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## Review of Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico

January 29, 2025 *(Revised July 31, 2025)*



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## **1. INTRODUCTION**

Glorieta Geoscience (GGI), A Division of GZA GeoEnvironmental, Inc. was retained by Santa Fe County (County) to conduct a third-party review (Review) of an Environmental Impact Report (EIR) submitted by Rancho Viejo Solar, LLC (Applicant) for technical accuracy and for compliance with the Santa Fe County Sustainable Land Development Code (SLDC) Chapter 6.3.: *Environmental Impact Report (EIR)*. The proposed development is a solar array facility that includes a battery energy storage system (BESS), a substation, a generation tie-in line, water tank, access roads, and an operations building on approximately 724 acres of land in Santa Fe County 3 miles south of Santa Fe City limits, and 4.2 miles east of La Cienega. The development is known as the Rancho Viejo Solar Project (Project, Development), and is proposed to provide New Mexico with additional renewable energy sources and help the state to achieve its goals for cutting fossil-based energy.

The EIR was submitted to the County in July 2024 and summarizes the technical characteristics of the Project, as well as expected impacts to the local environment, and measures that will be taken to mitigate these impacts. This Review summarizes the EIR's compliance with each requirement stated in SLDC Chapter 6.3. noting any deficiencies in the assessment (Table 1).

In addition, this Review assesses the technical accuracy of the EIR. To the best of GGI's ability and specialized knowledge, we evaluated the accuracy of the EIR's assessment of impacts to environmental resources, and claims presented in the EIR that impacts would be significant or insignificant.

On January 22, 2025, the Applicant prepared a response to GGI's draft third party review of the EIR. GGI responded to the Applicant's comments in their *Review of Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico* dated January 29, 2025. Since the Santa Fe County Planning Commission Hearing on February 3 and 4, 2025, GGI and the Applicant have communicated questions, comments, and concerns through Santa Fe County staff regarding the application. This revised report summarizes the results of those communications and provides final recommendations from GGI regarding the application.

## **2. COMPLIANCE WITH SLDC CHAPTER 6.3.**

Table 1 provides an in-depth review of each requirement of SLDC Ch 6.3. The table breaks down each requirement of SLDC Ch 6.3., where the requirement was addressed in the EIR, if the requirement was sufficiently addressed by the EIR, and additional explanations if necessary. Any deficiencies in full compliance with SLDC Chapter 6.3. are identified, along with a brief explanation as to how such deficiencies should be addressed to satisfy each requirement. The Applicant's responses to GGI's draft report (2024) are also included in Table 1, along with GGI's final comments.

## **3. TECHNICAL ACCURACY ASSESSMENT**

In addition to compliance with SLDC Chapter 6.3., GGI evaluated the EIR for technical accuracy, which included the following:

- Identifying deficiencies in the EIR's assessment of anticipated impacts to environmental

resources

- Identifying areas where additional explanation is needed to understand potential impacts to environmental resources
- Verifying that the assessment of significant vs. insignificant impacts is accurate based on the information provided

Below are items within the EIR which GGI identified as deficient, in need of clarification, and/or inaccurate. These items include additional deficiencies that are not addressed in Table 1 and should be addressed to ensure technical accuracy.

### **3.1. Water Use: Section 2.1.2.4 of EIR**

The EIR states the estimated water use throughout the 12-month construction period will be 100-150 acre-feet. According to AES's responses to GGI's December 3, 2024 Draft and January 29, 2025 final reports, the water sources will be delivered to the project site by trucks and piped from the existing hydrant located nearest to the property. Water sources include potable water leased from Univest-Rancho Viejo, LLC in the County water system that are not currently being utilized, and reclaimed water from Ranchland Utilities. The Applicant's written water budget is as follows:

#### **Construction**

Water use during construction will be approximately 100 to 150 acre-feet over a 12-month construction period and will be delivered to the Rancho Viejo Solar Project (project) site by water trucks and piped from the existing hydrant located at the intersection of the access road and State Road 14. The water will be leased from Univest-Rancho Viejo, LLC with water rights Univest-Rancho Viejo, LLC owns in the County water system that are not currently being utilized. Water use during construction will maintain a balance between trucking reclaimed water to the project site and piping hydrant water and/or reclaimed water, to minimize transportation-related impacts and use of hydrant water. Water use will be managed as follows:

- During the months of April through September, when Ranchland Utility Company supplies much of its Class 1A reclaimed water for irrigation purposes, the majority of project construction water will be piped from the existing hydrant located at the intersection of the access road and State Road 14. This will limit the need for trucking water to the site from April through September. However, there may be several supplemental deliveries of reclaimed water (no more than six per day), when available, during these months. All water trucks will be scheduled outside the peak traffic hours of 7:30 to 8:30 a.m. and 4:30 to 5:30 p.m.
- During the months of October through March, when Ranchland Utility Company has excess Class 1A reclaimed water available, the majority of project construction water will be trucked to the site. This will allow for the greater use of reclaimed water from October through March. During these months, water truck deliveries will be limited to two water trucks per hour. Remaining construction water will be piped from the existing hydrant located at the intersection of the access road and State Road 14. All water trucks will be scheduled outside the peak traffic hours of 7:30 to 8:30 a.m. and 4:30 to 5:30

p.m. The project also may stage water storage tanks (e.g., frac tanks) on-site to minimize further the need for water trucks during periods of heavy use on State Road 14.

Under a worst-case scenario, there could be up to two water trucks per hour for a total of 20 water trucks per day from October through March and up to six water trucks per day from April through September. The EIR included 10 trips per day for material and equipment over the construction period and between 115 and 190 trips per day for workers commuting to the project for the duration of construction. The addition of six to 20 water trucks per day represents a 3% to 10% increase in vehicle trips. Because this addition of vehicle trips is modest, and because all water trucks will be scheduled outside the peak traffic hours of 7:30 to 8:30 a.m. and 4:30 to 5:30 p.m., there is no change to the traffic and roads effects analysis conclusions in the EIR. See confirmation letter prepared by Carl Vermillion, Traffic & Transportation Engineer at Bohannon Huston, and author of the Traffic Assessment for the project (enclosed with January 22, 2025, Response to the Third-Party Review of the Environmental Impact Report).

**Water Use Composition (Construction)**

Time of Year	Trucked Class A Reclaimed Water	Daily Truck Trips <sup>1</sup>	Piped Hydrant Water
<i>Water use of 150 acre-feet (134,000 gpd) over 12-month construction period</i>			
April thru September	24,000 gpd	6	110,000 gpd
October thru March	80,000 gpd	20	54,000 gpd
<b>Total Water Use by Source</b>	18,980,000 gallons 58 acre-feet	--	29,930,000 gallons 92 acre-feet
<i>Water use of 100 acre-feet (90,000 gpd) over 12-month construction period</i>			
April thru September	24,000	6	66,000
October thru March	80,000	20	10,000
<b>Total Water Use by Source</b>	18,980,000 gallons 58 acre-feet	--	13,870,000 gallons 42 acre-feet

<sup>1</sup>Water trucks are assumed to be 4,000 gallons.

**Water Use Composition (Operations)**

PV Panel Washing

The annual water consumption for operation of the facility will be expected to be approximately 2 to 3 acre-feet. This includes the water required for washing the PV panels as many as four times per year using a manual cleaning system. The estimated 2-to-3-acre feet of water that will be needed per year for O&M activities will be sourced from Ranchland Utility Company Class A reclaimed water and will be trucked to the project site.

The maximum 3 acre-feet or 977,500 gallons used over four PV panel washing events, amounts to 244,375 gallons per event. Each panel washing event would take approximately 2-to-3 weeks, which would result in approximately 4-to-6 water trucks per day. All water trucks will be scheduled outside the peak traffic hours of 7:30 to 8:30 a.m. and 4:30 to 5:30 p.m.

#### O&M Building

Potable water use at the O&M building will be approximately 3,000 gallons per month and will likely be supplied via Santa Fe County bulk water station. This would amount to one water truck about every six weeks.

#### **Decommissioning Water Use**

Water use estimates for project decommissioning will be included in the water budget to be submitted to Glorieta Geoscience prior to recordation of the CUP Site Development Plan. It is anticipated the volume of water used for decommissioning will be less than the volume of water needed for construction.”

It is GGI’s professional opinion that this additional detail is sufficient to satisfy the requirements of SLDC Chapter 6.3. with the following conditions:

- The Applicant shall provide to the County a copy of an executed lease agreement with Univest-Rancho Viejo, LLC for the water rights required for this project including the applicable New Mexico Office of the State Engineer (OSE) permit and permit conditions under the New Mexico Water Rights Leasing Act. The Applicant has confirmed that all necessary permits will be acquired prior to recordation of the Conditional Use Permit.
- The landowner has submitted a request for the Santa Fe County Utilities Department to provide a ready, willing, and able letter showing that they have the capability of providing 150 acre-ft of water during construction. If the County Utilities Department approves this request, the Applicant shall provide a copy to GGI and submit it with their application materials prior to recordation of the Conditional Use Permit.
- If the County Utilities department denies the use of potable water for construction, the Applicant should provide evidence that up to 150 acre-feet of reclaimed water can be provided by available resources. This can include Ranchland Utilities (DP-1164), or a combination of DP-1164 reclaimed water and other reclaimed water resources such as the City of Santa Fe wastewater treatment facility. The Applicant will then need to re-evaluate the water, traffic, noise, and air quality studies accordingly, and GGI will review these studies for accuracy prior to recordation of the Conditional Use Permit.
- If reclaimed water is trucked from Ranchland Utilities to the project site, Ranchland Utilities will require a modification to their existing Discharge Permit (DP-1164) to allow reclaimed water to be used outside of its currently permitted location. The Applicant confirmed that a Discharge Permit modification will be completed prior to trucking and discharging reclaimed water at the project site. If reclaimed water is piped from Ranchland Utilities to the site, the Applicant will be required to obtain its own Ground Water Discharge Permit from the New Mexico Environment

## Department.

The Applicant stated in the EIR that the large vehicle traffic would include approximately 10 trucks per day. The Applicant revised this number in their above response to include six (6) to 20 additional large vehicles per day to account for water hauling. With an additional 115-190 passenger vehicle trips per day, the Applicant states that this increase in large vehicle traffic is only a 3-10% increase. It is GGI's opinion that this 3-10% increase is not an accurate representation of this increase in traffic, and that it would be more accurate to consider the increase in large vehicle traffic as an increase of 60-100%, as large vehicles have considerably higher greenhouse gas (GHG) emissions than passenger vehicles. However, GGI agrees with the Applicant that developing this solar array will generate renewable energy that will more than offset the GHG impacts from an increase in vehicle traffic.

### 3.2 Noise

GGI collaborated with our in-house GZA Acoustics Team to review and provide recommendations regarding the Applicant's noise-related sections of the EIR, including the Noise Technical Report included as Appendix C to the EIR. GZA Acoustics staff provided a memorandum to Santa Fe County on July 25, 2025 with our findings and recommendations. That memorandum is included as Attachment A of this report.

In summary, the memorandum states that a 24-hour ambient noise study is required to be conducted in the southwest corner of the project site boundary to determine the worst-case (lowest) 30-minute intervals during both daytime and nighttime. This 30-minute average ambient reading is a requirement under SLDC 7.21.4. These intervals will be used to prepare baseline ambient noise levels on which to base all operational noise modeling. When the Applicant completes the required noise monitoring and models noise impacts using these ambient measurements, GGI/GZA will review the final report for technical accuracy and compliance with SLDC 7.21.4. It is GGI's understanding that the Applicant is planning to conduct the above-recommended ambient noise monitoring and revise their report as necessary prior to the Board of County Commissioners (BCC) hearing on August 11 and 12, 2025. At the time of this report deadline (August 4, 2025), the noise monitoring and report had not been submitted for GGI's review.

### 3.3. Evaluation of Significant and Insignificant Impacts on the Environment

The EIR evaluates the development's impacts on 17 different environmental resources: air, biological, cultural, historic, archaeological, religious, geological, paleontological, soil, geographic, health and safety, land use, minerals and mining, noise, socioeconomic, roads, water, and visual resources.

For each of these environmental resources, a series of mitigation measures were described which will be implemented to mitigate potential impacts on the environment during the construction, operation, and decommissioning of the development. The EIR describes impacts to all resources as "less than significant" if mitigation measures are implemented. It is GGI's opinion that if all mitigation measures are implemented correctly, and if all permitting requirements are approved prior to construction, impacts to each environmental resource will be less than significant.

GGI's detailed review of the EIR's compliance with SLDC 6.3. is presented in Table 1 below.

## **5. REFERENCES**

Glorieta Geoscience, A Division of GZA GeoEnvironmental, Inc (2024). Review of Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico. Unpublished draft report for Santa Fe County.

Glorieta Geoscience, A Division of GZA GeoEnvironmental, Inc (2025). Review of Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico. Unpublished final report for Santa Fe County.

Gordon, Matt (2025). AES Clean Energy Senior Project Manager, Environmental Permitting. Unpublished e-mail communication to Santa Fe County staff Dominic Sisneros in response to GGI January 2025 Final Report.

GZA GeoEnvironmental, Inc. (2025). Internal memorandum from Gene Bove and Ethan Wagner to Abby Guidry.

SWCA Environmental Consultants (2024). Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico. Unpublished consultant report for Rancho Viejo Solar, LLC.

SWCA Environmental Consultants (2025). Response to the Third-Party Review of the Environmental Impact Report for the Rancho Viejo Solar Project in Santa Fe County, New Mexico, by Glorieta Geoscience, A Division of GZA GeoEnvironmental, Inc. Unpublished consultant report for Rancho Viejo Solar, LLC.

## **Attachments:**

Attachment A: GZA Internal Memo on Noise Study

Table 1. Assessment of Rancho Viejo Solar EIR Compliance with SLDC Ch 6.3						
Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
<b>Summary</b>						
<b>6.3.3. Summary.</b>	Does the EIR contain a summary of the proposed actions and their consequences?	ES-1	Yes	The EIR satisfies this requirement.		
	Is the language of the summary as clear and simple as reasonably practical?	ES-1	Yes	The EIR satisfies this requirement.		
<b>6.3.3.1.</b>	Does the summary identify each significant adverse effect and impact with proposed mitigation measures and alternatives that would reduce or avoid that effect or impact?	ES-1	Yes	Impacts summary sufficiently describes potential and expected impacts to each resource category. All impacts are defined as “less than significant” throughout the summary and Ch 3 of the report.		
<b>6.3.3.2.</b>	Does the summary identify areas of potential controversy identified in the pre- application TAC meeting?	ES-1	Yes	The Executive Summary states that the TAC letter with these issues in Appendix A. There were no items of potential controversy listed in the TAC letter.		
<b>6.3.3.3.</b>	Does the summary identify issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects?	ES-1	Yes	The summary does identify issues to be resolved. It mentions the ‘no action’ alternative and discusses the actions that went into avoiding impacts to certain environmental resources. No significant effects are expected according to the EIR.		
<b>Description of the Development, Local Environment and Baseline Conditions</b>						
<b>6.3.4. Project Description.</b>	Does the description of the project contain the following information in a manner that does not supply extensive detail beyond that needed for evaluation and review of the environmental impact? :	1-1	See below	See 6.3.4.1 Below		
<b>6.3.4.1.</b>	Does the description of the project contain precise location and boundaries of the proposed development project, such location and boundaries shown on a detailed topographical map? Does the description of the project contain the location of the project on a regional map?	1-2, 1-3	<b>Yes</b>	The regional map appears to be on a topo base, but no elevations are shown/legible and the contour lines are too difficult to see. <b>A detailed topographic map is needed.</b>	See Figure 1.2 (attached), which has been updated to include detailed topographic contour lines.	This satisfies SLDC 6.3.4.1. ‘Requirement Satisfied?’ column changed to ‘yes’.
<b>6.3.4.2.</b>	Does the description of the project contain a statement of the objectives sought by the proposed development project? The statement of objectives should include the underlying purpose of the project.	1-1	Yes	The EIR satisfies this requirement.		
<b>6.3.4.3.</b>	A general description of the project’s technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities.	Ch 2 Ch 3	Yes	Technical characteristics are described thoroughly in Ch 2. Environmental characteristics are described thoroughly in Ch 3.		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
				<b>Economic characteristics are not specifically described in the EIR, but SLDC Table 6-1 states that Fiscal Impact Assessment is on an ‘as needed’ basis for this project.</b>		
<b>6.3.5. Environmental Setting</b>	Does the EIR include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the environmental analysis is commenced, from the County, area, community, regional, and state perspectives?	Ch 3	Yes	The EIR satisfies this requirement.		
<b>Environmental Effects</b>						
<b>6.3.6. Significant Environmental Effects</b>	Does the EIR demonstrate that the significant environmental effects and impacts of the proposed project were adequately investigated and discussed?	Ch 3	Yes	Significance is defined in the EIR here: “An impact would be considered significant if there were a regional or population-level impact and/or the affected resource would not fully recover, even after the impacting agent is gone and remedial or mitigating action is taken.” The EIR states there will be no significant impacts to the environment based on the definition provided in the report.		
	Does the EIR demonstrate the significant adverse effects or impacts of the project in the full environmental context?	Ch 3	Yes	The EIR states that no proposed impacts are expected to be significant. They use the full environmental context to show this.		
	Has a geotechnical investigation and report been completed for the project?	Ch 3	Yes	Geotechnical report is included in Appendix D.		
	Does the EIR identify and focus on the significant environmental effects of the proposed development project?	Ch 3	Yes	The EIR states no effects are expected to be significant, however other impacts considered ‘less than significant’ are identified and focused on in the report.		
	Are direct and indirect significant effects and impacts of the project on the environment clearly identified and described, giving due consideration to both the short term and long-term effects and impacts?	Ch 3	Yes	Significance has been defined once in the EIR. Direct and indirect impacts are described throughout the report, along with short- and long-term duration status.		
	Does the discussion include relevant specifics of the area, the resources involved, physical changes and alterations to soil conditions, water, environmentally sensitive lands and ecological systems, changes induced in the human use of the land, health and safety problems caused by physical changes, and other aspects of the resource base such as	Ch 3	Yes	The EIR satisfies this requirement.		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
	historical, cultural and archaeological resources, scenic vistas?					
<b>6.3.7. Significant Environmental Effects Which Cannot be avoided</b>	Does the EIR describe significant adverse effects and impacts, including those which can be mitigated but not reduced to a level of insignificance?	Ch 3	Yes	None of the environmental impacts were listed as “significant”. All impacts were discussed in a manner that describes their ability to be mitigated.		
	Where there are effects and impacts that cannot be alleviated without an alternative design, does the EIR describe their implications and the reasons why the development project is being proposed?	Ch 3	Yes	Discussions of locations that were avoided to prevent impacts to visual, archaeological, biological, and wetland resources were included in the EIR. The final design and mitigation measures are presented as not having significant impacts, so these are not discussed.		
<b>6.3.8. Significant Irreversible Environmental Changes</b>	Does the EIR evaluate irretrievable commitments of resources?	Ch 3	Yes	The EIR states ‘no irretrievable commitments of resources are anticipated’ for all resources evaluated. In many places throughout the report, it is stated after discussing that mitigation measures will make impacts ‘less than significant’, which alone does not satisfy this requirement. When discussed in regards to the decommissioning process, the EIR satisfies the requirement- the decommissioned project will be restored to pre-development conditions, meaning that there will be no irretrievable commitments of resources after the decommissioning process is complete.		
<b>6.3.9. Other Adverse Effects.</b>	Does the EIR discuss other characteristics of the project which may significantly affect the environment, either individually or cumulatively? The EIR shall discuss the characteristics of the project which may decrease the area’s suitability for other uses, such as mixed use, industrial, residential, commercial, historical, cultural, archaeological, environmental, public and non-profit facilities, eco-tourism or scenic uses.	Ch 3	Yes	No elements of the development are expected to have significant impacts on the environment as long as mitigation measures are successfully implemented. <b>The EIR does not discuss decreasing the area’s suitability for other uses, because the decommissioning process will return the project site to its pre-development state if done correctly. The decommissioning bond will ensure that the decommissioning process is carried out properly.</b>		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
<b>6.3.10. Mitigation Measures.</b>						
6.3.10.1.	Does the EIR identify mitigation measures for each significant environmental effect identified in the EIR, such as the following? <ul style="list-style-type: none"> <li>inefficient and unnecessary consumption of water and energy;</li> <li>degradation of environmentally sensitive lands; sprawl; and noise, vibration, excessive lighting, odors or other impacts</li> </ul>	Ch 3	Yes	The water resource plan for the first year (construction) fails to address the inefficiencies and impacts of traffic on the surrounding communities and the environment. Water trucking to satisfy water volume needs would require 10,400-15,600 gallons (2-4 4,000-gal water trucks) each hour assuming 12-hour workdays, and 261 working days per year. This will contribute significantly to traffic, noise, and will increase GHG emissions associated with the project. If the fire hydrant will be utilized at the access road point on NM 14, this will reduce the potential impacts associated with hauling.	See "Applicant Response" provided to the Technical Accuracy Assessment from GGI in the above document. Specifically, see Item 1, Water Use: Section 2.1.2.4 of the EIR.	The explanation is sufficient provided that all required permits and approvals are met for water resources at the project site. 'Requirement Satisfied?' column changed to 'yes'.
6.3.10.2.	Where several measures are available to mitigate an effect or impact, does the EIR discuss each measure and the basis for selecting a particular measure identified?	Ch 3	Yes	All measures discussed are ones being proposed to mitigate impacts.		
	Does the EIR identify the formulation of mitigation measures at the first discretionary approval? Under no circumstances shall the formulation of mitigation measures be deferred until the ministerial development process.	Ch 3	Yes	The EIR satisfies this requirement.		
	Do recommended measures specify performance standards which would mitigate the significant effect of the project?	Ch 3	Yes	The EIR states the SWPPP will outline performance standards for two of the resources being mitigated.		
	Do recommended measures specify which may be accomplished in more than one specified way?	Ch 3	Yes	All mitigation measures discussed are ones planned to be taken by the applicant during development and closure/post closure.		
6.3.10.3.	Does the EIR discuss energy conservation measures, as well as other appropriate mitigation measures, when relevant?	Ch 3	Yes	The EIR satisfies this requirement.		
6.3.10.4.	Does the EIR discuss the adverse effects and impacts of mitigation measure <b>when</b> the mitigation measure would cause one or more significant effects and impacts in addition to those that would be caused by the project as proposed?	Ch 3	Yes	No mitigation measures are presented in a way that would cause additional impact to the environment if properly implemented. If the mitigation measures are not expected to cause more significant impacts, they do not need to be discussed in this context.		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
6.3.10.5.	Are the mitigation measures described in the EIR fully enforceable through conditions or a voluntary development agreement?	Ch 3	Yes	The EIR satisfies this requirement.		
6.3.10.6. Were all of the following considered and discussed in the draft EIR:	1. preservation in place is the preferred manner of mitigating impacts to historic, cultural or archaeological sites. Preservation in place maintains the relationship between artifacts and the historical, cultural, and archaeological context. Preservation shall also avoid conflict with religious or cultural values of Indian communities associated with the site;	Ch 3	Yes	This is satisfied by the description provided in the text and the four letters from the SHPO (state historic preservation officer). The cultural sites will be avoided completely for construction and left in place. No religious resources will be impacted.		
	2. preservation in place may be accomplished by, but is not limited to, planning construction to avoid all historical, cultural or archaeological sites; and incorporation of sites within parks, green-space, or other open space;	Ch 3	Yes	The EIR satisfies this requirement.		
	3. when data recovery through excavation is the only feasible mitigation, a data recovery plan which makes provision for adequately recovering the scientifically consequential information from and about the historical, cultural, or archaeological resource, shall be prepared and adopted prior to any excavation being undertaken. If an artifact must be removed during project excavation or testing, storage of such artifact, under proper supervision, may be an appropriate mitigation; and	Ch 3	Yes	Excavation is not necessary as the two cultural sites will be avoided by at least 100 ft from the construction zone. All other artifacts were determined ineligible.		
	4. data recovery shall not be required for an historical, cultural or archaeological resource if the appropriate entity determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented in the draft EIR.	Ch 3	Yes	The EIR satisfies this requirement.		
<b>6.3.11. Consideration and Discussion of Alternatives to the Proposed Project</b>						
6.3.11.1. Alternatives to the Proposed Project.	Does the EIR describe a range of reasonable alternatives to the project, or to the location, which would feasibly attain some of the basic objectives of the project but would avoid or substantially lessen the significant and adverse impacts or effects of the project?	Ch 2	Yes	The alternatives discussed are ones that would have a greater impact on the environment than the project as proposed. The project as proposed is the least significant alternative.		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
	Does the EIR evaluate the comparative merits of the alternatives, even if those alternatives would impede the attainment of the project objectives or would be more costly?	Ch 2	<b>Yes – see GGI Response</b>	Merits of the proposed alternatives are not discussed, only reasons why the alternatives were not chosen.	As stated in the EIR, alternative locations were considered within the larger parcel. Merits of these alternatives are provided as follows: <ul style="list-style-type: none"> <li>Partially siting the Project in Sections 5 and 6 would have allowed the solar arrays to shift to the north and away from the San Marcos subdivisions. This alternative was dismissed due to biological resources constraints along the southern branch of Bonanza Creek and the north-facing slopes.</li> <li>Siting the Project in Section 7, which is generally flat, would have benefited the overall solar production and efficiency rate. This alternative was dismissed based on public feedback related to concerns of potential visual resources effects to residential areas located to the south.</li> <li>Locating the Project closer to State Road 14 would have provided for a shorter access road. This alternative was eliminated because it is within part of the Turquoise Trail National Scenic Byway.</li> </ul>	The merits of the alternatives as described in SWCA’s response were not described in the EIR. Adding this response to the EIR would satisfy SLDC 6.3.11.1. ‘Requirement Satisfied?’ column changed to ‘yes’.
<b>6.3.11.2. Evaluation of alternatives.</b>	Does the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project?	Ch 2	<b>Yes</b>	The only information provided about alternatives is why they were not chosen.	See additional details added in the row immediately above, including merits of alternatives considered but eliminated from further analysis. Ultimately, the Proposed Action was chosen because it was the option that minimizes environmental impacts, and it represents the most feasible alternative for implementation.	If added to the EIR, the merits of the alternatives as described in SWCA’s response would satisfy SLDC 6.3.11.2. ‘Requirement Satisfied?’ column changed to ‘yes’.

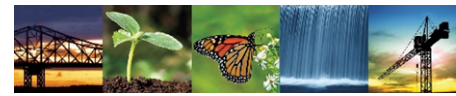
<p><b>6.3.11.3. Selection of a range of reasonable alternatives.</b></p>	<p>Does the EIR briefly describe the rationale for selecting the alternatives discussed?</p>	<p>Ch 2</p>	<p>Yes</p>	<p>No, the EIR does not explain why the alternatives were selected, but rather why the alternatives were not selected in place of the project as proposed.</p>	<p>The Proposed Action was refined based on public feedback, environmental diligence studies, and design constraints and this refined Proposed Action is the Project that is proposed within the CUP application and EIR. Ultimately, the Proposed Action was chosen because it was the option that minimizes environmental impacts, and it represents the most feasible alternative for implementation.</p>	<p>SWCA's responses satisfy SLDC 6.3.11.3. 'Requirement Satisfied?' column changed to 'yes'.</p>
Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
	<p>Does the EIR also identify any alternatives that were considered but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the determination?</p>	<p>Ch 2</p>	<p>Yes</p>	<p>The EIR satisfies this requirement.</p>		
<p><b>6.3.11.4. "No project" alternative</b></p>	<p>Was the specified alternative of "no project" evaluated along with its effects and impacts?</p>	<p>Ch 2 and Ch 3</p>	<p>Yes</p>	<p>There is a brief description in Ch 2 of the 'no project' alternative. In addition. There are sections labeled "No Action" under every single potentially impacted resource throughout Ch 3. Each of these together satisfies this requirement.</p>		
<p>6.3.11.4</p>	<p>Does the description and analysis of a "no project" alternative allow a comparison of any adverse effects and impacts of the proposed project with effects and impacts if the project were not accomplished?</p>	<p>Ch 2, Ch 3</p>	<p>Yes</p>	<p>The EIR satisfies this requirement.</p>		
<p>6.3.11.4</p>	<p>Is the "no project" alternative identical to the existing environmental setting analysis? If so, the "no project" alternative analysis is the baseline for determining whether the proposed project's environmental effects or impacts may be significant or adverse.</p>	<p>Ch 2</p>	<p>Yes</p>	<p>The 'no project' alternative is presented as identical to the existing environmental setting in Section 2.2.</p>		
<p>6.3.11.4.1</p>	<p>1. Does the "no project" analysis discuss the existing conditions at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the development project were not approved, based on current plans and consistent with available infrastructure and community services? Is the environmentally preferred alternative the "no project" alternative, and does the draft EIR also identify an environmentally preferred alternative among the other alternatives?</p>	<p>Ch 2</p>	<p>Yes</p>	<p>The EIR frames the Proposed Project as the environmentally preferred alternative – the 'no action' focuses on the potential other types of future development being worse, and the other locations as more impactful to certain resources. The EIR does discuss what would be reasonably likely to occur in the foreseeable future.</p>		

Code	Topic	EIR Location	Requirement Satisfied?	GGI Explanation (GGI, 2024)	Applicant Response (SWCA, 2025)	GGI Response to Applicant
	<p>Does the discussion of the “no project” alternative proceed as follows: The “no project” alternative is the circumstance under which the development project does not proceed. Does the discussion compare the environmental effects of the property remaining in its existing state against the environmental and adverse effects which would occur if the project were to be approved? If the consequence of disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other development project, was this discussed? Does the “no project” alternative mean “no build”, i.e., where the existing environmental setting is maintained? If failure to proceed with the project will not result in preservation of existing environmental conditions, does the analysis identify the practical result of the project’s non-approval?</p>	Ch 2, Ch 3	Yes	<p>Discussions of the No Project alternative are described in Ch 2 as well as throughout Ch 3 as they relate to each potentially affected resource. These descriptions compare the impacts of no development to the impacts of other potential developments. Other potential types of development projects are described in Section 2.2. The consequences of the development are described as follows: “the No Action Alternative could result in impacts to resources that would be similar and potentially greater in magnitude than the Proposed Action. Further, as Santa Fe County and the state of New Mexico both have goals related to renewable energy production, this Project would not contribute to those goals under the No Action Alternative.”</p>		
<b>6.3.11.5. Feasibility</b>	<p>Were some or all the following considered when addressing the feasibility of alternatives:</p> <ul style="list-style-type: none"> <li>• site suitability,</li> <li>• economic use and value viability,</li> <li>• availability of infrastructure,</li> <li>• jurisdictional boundaries (projects with a significant effect or impact should consider the county wide context), and</li> <li>• whether the applicant can reasonably acquire, control or otherwise have access to an alternative site in the common ownership?</li> </ul>	Ch 2	<b>Yes – See GGI Comments.</b>	<p>Alternative locations for the gen-tie and BESS were not discussed in the EIR, but alternative locations for the solar array itself were discussed and avoided due to biological resources, potential impacts to the Turquoise Trail National Scenic Byway, cultural resources, visual resources, and jurisdictional wetland boundaries. <b>Additional explanations relating to the feasibility of alternatives is necessary for the project beyond just alternative locations for parts of the development as discussed above.</b></p>	<p>The battery energy storage system was sited to be approximately 1.5 miles from residential properties. The project collector substation is sited adjacent to the battery energy storage system as a general design standard. The generation tie line alignment is a function of the shortest distance between the project collector substation and the point of interconnection. By minimizing the length of the generation tie line, the project minimizes potential impacts, including potential impacts to visual resources. The Proposed Action was refined based on public feedback, environmental diligence studies, and design constraints and this refined</p>	<p>SWCA’s responses satisfy SLDC 6.3.11.3. ‘Requirement Satisfied?’ column changed to ‘yes’.</p>

					Proposed Action is the Project that is proposed within the CUP application and EIR. Ultimately, the Proposed Action was chosen because it was the option that minimizes environmental impacts, and it represents the most feasible alternative for implementation.	
<b>6.3.11.6. Alternative locations.</b>	Does the analysis identify whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location? <b>Only locations that would avoid or substantially lessen any of the significant effects of the project should be included in the EIR.</b> Does the EIR consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (this is something that should NOT be done)?	Ch 2	Yes	The analysis does not identify any impacts of the development as ‘significant’ but discusses that alternative locations of the proposed project would have impacted certain cultural, visual, biological, and other resources more than the project as proposed. The SLDC states that only locations which would avoid or substantially lessen any of the significant effects of the project should be included in the EIR, however the EIR states no “significant” impacts will be associated with the development.  The EIR does not consider alternatives that are not reasonably ascertainable and whose implementation is remote and speculative.		
<b>Code</b>	<b>Topic</b>	<b>EIR Location</b>	<b>Requirement Satisfied?</b>	<b>GGI Explanation (GGI, 2024)</b>	<b>Applicant Response (SWCA, 2025)</b>	<b>GGI Response to Applicant</b>
<b>6.3.12. Organizations and Persons Consulted</b>						
<b>6.3.12. Organizations and Persons Consulted.</b>	Does the EIR identify all federal, state, or local agencies, tribal governments, or other organizations or entities, and any interested persons consulted in preparing the draft?	Ch 5	Yes	The EIR satisfies this requirement.		
<b>6.3.13. Discussion of Cumulative Impacts</b>						
<b>6.3.13. Discussion of Cumulative Impacts.</b>	Does the EIR discuss cumulative effects of a project? Does the discussion of cumulative effects and impacts reflect the severity of the effects and impacts and their likelihood of occurrence?	Ch 3	Yes	Cumulative impacts are summarized for every resource (Ch 3) within the cumulative impact analysis area (CIAA – 5-mile radius around project). Likelihood of impact is described, and severity is described (the EIR describes all as insignificant).		

6.3.13.1.	Does the <b>discussion focus</b> on the cumulative effects and impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative effect and impact?	Ch 3	Yes	The EIR satisfies this requirement.		
	Does the EIR discuss the following elements necessary to an adequate discussion of significant cumulative impacts: 1. a list of past, present, and probable future development projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the County (when determining whether to include a related development project, factors to consider should include, but are not limited to, the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue or when an impact is specialized, such as a particular air pollutant or mode of traffic);	Ch 3	Yes	The EIR satisfies this requirement.		
<b>Code</b>	<b>Topic</b>	<b>EIR Location</b>	<b>Requirement Satisfied?</b>	<b>GGI Explanation (GGI, 2024)</b>	<b>Applicant Response (SWCA, 2025)</b>	<b>GGI Response to Applicant</b>
	2. Does the EIR define the geographic scope of the area affected by the cumulative effect and impact and provide a reasonable explanation for the geographic scope utilized?	Ch 3	Yes	The geographic scope is defined as the cumulative impact analysis area (CIAA) which includes a 5-mile buffer around the proposed project and a reasonable explanation is provided.		
	3. Does the EIR include a summary of the expected environmental effects to be produced by those projects with the specific reference to additional information stating where that information is available?	Ch 2	Yes	The expected environmental effects associated with other projects in conjunction with this project are mentioned briefly in each 'cumulative impacts' statement associated with each resource throughout Ch 3. Section 3.2 describes past, present, and probable future development projects citing sources for this information.		
	4. A <b>reasonable</b> analysis of the cumulative impacts of the relevant projects? Does the draft EIR examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects or impacts?	Ch 3	Yes	The EIR and Rancho Viejo Solar, LLC specify their proposed actions to mitigate the development's contribution to cumulative impacts on the environment.		

<p><b>6.3.13.2.</b></p>	<p>Did the cumulative impact analysis use approved land use documents, including the SGMP and any applicable area, district or community plans?          Was a pertinent discussion of cumulative effects and impacts, contained in one or more previously certified final EIR development projects and incorporated by reference?</p>	<p>Ch 3</p>	<p><b>Yes</b></p>	<p>Ch 3.2 references the SGMP and the Community College District (CCD) Plan. The EIR does not reference one or more EIRs in the vicinity.</p>	<p>There are no applicable previously certified EIRs in the vicinity for consideration.</p>	<p>Santa Fe County staff stated that no applicable EIRs exist in the vicinity.          'Requirement Satisfied?' column changed to 'yes'.</p>
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July 25, 2025

Ms. Abby Guidry  
Via Email to: abby.guidry@gza.com

Re: Rancho Viejo Solar Project  
Sections 2–9  
Township 15 North, Range 9 East  
Santa Fe County, NM

Dear Abby,

GZA GeoEnvironmental, Inc. (GZA) acoustics group completed a review of an Environmental Impact Report (EIR) and noise report prepared by SWCA Consultants on behalf of the proposed AES/Rancho Viejo Solar project in Santa Fe County. GZA evaluated Santa Fe County Sustainable Land Development Code (SLDC) 7.21.4. 'Noise' to assess the noise levels generated from construction and operational noise from the proposed project on lands leased by AES from Rancho Viejo in Santa Fe County, NM (Project Site).

The GZA acoustics team's experience includes modeling long term noise levels based on specific construction equipment and vehicles utilized, renewable energy noise assessments including over 85 individual solar and battery energy storage projects, as well as various other acoustics related projects.

**PROJECT SCOPE**

The GZA acoustics team was requested to provide a technical and regulatory compliance review of the SWCA environmental impact report (EIR), and the SWCA Noise Technical Report submitted as Appendix C to the EIR (revised November 2024). GZA was asked to review the reports based on our experience with energy projects and construction noise impact reports. A short memo reviewing the two texts mentioned above as well as the Santa Fe County Sustainable Land Development Code (SLDC) Section 7.21.4 (Noise) is provided below.

## SANTA FE COUNTY NOISE CODE DISCUSSION AND FINDINGS

SLDC Section 7.21.4 describes operational noise requirements within the County. SLDC Section 7.21.4 is as follows:

**7.21.4. Noise.** Any actual or projected measurement that exceeds the average conditions calculated over a thirty (30) minute period, at the property line, of the limits shown in Table 7-21 shall be grounds for denial of a development application or imposition of noise mitigation efforts sufficient to ensure that the development will not exceed the applicable noise limits. The Administrator may require a noise study to be conducted whenever it is determined that the use proposed in the development application may exceed the noise limits. This determination may be made by category of use or on an application-by-application basis.

**Table 7-21: Noise Limits.**

Zoning District	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Industrial and Commercial*	75dBA, or 10 dBA above ambient; whichever is less	60dBA, or 5 dBA above ambient; whichever is less
All Other Districts	55dBA, or 5 dBA above ambient; whichever is less	45dBA, or 5 dBA above ambient; whichever is less

\*These noise limits shall not apply to wind energy facilities. Instead, see limits contained at Section 10.16

There are two phases to consider for this noise ordinance – during construction and during regular operation of the solar installation. GZA staff confirmed with Santa Fe County staff that construction noise would be exempt from meeting the noise limits outlined in Table 7-21 in the conditions of the Conditional Use Permit, as is standard with all development projects within the County. County staff also verified that the Conditions of Approval written by the Santa Fe County Planning Commission require construction to be limited to daytime hours. Therefore, as long as construction only occurs during daytime hours, construction noise modeling is not necessary in the SWCA Noise Technical Report to meet County requirements.

For operational noise, the time of operation will be relevant to the noise code interpretation. In summer hours when the sunrise is before 7am, trackers and transformers will be audible noise sources during nighttime limits. Therefore, a conservative 45 dB(A) or 5 dB(A) increase over ambient at relevant property lines is applicable in analysis.

Last, it is important to be basing all impact calculations from 30 minute “average” readings at the relevant property line – which may be interpreted as Leq (average noise detected over a time period) or L50 (median noise level detected over a time period).

## SWCA ENVIRONMENTAL IMPACT REPORT REVIEW AND FINDINGS

Ambient noise levels were not discussed in the body of the EIR, but ambient readings taken by County staff were discussed in Appendix C (Noise Technical Report). Based on GZA’s observations during a site visit with County staff on November 15, 2024, two brief readings were recorded by County staff: one in

the southwest corner of the property, and one in the northeast corner. Based on SLDC 7.21.4, it is our professional opinion that 24-hour monitoring should be conducted along the nearest sensitive receiver property line to evaluate worst-case (lowest) 30-minute readings for daytime and nighttime. In this case, the property line would be the southwest corner of the AES development nearest to a sensitive receptor.

Construction noise will likely raise ambient noise levels at sensitive receiver property lines to 55 dB(A) during the day. If any construction is to occur outside approved construction hours, the applicant will need to coordinate with Santa Fe County and ensure that noise levels stay below the specified limits in SLDC 7.21.4. The nearest residence is located 0.26 miles (or 1,400 feet) to the southwest of the nearest property line. Therefore, it is possible that the ambient noise level is below the assumed nighttime 42 dB(A), which is an important consideration when assessing noise impacts.

### **NOISE TECHNICAL REPORT RANCHO VIEJO SOLAR PROJECT – APPENDIX C OF EIR**

As discussed in this report and observed by GGI staff during a site visit on November 15, 2024, brief ambient noise readings were taken from the southwest and northeast corners of the property boundary. GZA recommends that the applicant conduct a 24-hour noise measurement along the nearest sensitive receiver property line to evaluate worst case (lowest) 30-minute readings for daytime and nighttime to comply with SLDC 7.21.4. Construction noise will be exempt from meeting the noise limits in SLDC 7.21.4, as is standard for developments in Santa Fe County, which will be included in the Conditional Use Permit. The Planning Commission's conditions of approval also state that construction shall be limited to daytime hours.

Operational noise post-construction is modeled and discussed in this report. The acoustic modeling done for operational noise is sufficient from this report but will need to be compared against an ambient measurement collected according to the above recommendations per guidance from ANSI S12.9 to better predict community impact from increase over ambient noise monitoring measurements.

If the ambient noise levels are lower than previously anticipated, and there are now exceedances to the noise limits, mitigation measures will need to be modeled and discussed in the report. Mitigation could be in the form of barriers, equipment applied attenuation, etc.

### **CONCLUSIONS**

In summary, a 24-hour ambient noise study should be conducted to satisfy the requirements outlined in SLDC 7.21.4. Since daytime construction is an exemption from SLDC 7.21.4, no construction noise modeling is needed to satisfy County requirements. After increase over ambient is calculated from the noise monitoring suggested, it is recommended to assess possible community impact following the guidelines in ANSI 12.9. Please contact us with any questions or comments.

Sincerely,  
GZA GEOENVIRONMENTAL, INC.



Gene Bove, INCE  
Project Manager



Ethan Wagner, INCE  
Acoustic Project Manager