

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

In the Matter of:

*Electronic* Application of Caldwell Solar, LLC )  
for Certificate of Construction for an up to 200 )  
Megawatt Merchant Electric Solar Generating )  
Facility in Caldwell County, Kentucky )

Case No.  
2020-00244

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**Notice of Filing**

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Applicant, Caldwell Solar, LLC, herewith submits the attached responses to Siting Board's Staff's Request for Information Nos. 05, 28, 50, 52, 66, 80, 83-85, 88, 91 and 92. These are part of Caldwell's Response to Staff's First Request for Information filed on December 3, 2021, for which a Motion for Extension to Response to the remaining data request was filed on December 1, 2021. The verification contained in the Response to Staff's First Request for Information filed on December 3, 2021, also applies to the responses filed herein.

Respectfully submitted,

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Caldwell Solar, LLC*

### Request

5. Provide a description of any construction method that will suppress the noise generated during the pile driving process that Caldwell Solar plans to employ and the associated reduction in noise that each method produces.
    - a. Provide Caldwell Solar's planned level of construction using methods that suppress noise during the pile driving process.
    - b. Provide the estimated additional cost the use of noise suppression methods Caldwell Solar projects it will incur.
    - c. Provide a description of any additional construction noise mitigation measures Caldwell Solar considered implementing for the project; include the reason why it chose not to implement the additional noise mitigation measure.
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### Response

- a. Caldwell Solar is not aware of any proven and practical noise suppression options for this type of equipment or this driving process. Pile driving noise impacts are temporary in nature. A small, special purpose pile driver is used to install mounting posts for solar panels. As opposed to much larger pile drivers, this type of driver does not produce individual impact noises separated by a momentary silence, but rather drives each post with a rapid, nearly continuous series of strikes that puts the post down in a matter of seconds. The time spent at any single installation location is around one minute. Caldwell Solar will limit the pile driving hours to 7am to 7pm to mitigate noise impacts to nearby landowners.
- b. Caldwell Solar is not aware of any proven and practical noise suppression options for this type of equipment or this driving process.
- c. Caldwell Solar has reviewed the discussion in other Siting Board cases regarding utilization of fence sound blankets or covered trailers to suppress pile driving noise, but the Project does not find these to be proven or practical noise suppression methods.

**Request**

28. Refer to the Application, Exhibit C, which includes meeting materials that state generally, “construction typically takes 12-18 months.” Explain how long construction of the Caldwell Solar Project specifically will take, in total number of months.
- a. Provide a detailed description of construction activities, including a construction timeline and schedule by activity.
  - b. Explain whether construction activities will occur sequentially, or concurrently across the Project site.
  - c. Explain whether construction activities will include different activities taking place in different areas of the Project site at the same time.
  - d. State when the peak construction activity period will occur (which month or quarter of the full construction period).
  - e. State how long the peak period will last, in weeks or months.
  - f. Provide the average number of construction workers on-site.
  - g. Provide the number of construction workers on-site during the peak period.
  - h. Provide the number of construction workers on-site, by quarter, over the entire construction period.
  - i. Describe any special construction activities or personnel required to connect the Project to the existing transmission line.

**Response**

a.

Task	Estimated Duration	Key Predecessor	Anticipated Timeframe
Site preparation	60 days	Start of Construction	September-October
Pile Installation	150 days	Site Preparation	November - March
Racking Installation	150 days	Pile Installation	January - May
Module Installation	170 days	Racking installation	February -July
Project Substation	270 days	Site Preparation	November - July
Transmission line	45 days	Project Substation	June-July
Operations building/parking lot	120 days	Site Preparation	March - June
Mechanical Completion	100 days	Module Installation	July - October
Commissioning	120 days	Mechanical Completion	September - December

- b. Construction activities will occur concurrently.
- c. Yes, different construction activities will take place in different areas of the Project site at the same time.
- d. The peak construction activity will occur during delivery and installation of the structural piles, trackers, modules, and inverters.
- e. The peak period will last approximately 6 months.
- f. The average number of construction workers on-site is 60.
- g. The average number of construction workers on-site during the peak period is 225.
- h.

Quarter	Estimated Workers On-site
Q3 - 2023	60
Q4 - 2023	100
Q1 - 2024	180
Q2 - 2024	225
Q3 - 2024	100
Q4 - 2024	60

- i. Caldwell Solar is not responsible for connecting the Project to the existing transmission line. The transmission operator is building the switchyard and will be responsible for the connection to the existing transmission grid.

## Request

50. Refer to the Application, Exhibit H, Attachment F Traffic Study.
- a. The Traffic Study states that deliveries by overweight or oversized trucks are not anticipated. Clarify whether that assumes that the railway is used for large deliveries.
  - b. If the railroad is not used, describe the delivery route for large, heavy equipment such as the main power transformers.
  - c. Provide additional baseline traffic data for local roads adjacent to and within the Project site, including, but not limited to, Old Fredonia Road, Pleasant Valley Road, Skinframe Creek Road, and Fredonia Quarry Road.
  - d. Provide the average daily number of construction vehicles accessing the site, by vehicle type, i.e., worker vehicles, delivery trucks and water trucks (if utilized).
  - e. Provide the peak daily number of construction vehicles accessing the Project site, by vehicle type, i.e., worker vehicles, delivery trucks and water trucks, if utilized.
  - f. Provide the assumption of the number of workers per vehicle traveling to the Project site.
  - g. Provide the maximum expected weights for each type of delivery truck or water trucks, if utilized.
  - h. Identify and describe the anticipated routes to be used by workers and delivery trucks during construction.
  - i. State which roads will be utilized to access the Project site.
  - j. Explain how many commuter vehicles will use each road on average during the construction period.
  - k. Explain how many commuter vehicles will use each road during the peak construction period.
  - l. Explain how many delivery trucks or other large trucks will use each road on average during the construction period.
  - m. Explain how many delivery trucks or other large trucks will use each road during the peak construction period.
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## Response

- a. Caldwell Solar would like to correct the Traffic Study and clarify that overweight or oversized trucks may be used for construction deliveries. Caldwell Solar will obtain all

necessary permits from road authorities if overweight or oversized trucks are used. Railways or trucks may be used for large deliveries.

b. The delivery route for large, heavy equipment will be determined closer to construction, in coordination with the supplier. Caldwell Solar anticipates US-641 and KY Route 91 (Marion Road) will be used for large deliveries.

c. Public baseline traffic data for local roads (Old Fredonia Road, Pleasant Valley Road, Skinframe Creek Road, and Hidden Meadows Road) were obtained from five additional stations (there are no stations located on Fredonia Quarry Road). Table 1 of Exhibit H-Appendix C has been updated below. One of the AADT values has been updated due to the availability of new data; and some distances have been slightly revised to reflect the final site layout. Note that the Kentucky Transportation Cabinet reported an AADT of zero at two stations. Technically, AADT should be some value greater than zero, but the KTC data does not report data between zero and one.

Station ID	Roadway	County	Milepoints	Distance from Project Area	Annual Average Daily Traffic (AADT; average of vehicles / 24 hours)
17565	I-69	Caldwell	73.694-79.771	7,110 feet – southeast of Project area	9,000
17750	KY-91	Caldwell	15.776-23.389	340 feet – north of Project area	2,741
17755	US-641	Caldwell	0.000-2.877	8,600 feet – northwest of Project area	2,515

17511	KY-91	Caldwell	13.905-15.776	9,900 feet – northeast of Project area	2,465
72016	US-641	Lyon	2.668–5.715	6,500 feet – southwest of Project area	2,550
17540	CR-1366 (Pleasant Valley Rd.)	Caldwell	1.745-1.945	1,666 feet – south of Project area	126
17539	CR-1250 (Old Fredonia Rd.)	Caldwell	6.576-6.776	3,060 feet – south of Project area	79
17689	CR-1372 (Hidden Meadow Lane)	Caldwell	0.078-0.278	3,175 feet – east of Project area	29
17542	CR-1373 (Skinframe Creek Rd.)	Caldwell	0.133-0.246	In Project area	0
17557	CR-1250 (Old Fredonia Rd.)	Caldwell	5.440-5.640	In Project area	0

- d. 20 delivery trucks, 1-2 water trucks, 60 worker vehicles, minus any carpooling.
- e. 30-40 delivery trucks, 1-2 water trucks, 225 worker vehicles, minus any carpooling.
- f. Although some workers may carpool, the average number of workers per vehicle is estimated to be one.
- g. Project equipment will be delivered via semi-trucks. The two main power transformers will be the heaviest delivery with an expected weight of 235,000-290,000 pounds per truck in total. Delivery of other equipment, such as inverters and modules, is expected to weigh up to 70,000 pounds per truck. The expected water truck weight is 15,000 pounds.
- h. The routes will be finalized closer to construction, after the laydown area locations have been selected. Construction workers and deliveries will likely originate from KY Route

91 and US-641. Caldwell Solar will coordinate construction routes with the Caldwell County Road Supervisor.

- i. Refer to Amended Exhibit J for a map of preliminary site access roads. At final design, Caldwell Solar will select access routes that move equipment and construction workers around the site in the most effective manner, while taking into consideration impacts to roads and neighbors. Caldwell Solar will coordinate construction routes with the Caldwell County Road Supervisor.
- j. Caldwell Solar assumes an average of 60 commuter vehicles across multiple roads.
- k. Caldwell Solar assumes an average of 225 commuter vehicles across multiple roads.
- l. Caldwell Solar assumes an average of 20 delivery vehicles across multiple roads.
- m. Caldwell Solar assumes an average of 20 delivery vehicles across multiple roads.



**Request**

52. Explain whether water trucks will be required to deliver water to the Project site during construction. If so, provide the number of water trucks accessing the site on (1) average and (2) during the peak period.

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**Response**

Caldwell Solar anticipates an average of 1-2 water trucks during both average and peak periods.

**Request**

66. State the number of days or weeks over which pile driving activities will occur.

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**Response**

Pile driving activities are anticipated to last 5 months, but will move across different regions of the site during those 5 months.

### **Request**

80. Refer to Application, Exhibit F, Section 2 Capital Investment.
- a. Public meeting materials included in Exhibit C state capital investment of \$317 million. Confirm or correct that estimate.
  - b. Explain what types of materials, supplies, or equipment would be purchased within Kentucky in support of Project construction.
  - c. Explain what types of materials, supplies, or equipment would be purchased within the regional SAOI (Caldwell, Crittenden, and Lyon counties) in support of Project construction.
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### **Response**

- a. The estimated capital infrastructure investment is estimated to be approximately \$317 million as presented in the public meeting materials.
- b. To support Project construction, Caldwell Solar is likely to purchase materials such as steel, rebar, and cable within Kentucky.
- c. To support Project construction, Caldwell Solar is likely to purchase aggregate, concrete, building supplies for the operations and maintenance building within the regional SAOI.

**Request**

83. Clarify whether the 160.6 jobs generated during the construction phase are FTEs and whether the jobs noted in this section are expected to be filled by residents of Kentucky.

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**Response**

Yes, the jobs generated during construction are FTEs. It is always the intent of Caldwell Solar to hire employees during the construction phase as locally as possible, but it is important to note the ability to do so is heavily dependent on the selected EPC as well as the availability of local employees with the necessary skill sets.

**Request**

84. Clarify whether additional construction jobs will be generated by the Project, but filled by out of state residents.

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**Response**

It is always the intent of Caldwell Solar to hire employees during the construction phase as locally as possible, but it is important to note the ability to do so is heavily dependent on the selected EPC as well as the availability of local employees with the necessary skill sets.

**Request**

85. Confirm or correct our understanding that average earnings per construction employee is about \$69,350 over the entire construction period.

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**Response**

Yes, that is correct.

**Request**

88. Confirm or correct our understanding that each operational employee would earn an average annual salary of \$60,000 each. In comparison, public meeting materials included in Exhibit C suggest that each operational employee would earn an annual salary of \$70,000.

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**Response**

It is correct to assume that each operation employee would earn an average annual salary of \$60,000-\$70,000. Currently, the average solar technician's salary is typically approximately \$70k/year.

### **Request**

91. Refer to the Application, Exhibit F, Section 5 Economic Impacts: Regional. Section 3 explains the methodologies used to determine regional impacts. That methodology appears to result in a conclusion that less than one direct construction job will be generated by the Project in the local area and no operational jobs (although it is noted in the text that the five operational jobs are likely to be filled by local individuals). Provide a revised estimate of the number of construction jobs, and associated earnings, potentially filled by local residents.

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### **Response**

Caldwell Solar anticipates hiring up to 300 employees during the construction phase with an average annual salary equal to approximately \$69,350. To support facility operations, Caldwell Solar anticipates between five to seven full time equivalent employees comprised of solar technicians and supervisors with an average annual salary equal to approximately \$70,000. It is always the intent of Caldwell Solar to hire employees as locally as possible, but it is important to note the ability to do so is heavily dependent on the selected EPC as well as the availability of local employees with the necessary skill sets.



**Request**

92. Explain what types of items (materials, supplies, equipment, etc.) would be purchased from within the regional SAOI in support of facility operations.

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**Response**

To support facility operations, Caldwell Solar is likely to purchase items such as fuel, utilities, fuses, rags, tools, and necessary lubricants within the regional SAOI.