise. The noise associated with these activities is very similar to that currently generated onsite by farming activities and offsite by commercial and farm uses.

18. As discussed in the Site Assessment Report (Appl. Exh. H Section 2), the visual impact of the Project on neighboring property owners is low and is mitigated by vegetative buffers. An estimated 32 buffers are planned, each ranging from 100 feet to 2,350 feet in length (total length of proposed screening is 21,832 feet). The majority of buffers will be planted along the Project perimeter, with a smaller proportion within the Project area. The site plan in Application Exhibit J shows where these buffer additions are planned (Sheet C.200-201). The trees and shrubs will be planted at a height of 3 and 2 feet and are anticipated to reach a height of 15-30 feet and 8-18 feet at maturity, respectively. Vegetation screening details are included in Application Exhibit J, Sheet L.100.

19. A Glare Report (Appl. Exh. H, Attachment C) was prepared for the Project and predicted no Project-related glare to roadways or residences. No airport was located within four miles of the Project location. The Glare Report found "no evidence based upon our modeling of the potential array locations that glare from the Project will cause an adverse impact for drivers along analyzed portions of Route 91, Dalton Road, Grey Road, Goodsprings Road, Coleman Crider Road, and residential observation locations." Appl. Exh. H, Attachment C, p. 13. Golden will place down-lit security lighting at strategic locations throughout the facility. this lighting will be manually controlled and motion activated. See Appl. Exh. B, p. 9.

20. Given that adjacent property values are not anticipated to be affected by the siting of the solar facility (see Appl. Exh H, Attachment D), the implementation of vegetative screening buffers, and compliance with all regulatory requirements, the Project is scenically compatible with its surroundings, including the subject Neighborhood.

21. As discussed in the Traffic Impact Study included in Golden's Site Assessment Report, traffic will temporarily increase during the construction phase of the Project and any traffic effects during the operations phase will be negligible; neither is expected to affect traffic function. Three major roadways are present near the Project area vicinity: I-69, KY-91, and KY-641. Mitigation measures will be employed during construction to reduce the contribution of fugitive dust and other airborne materials. Appl. Exh. H, Attachment F, p. 3. These and other measures related to traffic will be employed by Golden to mitigate potential Project impacts. See Appl. Exh. H Section 6, Table 2 (Project Mitigation Measures).

22. Furthermore, the residences in the Neighborhood are covered by siting design and mitigation measures applicable to all residences and surrounding properties. See, generally, Appl. Exh. H Section 6.

23. To support the deviation requested in this Motion, and with respect to the Neighborhood, Golden makes the additional commitments to place panels no closer than 300 feet, central inverters no closer than 500 feet and the substation no closer than 1000 feet to any residence in the Neighborhood.

CONCLUSION

The proposed mitigation measures will protect residents in the Neighborhood from any adverse impact that may result from generating equipment of the proposed Project being located closer than 2000 feet. Applicant will continue to work closely with property owners throughout the design phase of the project and proposes to retain natural buffers to the extent possible and to implement mitigation measures to address visual impact and noise concerns.

WHEREFORE, because the proposed facility is designed to and, as located, would meet the goals of KRS 224.10-280, 278.010, 278.212, 278.214, 278.216, 278.218, and 278.700 to 278.716, at a distance closer to residential neighborhoods than 2000 feet, Golden respectfully requests a ruling from the ESB that:

(1) The only residential neighborhood (defined by KRS 278.700(6)) within 2000 feet of the Project boundary is the Neighborhood discussed in this Motion;

(2) Golden is granted a deviation from the setback requirement of KRS 278.704(2) for the Neighborhood that lies within 2000 feet of the Project site, such that the setback required from any residence in the neighborhood is 1000 feet for the substation, 500 feet for any central inverter, and 300 feet for any panel.

Respectfully submitted,

/s/ Kathryn A. Eckert

Jason R. Bentley
Katherine K. Yunker
Kathryn A. Eckert
McBrayer PLLC
201 East Main St., Suite 900
Lexington, KY 40507
(859) 231-8780
jbentley@mmlk.com
kyunker@mcbrayerfirm.com
keckert@mcbrayerfirm.com

Counsel for Applicant,
Golden Solar LLC

Figure No.
1

Title
Residence Threshold Map

Client/Project
Golden Solar Project

Project Location
Caldwell County, Kentucky

- Project Area
- Residential Community
- 2000-Ft Buffer
- Roads
- Railroad
- Vegetation Screening
- Access Roads
- Fencing
- Inverters
- Substation
- Laydown Yards
- Solar Panels
- O&M Building

0 600 1,200 Feet
(At original document size of 11x17)
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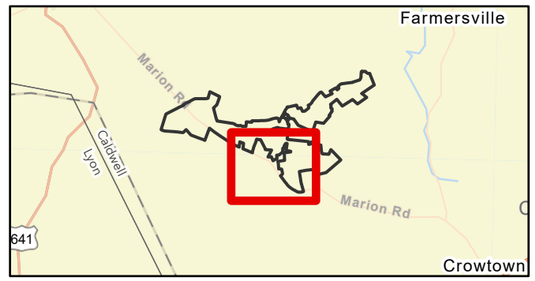

Notes
1. Coordinate System: NAD 1983 2011 StatePlane Kentucky FIPS 1600 Ft US
2. Background Source: Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Maxar

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