

# PRE-APPLICATION NEIGHBORHOOD MEETING SUMMARY

RANCHO VIEJO SOLAR PROJECT  
SANTA FE COUNTY, NEW MEXICO

JANUARY 2023

PREPARED FOR

**Board of County Commissioners,  
Santa Fe County**

PREPARED BY

**SWCA Environmental Consultants**

**PRE-APPLICATION NEIGHBORHOOD MEETING SUMMARY  
RANCHO VIEJO SOLAR PROJECT  
SANTA FE COUNTY, NEW MEXICO**

Prepared for

**Board of County Commissioners, Santa Fe County**  
100 Catron Street  
Santa Fe, New Mexico 87501

Prepared by

**SWCA ENVIRONMENTAL CONSULTANTS**  
7770 Jefferson Street NE, Suite 410  
Albuquerque, New Mexico 87109  
(505) 254-1115  
[www.swca.com](http://www.swca.com)

SWCA Project No. 71537

January 2023

## INTRODUCTION

The following pre-application neighborhood meeting summary provides a synopsis of the public outreach process and effort, including input received, for the Rancho Viejo Solar Project in Santa Fe County, New Mexico.

## PUBLIC INVOLVEMENT PROCESS

The public pre-application neighborhood meeting was held on October 4, 2022, from 5:00 p.m. to 7:00 p.m. at the Turquoise Trail Charter School Auditorium. Fifty members of the public attended the meeting, in addition to study team representatives. The meeting began with a one-hour presentation to discuss the project's proposed layout, equipment specifications, existing environmental conditions, project schedule, and ways to submit comments to the study team after the conclusion of the neighborhood meeting. After the presentation, comments and questions were solicited from the attendees. The question-and-answer period lasted for one hour. Approximately 24 comments and questions were received during the neighborhood meeting. Approximately 22 questions were submitted to the project team prior to the meeting, via email or the project website and were addressed as part of the October 4, 2022, presentation.

To provide announcement of the meeting, letter notices were sent via first class mail on September 15 and 19, 2022, to all landowners within a 500-foot buffer around the land parcel to be leased for the proposed project. AES also created a web page with a comment form and email address dedicated to Rancho Viejo Solar Project questions. The notice letter included the web page address. Public meeting notices are shown in Appendix A. The landing page provided a brief project description, a project map, visual simulations, a comment submission field, and contact information for the project team. The October 4, 2022, presentation with questions and answers was posted to the project web page in November 2022. AES posted meeting notification on the top of the project webpage, as well as emailing a notice to everyone who submitted their email address through the website in order to receive project updates and information. Documentation of public meeting attendance is provided in Appendix B.

Following the October 4, 2022, meeting, AES identified that a small segment of landowners within a 500-foot buffer around the land parcel to be leased for the proposed project had inadvertently not received letter notification. On December 19, 2022, letter notification was provided to this segment of landowners and a subsequent pre-application neighborhood meeting was held virtually on January 4, 2023. No members of the public participated in this subsequent neighborhood meeting.

## COMMENTS

All questions and comments that were submitted to the project team prior to the meeting are included in Appendix C. Review and analysis of the comments received indicate that the public input falls under six general themes: 1) safety, 2) visual impacts, 3) land lease conditions, 4) construction and operations, 5) project funding, 6) power purchase agreement, and 7) environmental impacts. The following paraphrased comment summaries reflect the questions and comments received prior to and during the neighborhood meeting and subsequent comment period.

### *Questions/comments concerning safety:*

- Fire suppression
  - Training first responders, including volunteer firefighters
  - Fire suppression technology

- The relevance of a related event at a storage site in Chandler, Arizona
- Chemicals that will be used to clean panels
- Chemicals used for dust suppression
- Chemicals in panels
- Other types of emergencies that could occur (flash flooding, high winds, etc.) and AES's plan to respond to such events
- Panels' designed resistance to wind and hail damage

*Questions/comments concerning visual impacts:*

- Visual simulations were not run from higher elevations
- Lack of visual simulations at 7 a.m.
- Visual simulations do not reflect maximum height

*Questions/comments concerning land lease conditions:*

- Whether the land is being purchased or leased
- Effects of project on property values
- The other proposed locations that had been shortlisted
- Lack of benefits for locals from this project
- Set-back versus buffer size
- Status of the Conditional Use Permit application

*Questions/comments concerning construction and operations:*

- Percentage of labor force that will be locally sourced
- Number of construction jobs that will be needed
- Percentage of produced power that will be needed for operations
- Plan to overcome supply chain issues
- Need for additional power lines
- Dust control plan for construction
- Location of project in relation to substation
- Access road construction

*Questions/comments concerning project funding:*

- Reliability of funding sources
- The fate of the project should AES go bankrupt before lease expires

*Questions/comments concerning power purchase agreement:*

- What PNM will do with the power generated

*Questions concerning the project's environmental impact:*

- Water usage
- Preservation of the site's ecosystem
- Cost and feasibility of recycling panels
- Compliance with dark sky ordinances
- Status of environmental reports

The project team reviewed all questions and comments submitted before the meeting, and prepared responses within the presentation slides. Those responses are listed in Appendix D. Additional comments that were received during the meeting are listed in Appendix E. The is attached as Appendix F.

## **APPENDIX A**

### **Public Meeting Notices**

---

September 2022

**Re: Rancho Viejo Solar Project’s Public Pre-Application Neighborhood Meeting**

Many of you attended an Open House style meeting about the proposed Rancho Viejo Solar facility that we hosted for the community on August 3, 2022. During that event, we heard from many attendees that they were expecting and preferred to have a presentation by our subject matter experts. We heard your comments and request for a more interactive format and have scheduled a community meeting for October 4, 2022. This meeting will have a hybrid format: a presentation about the project and an opportunity to ask AES representatives questions in an open house structure.

- 5:30 – 6:30 PM – Presentation of solar project information with emphasis on addressing all questions that have been previously submitted.
- 6:30 - 7:30 PM – Open House – AES subject matter experts are available to address specific questions, attendees are encouraged to review informational poster boards.

If you are unable to attend this meeting, please let us know and we will deliver via USPS, a printed Q&A of the topics that will be addressed during the presentation. You can let us know of your inability to attend by submitting a request in the comment form on the project website at [www.aes.com/rancho-viejo-solar](http://www.aes.com/rancho-viejo-solar) or email us directly at [ranchoviejosolar@aes.com](mailto:ranchoviejosolar@aes.com).

To add another question to the agenda, please email your questions to [ranchoviejosolar@aes.com](mailto:ranchoviejosolar@aes.com) under the subject line “Oct.4<sup>th</sup> Question”.

AES Clean Energy Development, LLC is proposing to build the Rancho Viejo Solar Project on private land in Santa Fe County, New Mexico. This letter is to invite you to a pre-application neighborhood meeting. All interested parties are invited to attend. The meeting details are as follows:

**Location:** Turquoise Trail Charter School Auditorium  
13 San Marcos Loop, Santa Fe, NM 87508  
**Date:** October 4, 2022  
**Time:** 5:30 – 7:30 PM

The project would be located approximately one mile south of Santa Fe city limits and approximately 4.2 miles east of La Cienega, located in Sections 2, 3, 4, 5, 6, 7, 8 and 9 Township 15 North, Range 9 East (see map on page 2). AES is applying to Santa Fe County for a conditional use permit (CUP) under the county’s Sustainable Land Development Code. The land is currently undeveloped and used as livestock rangeland, and is zoned as Rural Fringe, Mixed Use and Planned Development District. The Santa Fe County Planning Commission is responsible for reviewing and approving the CUP application.

The project will consist of (a) solar PV modules mounted on single-axis tracking steel structures; (b) an onsite collector substation and battery energy storage system (BESS) that will aggregate the output from the PV modules and convert the electricity from direct current (DC) to alternating current (AC); (c) a 115 kV gen-tie line that will transmit the electrical power generated to a new PNM “line-tap” switchyard at their existing 115 kV transmission line; (d) communications infrastructure including fiber optic cable; and (f) civil infrastructure including driveways, drainage management, and fencing. The perimeter of the

---

solar PV facility (including the onsite collector substation and the BESS) will be enclosed by a fence with controlled access.

At their highest point, the top edge of the PV panels would be approximately 12 to 14 feet above ground level. The transmission structures will be single-circuit H-Frame with maximum height of 40-50 feet, with structure spans of up to 250 feet. A 16-foot-wide gravel surfaced or compacted native soil access road would be constructed from State Road 14 to the project site.

To contact the county regarding this application, call the Planning Office at (505) 995-2717.

Sincerely,



Rebecca Halford  
Stakeholder Relations Manager, AES Clean Energy  
(505) 490-4935  
ranchoviejosolar@aes.com  
www.aes.com/rancho-viejo-solar



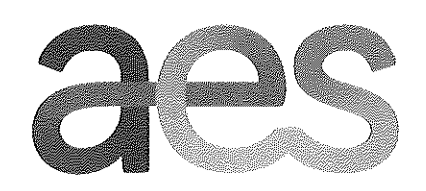
## **APPENDIX B**

### **Virtual Public Meeting Attendance Record**

# Open House – Sign-In Sheet

Rancho Viejo Solar  
 Oct 4, 2022  
 5:30 PM - 7:30 PM

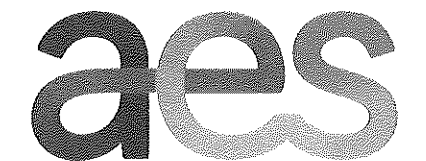
Name	Phone	Email	Mailing Address
Ericka Kidd	505 490 6173	walkingshortkidd@gmail.com	19 Cochiti East 87508
Baudilio R Jaca	505-331-4104	bbaca@bwell.org	4921 Alexander Blvd NE ALBANY 87108
Theresa Mendez		mendez.thera1234@gmail	137 RSM Loop, SF, NM
Charles Wright	505 490 3259	etw4155@gmail.com	96 SANMARCOS LOOP SF 87508
CHRIS ELIAS AGONADO	505 699 3064	ceide@hschool.org	70 ARCADE PLUMME DL 87508
<del>FRANK BROWN</del>	<del>505 549 6840</del>	<del>pdxbrown@msn.com</del>	<del>11 BASSWOOD ROAD 87508</del>
JILL SALOPEK	505 400 0201		
Ben Jan	505 400 3854		
Debra Anderson	505 473 9590	dabrac@redrockpictures.org	693 Stenrod Tr.
Warren Thompson	505 577-2744	Warren.thompson@mac.com	
KIM, SANDRA NITSCHE	505-557-7781	KIM.NITSCHKE@CMAIL.COM	12 SORONA RD SANTA FE
Jill Gibvern	505 490 3070		45 Crazy Rabbit Dr
Jeff Taylor	505 795-1821	Jeff@SolarSolar	



# Open House – Sign-In Sheet

Rancho Viejo Solar  
 Oct 4, 2022  
 5:30 PM - 7:30 PM

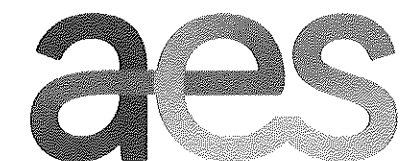
Name	Phone	Email	Mailing Address
Nancy Day	505.471.704	joenancy209@gmail.com	209 Rancho Alegre Rd S.F 87508
MATTHEW MCQUEEN		mcqueenfornm@gmail.com	
SELMA ETWELLENBUDM		selma@ifscolorado.com	227 SM WWP
Dan Simpson	503 969 5219	dbs2144@gmail.com	179 Calle Calisten
PHIL ROWE	303 419 9369	ROWESP@COMCAST.NET	
Date Lyons	505 694 4622	date.lyons@southernmiller.com	
Bill Brancard		billbrancard@gmail.com	91 E Chitilina Rd 87508
MARK HUGEL	505 954 1188	HWT@ATT.NET	45 VICTORIO Peak 87508



# Open House – Sign-In Sheet

Rancho Viejo Solar  
 Oct 4, 2022  
 5:30 PM - 7:30 PM

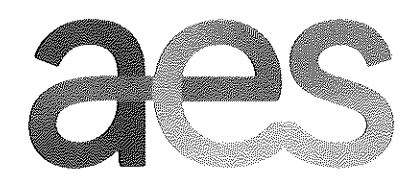
Name	Phone	Email	Mailing Address
Camilla DeJoia	505-231-8571	cdejoia@aol.com	59 ALTEZA, SK, N.M. 87508
JOHN DeJOIA	505-231-8570	john@mineralogica.org	" " " "
Phyllis Turner	505-660-5040	zoeyclue@aol.com	214 San Marcos Loop, Santa Fe NM
Janet Persons		janet.persons@gmail.com	107 Raunboms Erd, Cimarron NM 87500
Warren Churchill	505-690-0839	cwarren761@aol.com	331 San Marcos Loop 87508
CALUCK BRYANT	505-995-3340	---	
ELIZABETH TREGARD	505-231-8676		
BRIAN KOMERLO	505 577-1430		
Tom & Geri TREGARD	505-470-5904	geritreg@aol.com	138 SAN MARCOS loop
Janet McVicker	505 745 3239	jmcvicker@gmail.com	
Paul Villone	505-490-2876		19 Calle Morilla N. 87508



# Open House – Sign-In Sheet

Rancho Viejo Solar  
 Oct 4, 2022  
 5:30 PM - 7:30 PM

Name	Phone	Email	Mailing Address
Erin Dayl Thomas Trujillo Kim KAUFMAN	505 373 4467	edayl@senecasolar.com thomas@IBEW611.org KHK123@HOTMAIL.COM	
Cathy Simpson Bob Gonzalez	503.969.5224 505-474-6080	BGONZ28@aol.com Bobkimspred@aol.com	
Kim Gonzales Gregg Hoffman	" " " " " "	gpoffman@gmail.com	
PAUL NEUFELD Robert Cisneros	661-428-0354 805-750-9116	PNEUFELD@YAHOO.COM C.RHINO@UNM.NET	
Dan Milano Rick Hughes	505-360-5039 505-991-6365	Dan@IBEW611.org rhughes@ghc-nm.com	
Kim SORVIG Cass Thompson	<del>505-574-4725</del> 505 577 4726	ksorvig@unm.edu Cass@RanchoViejo.com	
Dennis KURTZ	THE SAN MARCOS ASSOCIATION	dennis.kurtz@gmail.com	info@thesanmarcosassociation.org



## **APPENDIX C**

### **Questions/Comments Submitted Prior to Neighborhood Meeting**

- What are potential emergencies that could arise at this site and how has AES planned to address them? For example, fires, flash flooding, wind events, etc.
- Should this project move forward, it seems like an excellent opportunity to preserve the soil and surface ecosystem in the area beneath the solar panels. What steps will AES take to ensure minimal disturbance to the existing landscape? Some service roads and support footings are to be expected, but what percentage of the existing landscape will remain untouched should this array be built?
- How will AES ensure that threatened species will be protected during construction, and the subsequent decades?
- How many gallons of water and from what source will be needed for construction?
- How many gallons of water will this solar array consume annually – both from a design standpoint and in the case of some sort of emergency? From what source will this water be drawn?
- Will the access/service roads be paved?
- Up to what wind speeds and hail size are these panels and other pieces of equipment expected to remain undamaged?
- For any damaged panels, or other equipment, will they be recycled? Who absorbs the cost of disposing of any such material?
- How does your design comply with New Mexico and Santa Fe County dark sky ordinances?
- What design elements have been put into place to protect the installation and surrounding areas in the event of a fire – either one ignited in the solar array itself, or a wildfire entering the array from elsewhere?
- Are the simulated photos showing the panels at their maximum height?
- Your letter dated Sept 7, 2022 says that the lithium ion battery storage will have new technology with updated safety features and fire suppression. I spoke to the battery expert at the Aug 3 meeting, and was told that this new technology has not been installed in any other solar facility, but it has been tested. In order to address the perception of us neighbors being "guinea pigs", will you explain to new technology in detail, specify exactly how it has been tested and the specific outcomes of the testing?
- The Sept 7 letter also states that "local fire and emergency management organizations will be thoroughly informed about the project and all access points...Turn around radius will be reviewed to assure local equipment can access and operate.". What isn't mentioned is the specific techniques and materials needed to fight a lithium ion battery fire. Per an article in the Arizona Republic (<https://azcentral.com/story/money/business/energy/2020/7/27/aps-battery-explosion-surprise-new-report-findings/5523361002/>), the Arizona Public Service Co (APS) report on the April 2019 battery explosion stated that "the emergency response plan provided by AES to APS did not have instructions on how to respond to a potential explosion or how to enter the system after the fire suppression system has been discharged". In a fire at a lithium battery storage facility in Morris, Illinois on June 2021 (<https://westgardnersolar.com/utility-scale-solar-health-and-safety-concerns/>), the article states that "because of dangers with treating lithium fires with water, the local firefighters applied a dry chemical agent, Purple K, to the fire. Purple K mitigates the toxic effects of the fire: however, this was unsuccessful. Ultimately, the fire was extinguished by covering the 30 foot by 40 foot area with Portland cement.". Therefore, the questions to AES is what are the specific materials and techniques needed to fight a lithium ion battery fire, and will you assist local fire departments and emergency management operation to secure the materials and be trained in the techniques?
- The Sept 7 letter also says that "the project is proposing a 1,000-foot set-back buffer from any property line." The website says "The panels and the fence surrounding the facility will be set back at a minimum 1,000' form any adjacent residence/house.". Which is it?

- The website says 3 environmental and technical studies are in progress October 2022 - The Environmental Impact Report, the Hydrologic and Hydraulic Study, and the Site Thresholds Analysis. What is the status of these reports? is there a projected date or dates these are expected to be completed? How soon after the completion of these reports will the Conditional Use Permit (CUP) application be submitted?
- The Sept 7 letter says that "Water used during construction and maintenance will be delivered by water trucks for dust mitigation and panel washing." How much water are you talking about and where will it be trucked in from? There is a significant shortage of water in our area, in the state and in the entire western half of the US, and we have other construction in progress near us.
- Which specific agency will the CUP be submitted to? What is the process and time frames after the CUP application is submitted?
- I would like to know what accommodations are being made for glare and for wildlife migrations.
- Given the current economic conditions within the United States, your current key statistics along with YTD earnings, and it is an election year: How will you fund your project successfully?
- The National unemployment rate is at 3.7% and New Mexico is at 4.4%: Can you tell us what percentage of your labor pool will be locally sourced?
- With respect to driver and other labor shortages, transportation costs, inflation and product demand: How will you address any supply-chain issues for project construction? And who will oversee the progress and completion to stay within your project timeline?
- Decommission of your solar facility show Y2059: How long does a decommission take and where do all the used materials end up?
- What security fencing is expected to surround this solar array and what are its specifications – height, design, materials, electrified, monitored by security cameras, etc.?
- The pre-application process has, so far, not been completely transparent. Everyone does not have the opportunity to hear the answers to all questions by authorized representatives of AES. There has been no opportunity for public give and take in asking and responding to questions, and follow-up questions. Question: What precisely are the words we can use in responding to our neighbors when they question the lack of complete transparency?



## **APPENDIX D**

### **Responses Provided During Presentation**

*Why Here?*

- Utility-scale solar cannot be built remotely as it needs to serve the utility power loads (where people live) and access utility transmission lines/infrastructure (also where people live).
- The NM Renewable Portfolio Standards (RPS) applied to state IOUs requires a 50% total retail sales from renewable energy by 2030
- The PNM utility load territory includes Albuquerque, Rio Rancho, Los Lunas, Belen, Santa Fe, and Las Vegas, New Mexico –this corridor contains the load infrastructure
- Santa Fe is within the PNM service area and has only two 115kV lines located in a 3-mile radius
- The land that the project is sited on is 1,000+ contiguous acres, accessible to the PNM service lines, buildable (flat, south-facing, and unobstructed), and the landowner is willing to partner with us
- The privately owned land is surrounded by state lands and waterways (arroyos)
- The project will be set back at least 1 mile from the NM Hwy 14 Turquoise Trail scenic corridor
- The project site is set outside of the community college district
- The project avoids the Gallina Arroyo and Bonanza Creek arroyo and tributaries
- The project is a setback as far as possible from neighbors –at least 1,000' from nearest property lines (county requirement is 25' setback)
- The distance from the available transmission line is < 3 miles

*Can AES guarantee the County required minimum setback of 25' to adjacent property lines?*

- Yes. AES guarantees a minimum setback of 1,000' to any adjacent property line/boundary.

*Are there plans to expand the project?*

- There are no plans to expand the project. This facility, known as Rancho Viejo Solar, is sized at 96 MW AC and will NOT increase in size. AES has two community solar projects in early-stage development proposed for Santa Fe County that will enter into the competitive PNM RFP solicitation, and if awarded, will also go through the County permitting process. These two proposed community solar projects are not associated with the proposed Rancho Viejo utility-scale solar facility. They will be located on separate parcels of land and interconnect to the PNM grid in different locations.

*Does proximity threaten the health and safety of neighbors?*

- No. The project was designed and implemented to not adversely impact the health and safety of neighbors.
- Ultimately, Santa Fe County decision-makers will consider health, safety, and welfare when they consider the project.
- AES is working with appropriate third parties to provide safety and fire management training for fire departments located within the vicinity of the project. This training will occur within the next five months and again prior to the completion and energization of the facility. The training will also include "train the trainer" sessions for future emergency response teams.

*How does this impact property value?*

- AES has engaged with a third-party national and local appraisal firm that is completing a property value analysis.
- Numerous studies have examined this question, considering the size of the facility, distance from adjacent properties, vegetation, screening, noise, odor traffic, alternative uses permitted under current zoning, etc.
- The analysis findings and report will be submitted to Santa Fe County with our CUP application.

*What are toxicity risks of solar panels?*

- No reports provide evidence that there any health issues caused by solar panels.
- All AES solar panels pass the EPA's Toxic Characteristic Leaching Procedure (TCLP) test and,
- Are classified as non-hazardous and are not regulated as toxic materials.

*Do solar panels heat the air above the panels?*

- The surface of PV modules is regularly warm but not hot to the touch on a summer day in full sun. However, the PV Heat Island (PVHI) effect has been studied and early results indicate that temperatures may be 3-4 deg C hotter directly over a PV array. The study is not conclusive regarding the effect of varying vegetation and albedo relative to the amount of temperature change, though.

*Can AES guarantee the County required minimum setback of 25' to adjacent property lines?*

- Yes. AES guarantees a minimum setback of 1,000' to any adjacent property line/boundary.

*Are there plans to expand the project?*

- There are no plans to expand the project. This facility, known as Rancho Viejo Solar, is sized at 96 MW AC and will NOT increase in size. AES has two community solar projects in early-stage development proposed for Santa Fe County that will enter into the competitive PNM RFP solicitation, and if awarded, will also go through the County permitting process. These two proposed community solar projects are not associated with the proposed Rancho Viejo utility-scale solar facility. They will be located on separate parcels of land and interconnect to the PNM grid in different locations.

*Does proximity threaten the health and safety of neighbors?*

- No. The project was designed and implemented to not adversely impact the health and safety of neighbors.
- Ultimately, Santa Fe County decision-makers will consider health, safety, and welfare when they consider the project.
- AES is working with appropriate third parties to provide safety and fire management training for fire departments located within the vicinity of the project. This training will occur within the next five months and again prior to the completion and energization of the facility. The training will also include "train the trainer" sessions for future emergency response teams.

*Is dust pollution an issue during and after construction? Will AES clearcut and/or grade all the land under the array? Describe the post-construction landscape under the solar panels –dirt, natural vegetation, rock? How do you protect the facility from lightning strikes? What type of fencing will be used to surround the project? Will it encompass the entire complex?*

- The project will be constructed at the existing grade to the greatest extent possible, minor grading and/or grubbing may occur throughout the portions of the solar facility, BESS, foundation pads, equipment storage, and staging areas. Grading will conform to accepted slope stability requirements. Active construction would take approximately 12 months. Dust control best management practices that would be employed during construction would generally include:
  - Limit vehicular speeds on non-paved roads.
  - Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
  - Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding. • Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
  - Cover exposed stockpiled material areas.
  - Suspend excavation and grading during periods of high winds.
- When a project reaches the end of its project life, the project is responsible for executing the approved Decommissioning Plan, including abiding by all local and state decommissioning requirements. This includes the removal, recycling, and disposal of all equipment and other structures associated with the project, as applicable. The land surface within the project area will be sensibly restored to pre-project conditions to allow a return to desert vegetation status or other uses consistent with the land-use policies at the time.

*Dust and Glare*

- Solar panels are intended to capture as much sunlight as possible and are specifically designed to reduce reflection and glare. Modern solar panels reduce reflection by using anti-reflection coatings (ARC) and by texturing the surface. According to the National Renewable Energy Laboratory, solar panels reflect as little as 2% of incoming sunlight and produce less glare than standard windows and water. The Federal Aviation Administration (FAA) produced a final policy report that found solar projects do not create hazardous glare for aircraft in the area.
- Active construction would take approximately 12 months. Dust control best management practices employed during construction will generally include
  - Limit vehicular speeds on non-paved roads.
  - Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
  - Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding.
  - Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
  - Cover exposed stockpiled material areas.
  - Suspend excavation and grading during periods of high winds.

*Is dust pollution an issue during and after construction?*

- Active construction would take approximately 12 months.
- Fugitive dust would be managed in accordance with County or EPA rules and requirements.
- Dust control best management practices that would be employed during construction would generally include:

- Limit vehicular speeds on non-paved roads.
- Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
- Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding.
- Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
- Cover exposed stockpiled material areas.
- Suspend excavation and grading during periods of high winds.

*Will AES clearcut and/or grade all the land under the array?*

- The project will be constructed at the existing grade to the greatest extent possible, minor grading and/or grubbing may occur throughout the portions of the solar facility,
- The area around the Project Collector (2 AC) and BESS (4 Ac) will be graded and leveled to include a gravel surface with concrete foundation pads for certain equipment, including the individual battery containers.
- Grading will conform to accepted slope stability requirements. Pole mounts used in the solar racking system do not require leveling the land or installing complex foundations.
- The installation method will be either pile or screw driven, depending on the compactness of the soil

*Describe the post-construction landscape under the solar panels –dirt, natural vegetation, rock.*

- Reclamation would include the establishment of native vegetation.
- Certified weed-free native seeds would be used.

*How do you protect the facility from lightning strikes?*

- AES project engineering utilizes standards to design proper grounding systems as well as lightning arrestors (surge arrestors) to inhibit lightning-related equipment failures.
- The PV racking can be inherently grounded through its driven piles and grounding grids are regularly included in foundation design, to which BESS enclosures may be tied.
- This allows for lightning to pass around sensitive equipment, conductively through to the ground.

*What type of fencing will be used to surround the project? Will it encompass the entire complex?*

- 7-8' high Agricultural fencing, which allows smaller-sized wildlife to pass through while keeping larger animals out of the facility
- The solar facility will be enclosed and secured by fencing (see project overview section for fencing layout).

*Where can I obtain a copy of the Environmental Impact Statement (all reports)? What are the impacts on water resources? What will be the water source to the complex? Expected use annually? How often will the panels be washed? How much water will be used for panel washing? Can you qualify the noise made by the panel (racking) motors? How many air conditioning units will run most of the time? How many units and what direction will they face? What is the impact on the scenic view? Can you qualify the noise made by the panel motors? How many panel motors will there be? Will there be any outdoor lighting? When will it be on? What is the impact on the environment?*

- As part of the development process, we conduct studies to ensure we are aware of all environmental elements. By identifying these resources at the front end, we can design our facility in a way that avoids any impacts. These studies include:
  - A delineation of any wetlands and streams
  - A search for any hazardous materials on site
  - An assessment of potential cultural, historic, archaeological, and religious resources within and surrounding the site
  - An assessment of any threatened and endangered wildlife habitat on site
  - An assessment of visual resources
  - An assessment of local floodplains and hydrology
  - An assessment of soils and geology -including on-site geotechnical and pile load testing studies
  - A survey of the terrain, boundary, and real estate encumbrances
  - Infiltration testing to understand soil drainage rate
  - An Environmental Impact Report (EIR) including these studies is being prepared in accordance with the requirements of Santa Fe County to identify potential impacts and associated mitigation measures for the construction and operation of the proposed project. The EIR will be part of the Conditional Use Permit application submitted to Santa Fe County.

*Where can I obtain a copy of the Environmental Impact Statement (all reports)?*

- The project is not required to prepare an Environmental Impact Statement pursuant to the National Environmental Policy Act. However, the project is required to prepare an Environmental Impact Report in accordance with the requirements of Santa Fe County.
- The Environmental Impact Report, and associated environmental technical reports, will be part of the public record when submitted to Santa Fe County as part of the Conditional Use Permit application package.

*What are the impacts on water resources?*

- Construction impacts would generally be related to stormwater runoff. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared in compliance with the state's Construction General Permit, and Clean Water Act Section 402, National Pollutant Discharge Elimination System (NPDES). The SWPPP would identify best management practices (BMPs) to minimize stormwater runoff and sedimentation during construction activities. Stormwater BMPs that would be employed during construction include: Place silt fences and/or straw wattles along the downgradient perimeter of the project to minimize stormwater sedimentation from leaving the site.
- Minimize grading and vegetation removal, and limit surface disturbance during construction to the time just before solar module support structure installation.
- One ephemeral drainage (Gallina Arroyo) containing an ordinary high-water mark was observed during the April 2022 aquatic delineation survey. Impacts to this drainage are estimated to be less than 0.1 acre and are limited to the gen-tie crossing. Project would likely qualify for coverage under Nationwide Permit (NWP), per Section 404 of the Clean Water Act.
- Water for construction uses, such as dust suppression. Construction water use would be approximately 100 to 150 acre-feet over a 12-month construction period.
- Long term water uses would be approximately 2 to 3 acre-feet per year and would be associated with periodic panel washing.

*What is the impact on the scenic view?*

- Viewshed analysis has been completed, including visual simulations.
- The Turquoise Trail Scenic Byway is located approximately 2 miles west of the proposed Project and is the closest National Historic Trail to the proposed Project. There is potential for viewers from this location to notice new structures in the distance, but the Project would not attract the attention of the casual observer. The primary visual features in the foreground and mid-ground of the viewshed include existing transmission lines, the San Marcos subdivision, the Eldorado subdivision, and roadways. The visual impact of the proposed Project would be minimal and would not degrade the existing landscape from what is already present.
- Long-term visual impacts include operation and maintenance of Project components. Overall, these new elements would remain subordinate to the existing landscape character.
- Glare analysis completed: No glare predicted.

*Can you qualify the noise made by the panel motors? How many panel motors will there be?*

- There will be 66 tracker motors. However, the main source of noise with solar arrays is from inverters. The project will have approximately 25 inverters, which are dispersed throughout the facility.
- Inverters have a sound that can be characterized as a low hum. At 15 meters have a decibel (dB) level of 61, which is similar to a normal conversation. At 50 meters the sound attenuates to 50 dB, very faint –similar to moderate rainfall. At 200 meters the sound attenuates to 44 dB, which is a very low perceptibility.\* Inverter: Basic function is to “invert” the direct current (DC) output into alternating current (AC).

*Will there be any outdoor lighting? When will it be on?*

- It is anticipated there will be a motion sensor, downcast shaded security lighting at the access gate, battery storage, and substation location, and solar pads.
- Downcast lighting protects the ability to view the night sky by restricting unnecessary upward projection of light.

*What is the impact on the environment?*

- An environmental impact report (EIR) was prepared in compliance with Santa Fe County's Sustainable Land Development Code.
- The resources addressed in this EIR include air resources; biological resources; cultural, historic, archaeological, and religious resources; geological, paleontological, and soil resources; geographic resources; health and safety; land use; minerals and mining resources; noise resources; socioeconomic resources; roads; water resources; and visual resources.
- The analysis evaluates impacts to these resources associated with the construction, operations and maintenance, and decommissioning of the project.
- The EIR also identifies mitigation measures that would be implemented to avoid and minimize significant impacts.

- Based on the draft EIR, the Rancho Viejo Solar Project is not expected to unduly impair important environmental values.

*How many lithium-ion batteries will be stored in each of the 39 containers and how many cells would one battery have? What is the fire danger of lithium-ion batteries and how is prevention and mitigation addressed? What are the toxicity risks of batteries? What are the dimensions of the containers are going to be, height, width and length? Will there be a liquid electrolyte in the batteries? How far apart will the battery BESS containers be placed?*

- The combination of solar + storage will allow the utility to call upon the energy stored when it is needed most, day or night, helping to offset night-time fossil fuel generation
- Help ramp up toward peak energy demand periods (instead of using fossil fuel generation)

*How many lithium-ion batteries will be stored in each of the 39 containers and how many cells would one battery have?*

- 52 40' ISO containers
- Approx. 260 modules per container (20 racks with 13 modules each)
- Total modules = 52 x 260 = 13,520
- Each module contains 44 cells in a 2P22S configuration

*What is the fire danger of lithium-ion batteries and how are prevention and mitigation addressed?*

- Multiple options are available depending on the nature of the hazard. The first step is always to prevent the hazard, which is done with a multitude of risks management layers: the battery management system maintains nominal operations and separates a battery string from hazards when necessary; site SCADA systems identify hazardous conditions and can automatically stop the system and alert response personnel, and non-battery fires that may result in a battery fire are dealt with by the same measures as non-battery sites (defensive posturing and material-specific suppression). If a battery fire is initiated, the enclosures planned for this site would release fire suppressant in large concentrations directly into the initiating cell, removing heat and preventing thermal runaway throughout the enclosure. UL 9540 certification addresses safety and requires UL 9540a test results to be available for review. The UL 9540a tests of this system indicate adequate prevention of thermal runaway. The AES Energy Storage solution will achieve UL 9540 certification prior to site commercial operation.

*What are the toxicity risks of batteries?*

- Proper transportation, installation, operation, and disposal of batteries poses no toxicity risks to humans. If a battery is damaged during any of the phases of a battery's life, the proper response requires safe disposal, in which toxicity is contained as a part of the recycling and material re-capture. Lithium-ion batteries include metals, such as lithium, copper, and aluminum, as well as organic chemicals compounds sealed in metal and plastic casing. The amounts and concentration of liquid is such that damage is not expected to leak any fluids.

*What are the dimensions of the containers are going to be, height, width and length?*

- 39 units @ 45' x 8' x 9.5'

*Will there be a liquid electrolyte in the batteries?*

- AES uses lithium-ion batteries that contain liquid electrolytes. The batteries are sealed and inhibit any release of the liquid.

*How far apart will the battery BESS containers be placed?*

- Two back-to-back units per group with 3' spacing and 17' between the groups of two

*Are you aware of any fires using these same model BESS battery systems? When? where?*

- Several BESS battery fires have occurred though AES engineers are not aware of any known fires that have occurred with this model battery (as a reference point, Tesla's California Moss Landing battery complex caught fire). With each event, the energy storage industry has gathered several lessons learned and AES is currently applying the latest leading practices to address each lesson.
- Yes, Tesla's California Moss Landing battery complex caught fire. Please see ref. link. <https://www.canarymedia.com/articles/energy-storage/tesla-grid-battery-fire-shows-young-industrys-failures-and-successes>

*Has anyone been injured or killed due to fires originating from a shipping container sized BESS battery system?*

- In 2019, 4 firefighters were injured in an event that reshaped the energy storage industries view on safety. The system was larger than a shipping container, though lessons learned were adopted into then-emerging standards (UL9540 and NFPA 855) as well as common practice by AES. The hazards are understood to a much finer degree and resulted in design changes to AES's current energy storage solution. Specifically, the management of both fire and flammable gases is addressed and tested.

*Describe the fire suppression techniques currently used to fight large container sized lithium-ion battery fires. Is the gas used going to be FM 200 or 3M Novec1230?*

- Multiple options are available depending on the nature of the hazard. The first step is always to prevent the hazard, which is done with a multitude of risks management layers: the battery management system maintains nominal operations and separates a

battery string from hazards when necessary; site SCADA systems identify hazardous conditions and can automatically stop the system and alert response personnel; and non-battery fires that may result in a battery fire are dealt with by the same measures as non-battery sites (defensive posturing and material-specific suppression). If a battery fire is initiated, the enclosures planned for this site would release fire suppressant in large concentrations directly into the initiating cell, removing heat and preventing thermal runaway throughout the enclosure. UL 9540 certification addresses safety and requires UL 9540a test results to be available for review. The UL 9540a tests of this system indicate adequate prevention of thermal runaway. The AES Energy Storage solution will achieve UL 9540 certification prior to site commercial operation.

*What will be the ground treatment underlying the battery containers and substation?*

- Concrete pads directly underneath the containers, surrounded by gravel.

*How much distance from the BESS containers to a flammable landscape?*

- The gravel will surround the concrete pads and containers, extending approximately 6 feet in circumference.

*Will the solar panels act as a fire break toward neighboring subdivisions?*

- The solar panels will provide additional clearance between the property boundary and the BESS equipment.

*Will the fire department receive equipment and training specific to fighting fires originating in the materials used onsite?*

- AES is working with appropriate third parties to provide safety and fire management training for fire departments located within the vicinity of the project. This training will occur within the next five months and again prior to the completion and energization of the facility. The training will also include "train the trainer" sessions for future emergency response teams.

*Will the BESS air conditioners have weather and noise-suppressing shields on the outside?*

- The project will include 39 battery containers, which are located over 1-mile from residential houses. The project will include 78 heating ventilating and air conditioning (HVAC) units. Two HVAC units will be placed at the end of each battery container, however only one HVAC per unit will be operating at any one time (the other is for redundancy purposes). At 50 meters the sound attenuates to 50 dB, very faint –similar to moderate rainfall. At 200 meters the sound attenuates to 44 dB, which is a very low perceptibility. The HVAC units are located over 1-mile from residential houses.
- The project will comply with legal noise limits.
- The facility is virtually silent, and the ac units are equivalent to a conversation-level volume.
- The HVAC is rated for outdoor use. AES specifies site-specific environmental coatings and materials.

## **APPENDIX E**

### **Comments Received During Neighborhood Meeting**



Question or Comment	Design Team Response
<p>You don't expect trouble with thermal runaways, but there are times you can't control during production. What about events that wouldn't trigger release of Novak?</p> <p>It's hard to inject the Novak into the modules.</p> <p>The products of the fire suppression/fire itself are toxic.</p>	<p>Each module has a line connected to a tank of Novak. It generates products like products from a car fire, but they are safe enough for fire fighters to be close enough to fight the flames. Shock detectors are now part of the modules.</p>
<p>You have visuals been done for when panels are flat, but not when they're at an angle. What about visuals from a higher elevation?</p>	<p>The project team identified various locations for the simulations (Key Observation Points (KOP). The locations are intended to be representative of actual views from NM 14, the Rancho San Marcos and El Dorado subdivisions. It is SWCA professional opinion that the project has low visual impact.</p>
<p>Has Novak been used anywhere else, or is this the first time it's been used?</p>	<p>It's the first time it's been used in this configuration, but not the first time the product has been used.</p>
<p>What is used to clean the panels a few times a year?</p>	<p>It's typically just water, but we may need to use solvent.</p>
<p>Are you buying or leasing the land for 30 years? Could you sell the panels afterward or do you have to remove them?</p>	<p>It's a long-term lease with the property owner. Right now, the PNM proposed purchase agreement is only for that time period. At the end of that period, it will be up to PNM and others whether to extend.</p>
<p>What percentage of the power produced will be used for operation?</p>	<p>Far less than 1%. The amount of energy consumed by having tracking panels is more than compensated by the increase in generation because they can follow the sun.</p>
<p>Will there be a backup fire system in the BESS? There are other things that could cause fire, such as a mouse chewing through wire, a short circuit, etc. It seems like you're not addressing the whole building. The Novak isn't a fire suppression system, it's a fire prevention system.</p>	<p>A worst-case scenario would be if every module lit on fire in one of the battery containers. The BESS is still being designed so we don't know the answer quite yet.</p>
<p>How do you fund a project of this size, i.e. federal, state, local funds? We want to make sure you can finish what you start.</p>	<p>We have pools of investors who fund all of our projects. AES had \$11 Billion in revenue in 2021. All projects are financed through a combination of private equity, federal incentives, and partnering investment firms. Those partners are not yet identified as funding comes together once the Power Purchase Agreement is signed.</p>
<p>What percentage of the labor pool will be locals?</p>	<p>Our goal is to hire locally. We are already looking for partnering local companies.</p>
<p>How will you address any supply chain issues so you can finish construction?</p>	<p>We procure the materials before construction begins.</p>
<p>The flier says that 300 jobs would be needed for construction, but the presentation said 200 jobs. Which one is accurate?</p>	<p>Between 200-300.</p>
<p>Is there any possibility that there will need to be additional power lines built?</p>	<p>We have been in PNM's interconnection process since 2019. The process is looking into upgrades and such, but to my knowledge, there won't be any need for additional lines.</p>
<p>What is the threshold for a thermal runaway?</p>	<p>It depends on the composition of the batteries, but upward of 100 degrees C.</p>

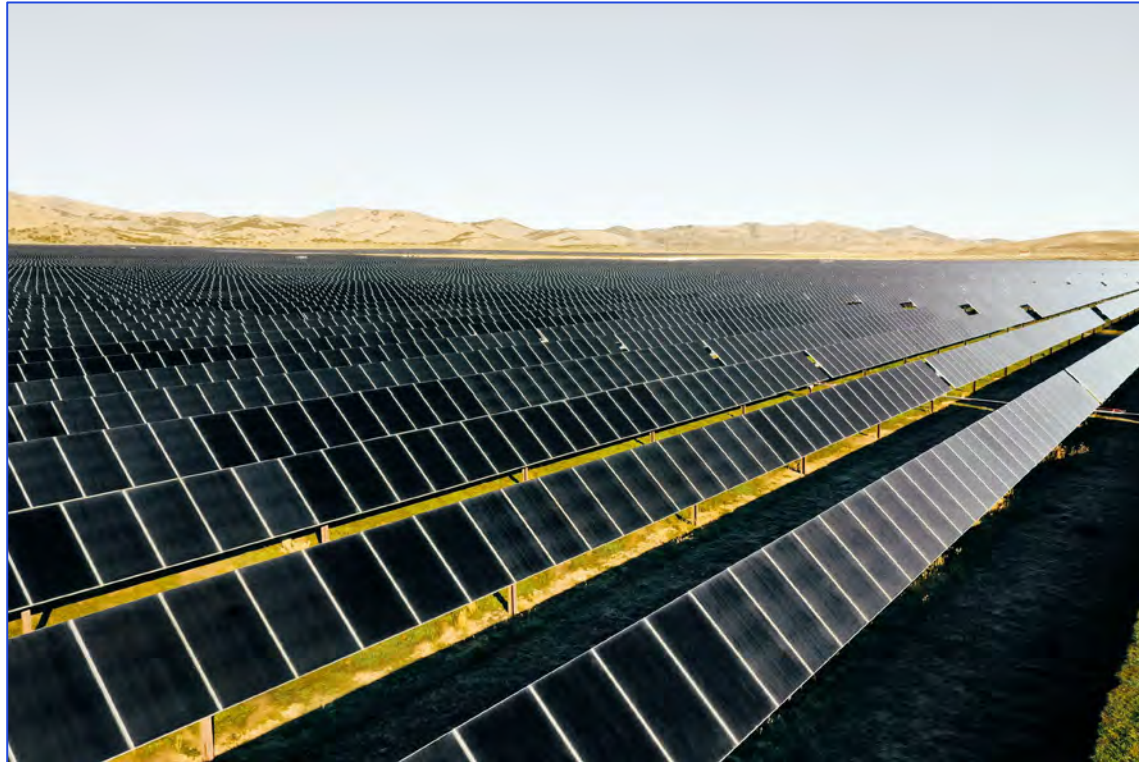
Question or Comment	Design Team Response
<p>If you're going to prevent dust using water, are you doing that between panels? Will you have access roads between panels? The presentation said there will be 84,000 ft of access roads- if those are vegetated, driving over them for maintenance will kill those fragile native grasses.</p> <p>The proposed washing schedules may not be sufficient for the dust. Is the county helping with dust suppression?</p>	<p>Dust mitigation procedures will be used during construction. There will not be access roads between panels but spacing to allow operation and maintenance crews access. There will be one road leading from the access point and through the facility with a turn-around point located near the BESS equipment. The road will be crusher-fine gravel.</p>
<p>What happens if AES goes bankrupt during the 30-year period?</p>	<p>There will be financial assurances in the form of a Decommissioning and Restoration guarantee established by the county and held by them for that scenario. AES is a solid company with a good revenue stream. There will be a separate entity that will be the signor in the agreement with PNM.</p>
<p>Will PNM be selling the energy generated?</p>	<p>We can't really say, power companies don't always share those plans with the generators</p>
<p>What chemical substances will be used in the panels as well as anything that will be used for dust suppression? Don't the panels have some of the forever chemicals in them?</p>	<p>The panels are in a solid state. There are no toxic chemicals in them. Yes, we can supply the spec sheets for all materials in the panels as well as the cleaning agents.</p>
<p>It makes sense to have the panels closer to the substation than have them further away.</p>	<p><i>None offered.</i></p>
<p>When property value assessments are done, will the assessors know that there are BESS containers?</p>	<p><i>Yes, the appraisers will have access to all of the project information.</i></p>
<p>There are four projects that were shortlisted- do you know where the other projects were proposed?</p>	<p>That is not public information at this time. PNM will announce their choice and may not disclose details about other projects bid into the RFP.</p>
<p>There is no benefit to the locals that this project offers.</p>	<p>Climate change, grid stabilization, offsetting power lost due to the San Juan Coal Plant closure, adding renewable energy to the mix, and meeting the state's carbon-neutral goals.</p>
<p>We would ask that the visual sims be done at 7am to see the side light.</p>	<p>There are no plans to perform additional visual simulations. The photos were taken in the morning and modeled to reflect maximum panel height</p>
<p>What was the fire situation on the fire in Chandler, AZ (SRP event)?</p>	<p>There have been two thermal incidents in the past few years at older BESS technology sites. While the older system used a gas-based system, the more recent incident occurred at a facility that utilized a water sprinkler system – much like you would see in an office building setting (fused elements in the ceiling that activate with heat). The system proved to be very effective at managing thermal events and prevented the effects of the incident from going external to the BESS enclosure. However, it did require higher quantities of water based on protocols managed by local fire responders out of an abundance of caution. Newer advanced fire protection systems are designed for much more focused water spray flow to reduce consequential impacts of spray and considerably reduce the overall quantity of water used. In the case of the proposed BESS at Rancho Viejo, an advanced, non-water-based fire suppression product will be used that removes the concern about large volumes of water and has more targeted fire suppression spray.</p>
<p>Volunteer fire fighters are not well trained so it's critical to train them.</p>	<p>BESS emergency response training program is being created and will be delivered to local fire departments.</p>

## **APPENDIX F**

### **Public Meeting Presentation Slides**

# Proposed Rancho Viejo Solar Project

---



## Neighborhood Meeting

October 4, 2022

Presented by Jonathan Moore, Matt Gordon,  
Travis Stowers, Rebecca Halford

96 MWac / 48 MW, 4-hour duration Solar + Battery Energy  
Storage System (BESS) Storage Plant  
Santa Fe County, New Mexico

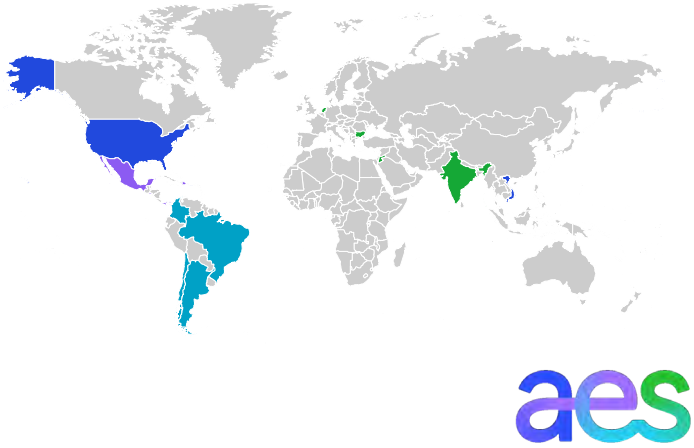




# Presentation Agenda

- AES, Project Team, and Stakeholders
- Project Location
- Project Overview
  - Site Layout
  - Point of Interconnect
  - Equipment
- Construction, Operations & Decommissioning
- Diligence & Studies
- Benefits
- Battery Storage System / Safety
- Q & A

# The AES Corporation



31,459

Gross MW in operation\*

\* 20,183 proportional MW (gross MW multiplied by AES' equity ownership percentage).

\$9.78 billion

Total 2020 revenues

3,497 MW

Renewable generation under construction or with signed PPAs

\$33 billion

Total assets owned & managed

4 Continents

14 Countries

4 Market-oriented strategic business units

6 Utility companies

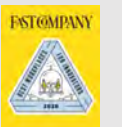
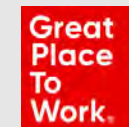
2.6 million

Customers served

8,450 people

Our global workforce

Recognized for our commitment to sustainability



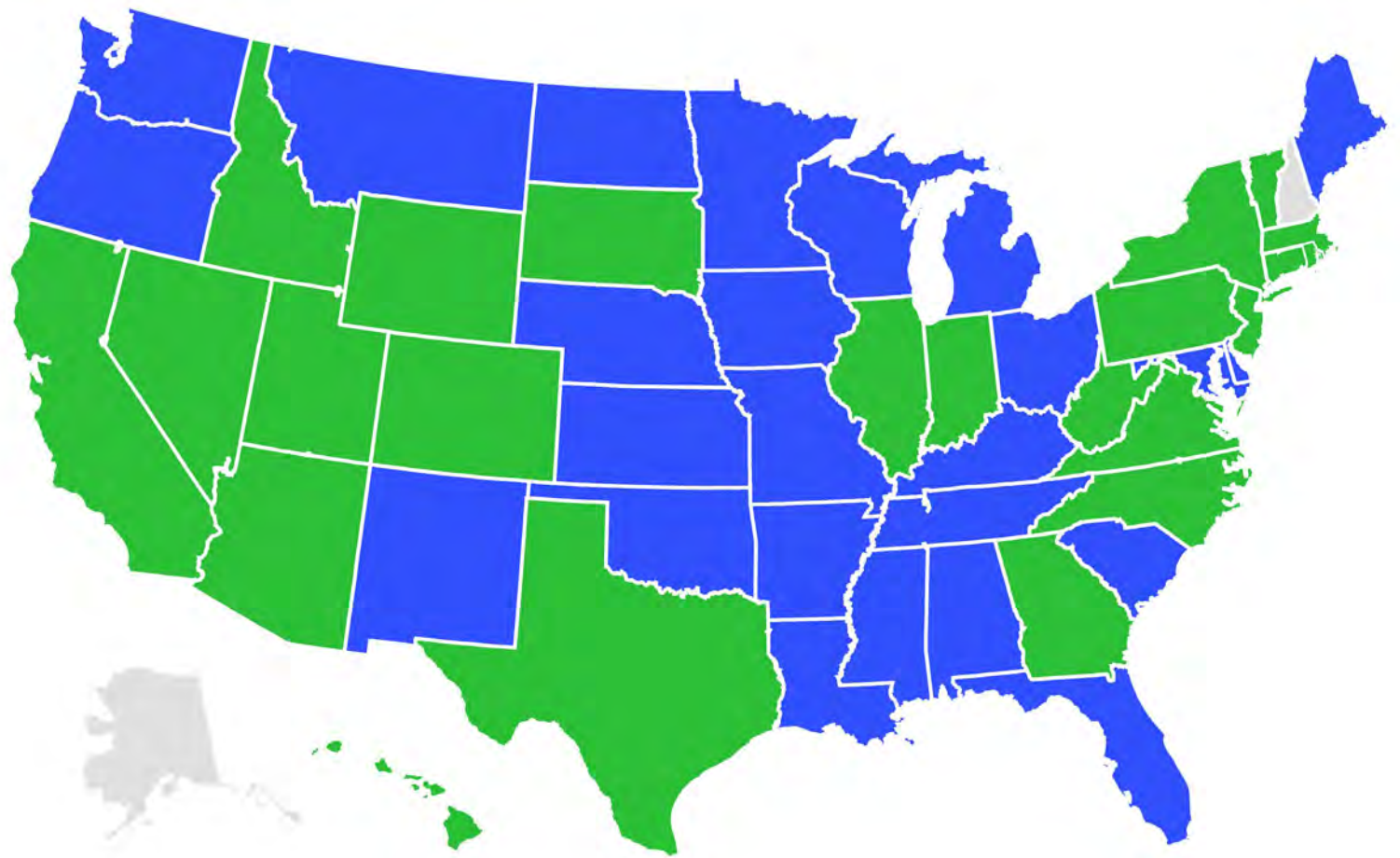
# Clean energy operating and development footprint

4.5 GW

Operating

40+ GW

Development pipeline



Operating

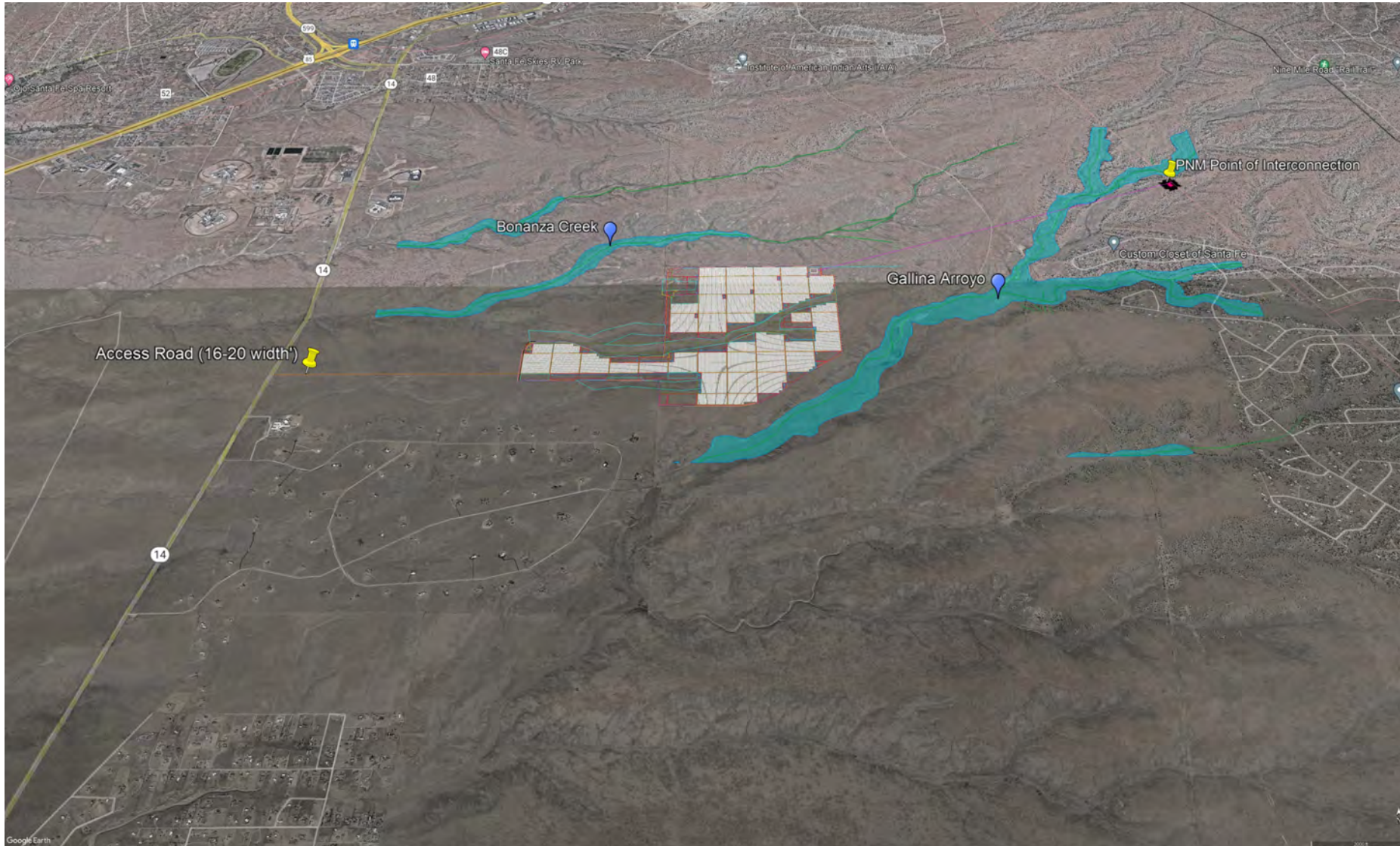
Developing

# Project Team and Stakeholders

<b>Santa Fe County</b>	Planning & Zoning Commission Board of County Commissioners Community Members
<b>AES Clean Energy</b>	Jonathan Moore, Lead Developer Matt Gordon, Permitting Lead Travis Stowers, Engineering Rebecca Halford, Stakeholder Relations
<b>SWCA (Environmental Consultant)</b>	Kim Parker, Project Consultant
<b>Landowners</b>	Rancho Viejo Limited Partnership



# Project Location



- Approximately 1 mile south of Santa Fe city limits
- Entrance to project is located 1 mile east of South Hwy 14
- Zoned RUR - Rural
- Project area – approximately 800 acres
- Located on private property

# Project Location

Project Location



View from Hwy 14 looking northeast



Photo capture location

# Project Location

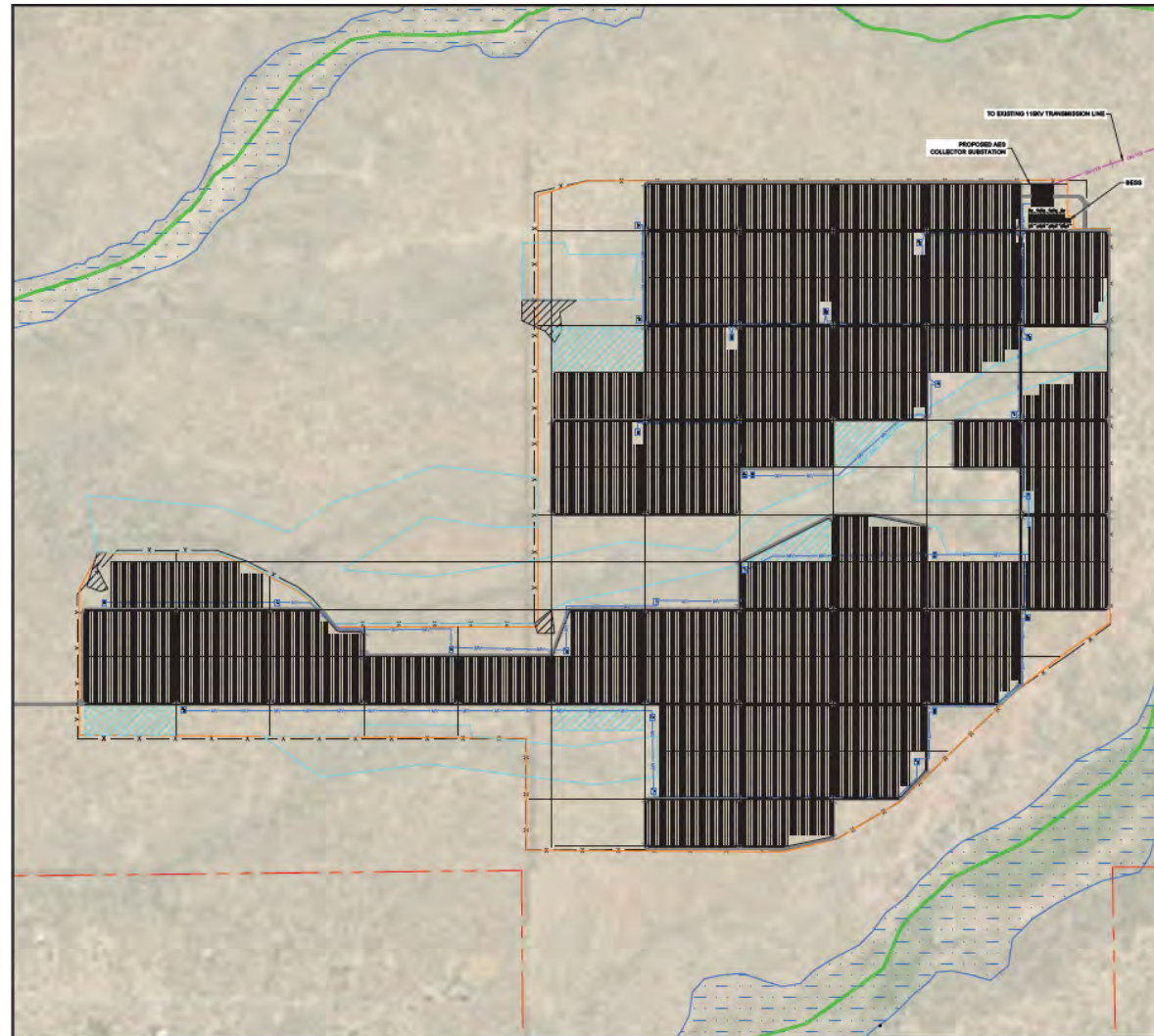
Project Location



Photo capture location

View from Camerada Road/Eldorado subdivision facing west

# Project Overview



## Technical Specifications

- 96 MW AC solar photovoltaic output
- 48 MW battery storage (4 hours)
- 1.5-mile access road
- 2.5-mile gentie corridor

## Utility-Scale Project - PNM

- Project will serve PNM transmission infrastructure
- Short-listed with PNM 2021 Replacement Generations RFP
- 20–30-year Power Purchase Agreement
- Est. April 2025 Construction Operation Date
- AES is the lifetime owner and operator of the facility

## Conditional Use Permit (SLDC)

- Santa Fe County Conditional Use Permit
- Est process 4-6 months
- Zoning: Rural Fringe & CCD
- Construction, Operations & Decommissioning

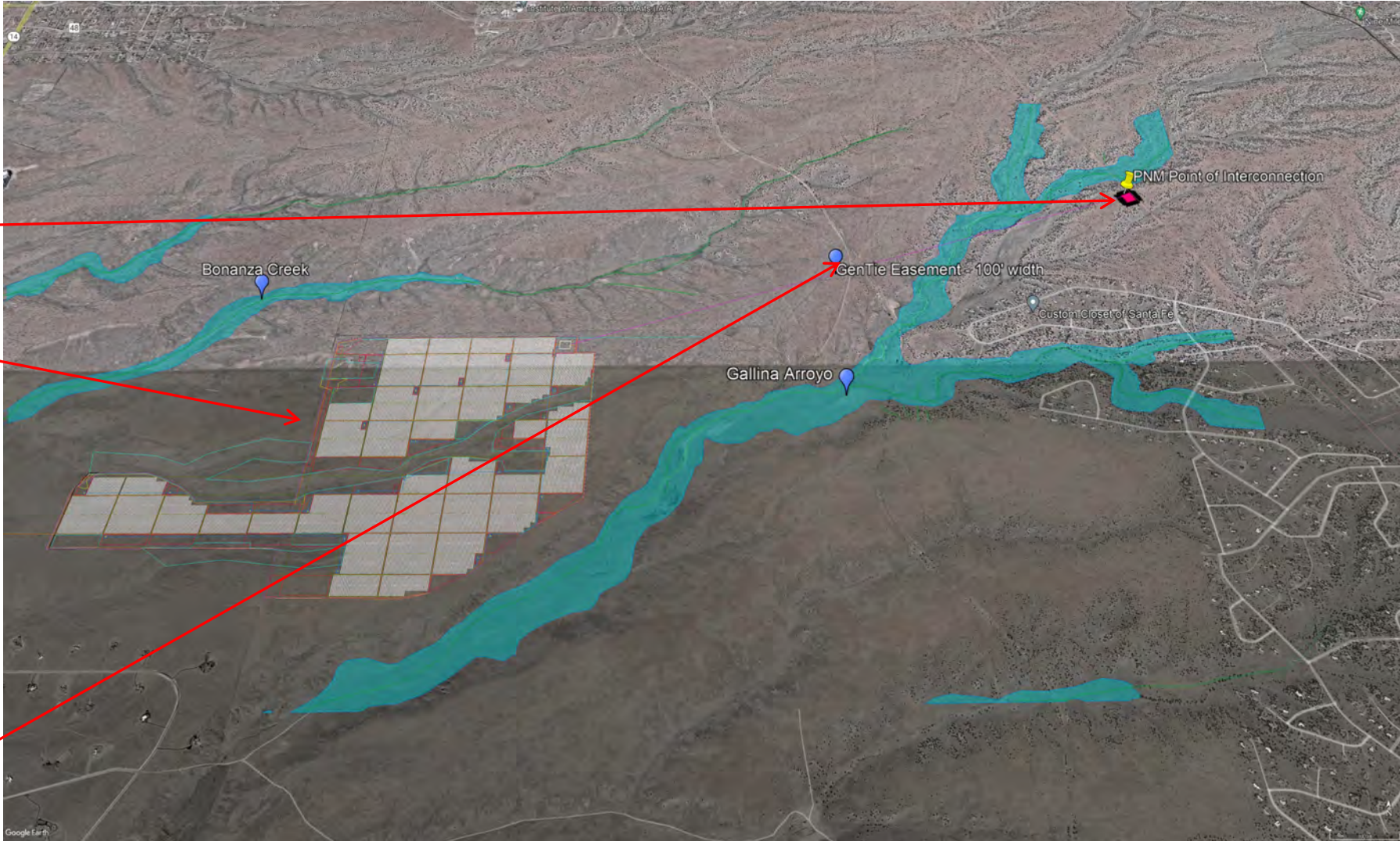


# Project Overview – Point of Interconnection

Substation

Project Location

Transmission Route



# Project Overview - Solar Photovoltaic Modules

## Structure Dimensions

- Approximately 15' max height
- 7' clearance at central rack and at flat tilt or stow mode.
- Approximately 30' aisles between modules
- Agricultural Fencing – 7-8' high

All solar panels used by AES pass the EPA's Toxic Characteristic Leaching Procedure (TCLP) test and are classified as non-hazardous and are not regulated as toxic materials.



# Questions about the project, location, & equipment

---

- Why here - Santa Fe County and why on this portion of Rancho Viejo ?
- Can AES guarantee the minimum setback of 1,000' to adjacent property lines?
- Are there plans to expand the project?
- Does the proximity threaten the health and safety of neighbors?
- How does this impact property value?
- What are toxicity risks of solar panels?
- Do solar panels heat the air above the panels?
- Is glare an issue?
- What is the current zoning of the 800 acres? How will that be changed?



# Project Overview

---

- Crystalline-silicon solar modules are made of basic “solid-state” materials, meaning there are no liquid or gaseous components. The project will be constructed with Tier I panels. Tier I panels are high quality, and rigorously tested for predictable performance, durability, and content. All solar panels used by AES pass the EPA’s Toxic Characteristic Leaching Procedure (TCLP) test and are classified as non-hazardous, and not regulated as toxic materials.
- PV systems do not emit any material during their operation. Electromagnetic fields (EMFs), are often referred to as non-ionizing radiation, meaning the radiation does not have enough energy to damage DNA. Studies prove modern humans are all exposed to EMFs throughout our daily lives, including wall-sockets, cellphones, and computers, without negative health impacts. Someone outside of the fenced perimeter of a solar facility is not exposed to significant EMF from the solar facility. Therefore, there is no concern or negative health impact from EMF produced in a solar farm.
- Solar systems are governed by the same Building/Electrical/Fire codes that govern the construction of homes and other buildings with electrical systems in the community. The local fire and emergency management organizations will be thoroughly informed about the project and all access points available to them. Turn around radius will be reviewed to assure local equipment can operate. The project will be fenced and secured with access only by approved personnel.

# Answers about the project, location, & equipment

## Why here?

Utility-scale solar cannot be built remotely as it needs to serve the utility power loads (where people live) and access utility transmission lines/infrastructure (also where people live).

- The NM Renewable Portfolio Standards (RPS) applied to state IOUs requires a 50% total retail sales from renewable energy by 2030
- The PNM utility load territory includes Albuquerque, Rio Rancho, Los Lunas, Belen, Santa Fe, and Las Vegas, New Mexico – this corridor contains the load infrastructure
- Santa Fe is within the PNM service area and has only two 115kV lines located in a 3-mile radius
- The land that the project is sited on is 1,000+ contiguous acres, accessible to the PNM service lines, buildable (flat, south-facing, and unobstructed), and the landowner is willing to partner with us
- The privately owned land is surrounded by state lands and waterways (arroyos)
- The project will be set back at least 1 mile from the NM Hwy 14 Turquoise Trail scenic corridor
- The project site is set outside of the community college district
- The project avoids the Gallina arroyo and Bonanza Creek arroyo and tributaries
- The project is a setback as far as possible from neighbors – at least 1,000' from nearest property lines (county requirement is 25' setback)
- The distance from the available transmission line is < 3 miles

# Answers about the project, location, & equipment

Can AES guarantee the County required minimum setback of 25' to adjacent property lines?

- Yes. AES guarantees a minimum setback of 1,000' to any adjacent property line/boundary.

Are there plans to expand the project?

- There are no plans to expand the project. This facility, known as Rancho Viejo Solar, is sized at 96 MW AC and will NOT increase in size. AES has two community solar projects in early-stage development proposed for Santa Fe County that will enter into the competitive PNM RFP solicitation, and if awarded, will also go through the County permitting process. These two proposed community solar projects are not associated with the proposed Rancho Viejo utility-scale solar facility. They will be located on separate parcels of land and interconnect to the PNM grid in different locations.

Does proximity threaten the health and safety of neighbors?

- No. The project was designed and implemented to not adversely impact the health and safety of neighbors.
- Ultimately, Santa Fe County decision-makers will consider health, safety, and welfare when they consider the project.
- AES is working with appropriate third parties to provide safety and fire management training for fire departments located within the vicinity of the project. This training will occur within the next five months and again prior to the completion and energization of the facility. The training will also include "train the trainer" sessions for future emergency response teams.

# Questions about the project, location, & equipment

---

How does this impact property value?

- AES has engaged with a third-party national and local appraisal firm that is completing a property value analysis. W
- Numerous studies have examined this question, considering the size of the facility, distance from adjacent properties, vegetation, screening, noise, odor traffic, alternative uses permitted under current zoning, etc.
- The analysis findings and report will be submitted to Santa Fe County with our CUP application.

What are toxicity risks of solar panels?

- No reports provide evidence that there any health issues caused by solar panels.
- All AES solar panels pass the EPA's Toxic Characteristic Leaching Procedure (TCLP) test and,
- Are classified as non-hazardous and are not regulated as toxic materials.

Do solar panels heat the air above the panels?

The surface of PV modules is regularly warm but not hot to the touch on a summer day in full sun. However, the PV Heat Island (PVHI) effect has been studied and early results indicate that temperatures may be 3-4 deg C hotter directly over a PV array. The study is not conclusive regarding the effect of varying vegetation and albedo relative to the amount of temperature change, though.

# Answers about the project, location, & equipment

Is glare an issue?

- Solar panels are intended to capture the most light possible and are specifically designed to reduce reflection and glare. Modern solar panels reduce reflection by using anti-reflection coatings (ARC) and by texturing the surface. According to the National Renewable Energy Laboratory, solar panels reflect as little as 2% of incoming sunlight and produce less glare than standard windows and water. The Federal Aviation Administration (FAA) produced a final policy report that found solar projects do not create hazardous glare for aircraft in the area.

What is the current zoning of the 800 acres? How will that be changed?

- Current zoning for the solar project: Rural Fringe (RUR-F),
- Current zoning for a portion of the gen-tie line and Point of Interconnection at the existing PNM line:
- Community College District (CCD) is the zoning of adjacent parcels
- Underlying zone district does not change,
- Conditional Use Permits (CUP) are not permitted in zoning districts as a matter of right but, may, under appropriate standards and factors set forth in the SLDC, be approved, approved with conditions, or denied.
- Conditional uses are those uses that are generally compatible with the land uses permitted by right in a zoning district but that require individual review

# Construction, Operations & Decommissioning

**Construction Start / timeline** – Anticipated early 2024 , 10-12 months

**Ground Treatment / Natural Vegetation** - Solar racking system does not require leveling the land or installing complex foundations. Installation method - either pile or screw driven poles, depending on soil compactness.

Revegetation - establishment of native vegetation/certified weed free seed mix

**Dust Mitigation** - Water from trucked-in resources for dust mitigation. Project must will comply AES will work with all applicable County, State and Federal standards and regulations

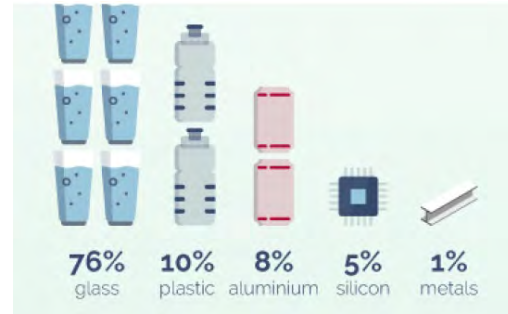
**Traffic** - Construction period - 10-15 max deliveries per day - construction crew traffic

- During operation - Remote operated with limited site traffic - Est. 4 trips per month

**Decommissioning and Restoration** - End of project useful life

- Decommissioning & Restoration Plan & Estimate
  - Removal of all installed equipment
  - Dismantle, reuse where possible, recycle
  - Site restoration – return to pre-construction condition
- Decommissioning and restoration guaranty

# Project Overview - Recycling



## PV Modules

- 90% of module material by weight is glass and aluminum.<sup>(1)</sup>
- 95% of the materials in PV modules are recyclable with 2022 technologies.<sup>(1)</sup>
- Emerging market, with advancements in recycling technology expected – also applicable to BESS.
- AES is in discussions with Equitable Solar Solutions for panel reuse / recycling upon decommissioning of all projects

## BESS

- Contracts with BESS manufacturers (Samsung, LG) mandates the recycling of the equipment at the end of the system's life.
- BESS comprised of:
  - Housing (steel)
  - Wiring (copper)
  - Inverters/transformers (steel, copper)
  - Batteries

1 - <https://www.energy.gov/sites/default/files/2022-03/Solar-Energy-Technologies-Office-PV-End-of-Life-Action-Plan.pdf>

# Questions about construction, operation, & decommissioning

---

- Is dust pollution an issue during and after construction?
- Will AES clearcut and/or grade all the land under the array?
- Describe the post-construction landscape under the solar panels – dirt, natural vegetation, rock?
- How do you protect the facility from lightning strikes?
- What type of fencing will be used to surround the project? Will it encompass the entire complex?



# Answers about construction, operation, & decommissioning

The project will be constructed at the existing grade to the greatest extent possible, minor grading and/or grubbing may occur throughout the portions of the solar facility, BESS, foundation pads, equipment storage, and staging areas. Grading will conform to accepted slope stability requirements. Active construction would take approximately 12 months. Dust control best management practices that would be employed during construction would generally include:

- Limit vehicular speeds on non-paved roads.
- Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
- Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding.
- Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
- Cover exposed stockpiled material areas.
- Suspend excavation and grading during periods of high winds.
- When a project reaches the end of its project life, the project is responsible for executing the approved Decommissioning Plan, including abiding by all local and state decommissioning requirements. This includes the removal, recycling, and disposal of all equipment and other structures associated with the project, as applicable. The land surface within the project area will be sensibly restored to pre-project conditions to allow a return to desert vegetation status or other uses consistent with the land-use policies at the time.

# Answers about construction, operation, & decommissioning

## Dust and Glare:

Solar panels are intended to capture as much sunlight as possible and are specifically designed to reduce reflection and glare. Modern solar panels reduce reflection by using anti-reflection coatings (ARC) and by texturing the surface. According to the National Renewable Energy Laboratory, solar panels reflect as little as 2% of incoming sunlight and produce less glare than standard windows and water. The Federal Aviation Administration (FAA) produced a final policy report that found solar projects do not create hazardous glare for aircraft in the area.

- Active construction would take approximately 12 months. Dust control best management practices employed during construction will generally include
  - Limit vehicular speeds on non-paved roads.
  - Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
  - Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding.
  - Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
  - Cover exposed stockpiled material areas.
  - Suspend excavation and grading during periods of high winds.

# Answers about construction, operation, & decommissioning

Is dust pollution an issue during and after construction?

- Active construction would take approximately 12 months.
- Fugitive dust would be managed in accordance with County or EPA rules and requirements.
- Dust control best management practices that would be employed during construction would generally include:
  - Limit vehicular speeds on non-paved roads.
  - Apply water or dust palliative to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction, as needed.
  - Apply the water using water trucks. Minimize water application rates, as necessary, to prevent runoff and ponding.
  - Apply dust control measures to haul roads to adequately control wind erosion during windy conditions (forecast or actual wind conditions of approximately 25 mph or greater).
  - Cover exposed stockpiled material areas.
  - Suspend excavation and grading during periods of high winds.

Will AES clearcut and/or grade all the land under the array?

- The project will be constructed at the existing grade to the greatest extent possible, minor grading and/or grubbing may occur throughout the portions of the solar facility,
- The area around the Project Collector (2 AC) and BESS (4 Ac) will be graded and leveled to include a gravel surface with concrete foundation pads for certain equipment, including the individual battery containers.
- Grading will conform to accepted slope stability requirements. Pole mounts used in the solar racking system do not require leveling the land or installing complex foundations.
- The installation method will be either pile or screw driven, depending on the compactness of the soil.

# Answers about construction, operation, & decommissioning

---

Describe the post-construction landscape under the solar panels – dirt, natural vegetation, rock.

- Reclamation would include the establishment of native vegetation.
- Certified weed-free native seeds would be used.

How do you protect the facility from lightning strikes?

- AES project engineering utilizes standards to design proper grounding systems as well as lightning arrestors (surge arrestors) to inhibit lightning-related equipment failures.
- The PV racking can be inherently grounded through its driven piles and grounding grids are regularly included in foundation design, to which BESS enclosures may be tied.
- This allows for lightning to pass around sensitive equipment, conductively through to the ground.

What type of fencing will be used to surround the project? Will it encompass the entire complex?

- 7-8' high Agricultural fencing, which allows smaller-sized wildlife to pass through while keeping larger animals out of the facility
- The solar facility will be enclosed and secured by fencing (see project overview section for fencing layout).

# Environmental Diligence

---

## Completed

- **Aquatic Resources Inventory Report:** May 2022
- **Biological Survey Report:** May 2022
- **Phase 1 Environmental Site Assessment:** May 2022
- **Geotechnical Investigation:** September 2022
- **Cultural Resources Study:** July 2022
- **Glint / Glare:** August 2022
- **Visual Simulations:** June 2022

## In Progress

- **Environmental Impact Report:**  
October 2022
- **Hydrologic and Hydraulic Study:**  
October 2022
- **Site Thresholds Analysis:** October  
2022

# Questions about environmental impact

---

- Where can I obtain a copy of the Environmental Impact Statement (all reports)?
- What are the impacts on water resources?
- What will be the water source to the complex? Expected use annually?
- How often will the panels be washed? How much water will be used for panel washing?
- Can you qualify the noise made by the panel (racking) motors?
- How many air conditioning units will run most of the time? How many units and what direction will they face?
- What is the impact on the scenic view?
- Can you qualify the noise made by the panel motors? How many panel motors will there be?
- Will there be any outdoor lighting? When will it be on?
- What is the impact on the environment?

# Answers about environmental impact

---

As part of the development process, we conduct studies to ensure we are aware of all environmental elements. By identifying these resources at the front end, we can design our facility in a way that avoids any impacts. These studies include:

- A delineation of any wetlands and streams
- A search for any hazardous materials on site
- An assessment of potential cultural, historic, archaeological, and religious resources within and surrounding the site
- An assessment of any threatened and endangered wildlife habitat on site
- An assessment of visual resources
- An assessment of local floodplains and hydrology
- An assessment of soils and geology - including on-site geotechnical and pile load testing studies
- A survey of the terrain, boundary, and real estate encumbrances
- Infiltration testing to understand soil drainage rate

An Environmental Impact Report (EIR) including these studies is being prepared in accordance with the requirements of Santa Fe County to identify potential impacts and associated mitigation measures for the construction and operation of the proposed project. The EIR will be part of the Conditional Use Permit application submitted to Santa Fe County.

# Answers about environmental impact

Where can I obtain a copy of the Environmental Impact Statement (all reports)?

- The project is not required to prepare an Environmental Impact Statement pursuant to the National Environmental Policy Act. However, the project is required to prepare an Environmental Impact Report in accordance with the requirements of Santa Fe County.
- The Environmental Impact Report, and associated environmental technical reports, will be part of the public record when submitted to Santa Fe County as part of the Conditional Use Permit application package.

What are the impacts on water resources?

- Construction impacts would generally be related to stormwater runoff. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared in compliance with the state's Construction General Permit, and Clean Water Act Section 402, National Pollutant Discharge Elimination System (NPDES). The SWPPP would identify best management practices (BMPs) to minimize stormwater runoff and sedimentation during construction activities. Stormwater BMPs that would be employed during construction include:
  - Place silt fences and/or straw wattles along the downgradient perimeter of the project to minimize stormwater sedimentation from leaving the site.
  - Minimize grading and vegetation removal, and limit surface disturbance during construction to the time just before solar module support structure installation.
- One ephemeral drainage (Gallina Arroyo) containing an ordinary high-water mark was observed during the April 2022 aquatic delineation survey. Impacts to this drainage are estimated to be less than 0.1 acre, and are limited to the gen-tie crossing. Project would likely qualify for coverage under Nationwide Permit (NWP), per Section 404 of the Clean Water Act.
- Water for construction uses, such as dust suppression. Construction water use would be approximately 100 to 150 acre-feet over a 12-month construction period.
- Long term water uses would be approximately 2 to 3 acre-feet per year and would be associated with periodic panel washing.



# Answers about environmental impact

What is the impact on the scenic view?

- Viewshed analysis has been completed, including visual simulations.
- The Turquoise Trail Scenic Byway is located approximately 2 miles west of the proposed Project and is the closest National Historic Trail to the proposed Project. There is potential for viewers from this location to notice new structures in the distance, but the Project would not attract the attention of the casual observer. The primary visual features in the foreground and mid-ground of the viewshed include existing transmission lines, the San Marcos subdivision, the Eldorado subdivision, and roadways. The visual impact of the proposed Project would be minimal and would not degrade the existing landscape from what is already present.
- Long-term visual impacts include operation and maintenance of Project components. Overall, these new elements would remain subordinate to the existing landscape character.
- Glare analysis completed: No glare predicted.

Can you qualify the noise made by the panel motors? How many panel motors will there be?

- There will be 66 tracker motors. However, the main source of noise with solar arrays is from inverters. The project will have approximately 25 inverters, which are dispersed throughout the facility.
- Inverters have a sound that can be characterized as a low hum. At 15 meters have a decibel (dB) level of 61, which is similar to a normal conversation. At 50 meters the sound attenuates to 50 dB, very faint – similar to moderate rainfall. At 200 meters the sound attenuates to 44 dB, which is a very low perceptibility.
- \* Inverter: Basic function is to “invert” the direct current (DC) output into alternating current (AC).

# Answers about environmental impact

---

Will there be any outdoor lighting? When will it be on?

- It is anticipated there will be a motion sensor, downcast shaded security lighting at the access gate, battery storage, and substation location, and solar pads.
- Downcast lighting protects the ability to view the night sky by restricting unnecessary upward projection of light.

What is the impact on the environment?

- An environmental impact report (EIR) was prepared in compliance with Santa Fe County's Sustainable Land Development Code.
- The resources addressed in this EIR include air resources; biological resources; cultural, historic, archaeological, and religious resources; geological, paleontological, and soil resources; geographic resources; health and safety; land use; minerals and mining resources; noise resources; socioeconomic resources; roads; water resources; and visual resources.
- The analysis evaluates impacts to these resources associated with the construction, operations and maintenance, and decommissioning of the project.
- The EIR also identifies mitigation measures that would be implemented to avoid and minimize significant impacts.
- Based on the draft EIR, the Rancho Viejo Solar Project is not expected to unduly impair important environmental values.

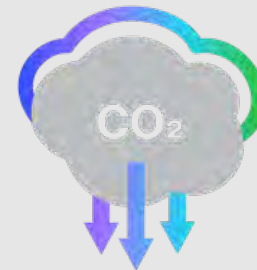
# Benefits: Environmental



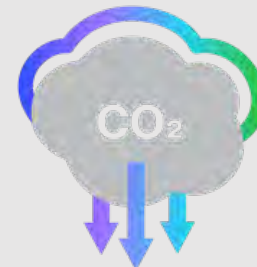
Assist Santa Fe County in reaching its Net-Zero greenhouse gas emissions goal by 2050



Renewable power for equivalent of approximately **23,000** homes' annual electricity use



Reduces approximately **120,000** tons of carbon dioxide emissions annually



Reduced carbon dioxide emissions are equivalent to **13,500,000** gallons of gas

Rancho Viejo Solar

# Benefits: Economic



~200 **construction jobs**

**Contributions to local services**  
(accommodation, restaurants,  
professional services)

Local Socio-economic  
partnerships



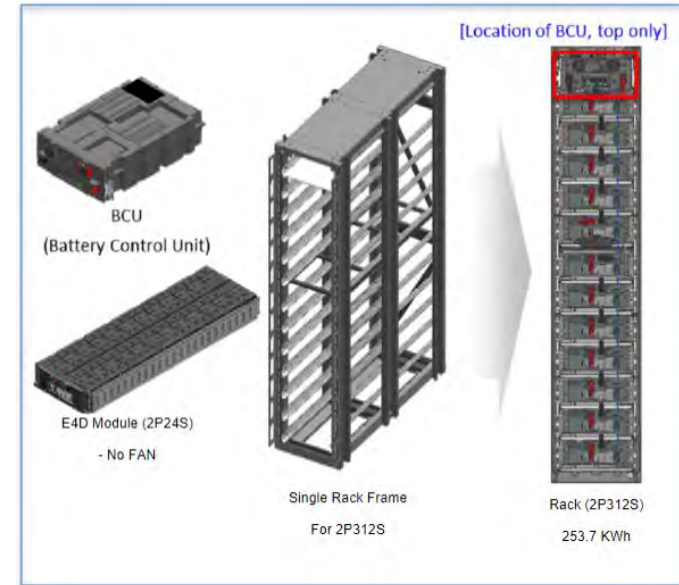
A third-party Economic Impact Report is underway and will determine all economic benefits including anticipated tax revenue, wages, and local spending



Market-competitive supply of  
energy at a long-term fixed cost

\*Total estimated tax revenue over 30 year term, actual revenue may be higher

# Battery Energy Storage System



## Typical Installation -

- Individual batteries are housed in units that are approximately the size of a shipping container.
- Each container has a fully integrated system of HVAC for temp control, sensors and controls for remote monitoring, as well as a built-in fire suppression system.
- The battery containers at Rancho Viejo will be grouped together on concrete pads. Each pad is surrounded by a non-vegetated / gravel fire break for an added layer of protection.

# Questions about BESS safety & fire prevention

---

- How many lithium-ion batteries will be stored in each of the 39 containers and how many cells would one battery have?
- What is the fire danger of lithium-ion batteries and how is prevention and mitigation addressed?
- What are the toxicity risks of batteries ?
- What are the dimensions of the containers are going to be, height, width and length?
- Will there will be a liquid electrolyte in the batteries?
- How far apart will the battery BESS containers be placed?

# Questions about BESS safety & fire prevention

---

- Are you aware of any fires using these same model BESS battery systems? When? where?
- Has anyone been injured or killed due to fires originating from a shipping container sized BESS battery system?
- Describe the fire suppression techniques currently used to fight large container sized lithium-ion battery fires. Is the gas used going to be FM 200 or 3M Novec 1230?
- How much distance from the BESS containers to a flammable landscape?
- Will the solar panels act as a fire break towards neighboring subdivisions?
- Will the fire department receive equipment and training specific to fighting fires originating in the materials used onsite?
- Will the BESS air conditioners have weather and noise suppressing shields on the outside?

# Answers about BESS safety & fire prevention

The combination of solar + storage will allow the utility to call upon the energy stored when it is needed most, day or night

- helping to offset night-time fossil fuel generation
- Help ramp up toward peak energy demand periods (instead of using fossil fuel generation)

How many lithium-ion batteries will be stored in each of the 39 containers and how many cells would one battery have?

- 52 40' ISO containers
- Approx. 260 modules per container (20 racks with 13 modules each)
- Total modules =  $52 \times 260 = 13,520$
- Each module contains 44 cells in a 2P22S configuration

What is the fire danger of lithium-ion batteries and how are prevention and mitigation addressed?

- Multiple options are available depending on the nature of the hazard. The first step is always to prevent the hazard, which is done with a multitude of risks management layers: the battery management system maintains nominal operations and separates a battery string from hazards when necessary; site SCADA systems identify hazardous conditions and can automatically stop the system and alert response personnel, and non-battery fires that may result in a battery fire are dealt with by the same measures as non-battery sites (defensive posturing and material-specific suppression). If a battery fire is initiated, the enclosures planned for this site would release fire suppressant in large concentrations directly into the initiating cell, removing heat and preventing thermal runaway throughout the enclosure. UL 9540 certification addresses safety and requires UL 9540a test results to be available for review. The UL 9540a tests of this system indicate adequate prevention of thermal runaway. The AES Energy Storage solution will achieve UL 9540 certification prior to site commercial operation.



# Answers about BESS safety & fire prevention

What are the toxicity risks of batteries?

- Proper transportation, installation, operation, and disposal of batteries poses no toxicity risks to humans. If a battery is damaged during any of the phases of a battery's life, the proper response requires safe disposal, in which toxicity is contained as a part of the recycling and material re-capture. Lithium-ion batteries include metals, such as lithium, copper, and aluminum, as well as organic chemicals compounds sealed in metal and plastic casing. The amounts and concentration of liquid is such that damage is not expected to leak any fluids.

What are the dimensions of the containers are going to be, height, width and length?

- 39 units @ 45' x 8'x 9.5'

Will there be a liquid electrolyte in the batteries?

- AES uses lithium-ion batteries that contain liquid electrolytes. The batteries are sealed and inhibit any release of the liquid.

How far apart will the battery BESS containers be placed?

- Two back-to-back units per group with 3' spacing and
- 17' between the groups of two

# Answers about BESS safety & fire prevention

Are you aware of any fires using these same model BESS battery systems? When? where?

- Several BESS battery fires have occurred though AES engineers are not aware of any known fires that have occurred with this model battery (as a reference point, Tesla's California Moss Landing battery complex caught fire). With each event, the energy storage industry has gathered several lessons learned and AES is currently applying the latest leading practices to address each lesson.
- Yes, Tesla's California Moss Landing battery complex caught fire. Please see ref. link.  
<https://www.canarymedia.com/articles/energy-storage/tesla-grid-battery-fire-shows-young-industrys-failures-and-successes>

Has anyone been injured or killed due to fires originating from a shipping container sized BESS battery system?

- In 2019, 4 firefighters were injured in an event that reshaped the energy storage industries view on safety. The system was larger than a shipping container, though lessons learned were adopted into then-emerging standards (UL9540 and NFPA 855) as well as common practice by AES. The hazards are understood to a much finer degree and resulted in design changes to AES's current energy storage solution. Specifically, the management of both fire and flammable gases is addressed and tested.

# Answers about BESS safety & fire prevention

Describe the fire suppression techniques currently used to fight large container sized lithium-ion battery fires. Is the gas used going to be FM 200 or 3M Novec 1230?

- Multiple options are available depending on the nature of the hazard. The first step is always to prevent the hazard, which is done with a multitude of risks management layers: the battery management system maintains nominal operations and separates a battery string from hazards when necessary; site SCADA systems identify hazardous conditions and can automatically stop the system and alert response personnel; and non-battery fires that may result in a battery fire are dealt with by the same measures as non-battery sites (defensive posturing and material-specific suppression). If a battery fire is initiated, the enclosures planned for this site would release fire suppressant in large concentrations directly into the initiating cell, removing heat and preventing thermal runaway throughout the enclosure. UL 9540 certification addresses safety and requires UL 9540a test results to be available for review. The UL 9540a tests of this system indicate adequate prevention of thermal runaway. The AES Energy Storage solution will achieve UL 9540 certification prior to site commercial operation.

# Answers about BESS safety & fire prevention

---

What will be the ground treatment underlying the battery containers and substation?

- Concrete pads directly underneath the containers, surrounded by gravel.

How much distance from the BESS containers to a flammable landscape?

- The gravel will surround the concrete pads and containers, extending approximately 6 feet in circumference.

Will the solar panels act as a fire break toward neighboring subdivisions?

- The solar panels will provide additional clearance between the property boundary and the BESS equipment.

Will the fire department receive equipment and training specific to fighting fires originating in the materials used onsite?

- AES is working with appropriate third parties to provide safety and fire management training for fire departments located within the vicinity of the project. This training will occur within the next five months and again prior to the completion and energization of the facility. The training will also include "train the trainer" sessions for future emergency response teams.

# Answers about BESS safety & fire prevention

---

Will the BESS air conditioners have weather and noise-suppressing shields on the outside?

- The project will include 39 battery containers, which are located over 1-mile from residential houses. The project will include 78 heating ventilating and air conditioning (HVAC) units. Two HVAC units will be placed at the end of each battery container, however only one HVAC per unit will be operating at any one time (the other is for redundancy purposes). At 50 meters the sound attenuates to 50 dB, very faint – similar to moderate rainfall. At 200 meters the sound attenuates to 44 dB, which is a very low perceptibility. The HVAC units are located over 1-mile from residential houses.
- The project will comply with legal noise limits.
- The facility is virtually silent, and the ac units are equivalent to a conversation-level volume.
- The HVAC is rated for outdoor use. AES specifies site-specific environmental coatings and materials.



To create a better future,  
we need to accelerate a  
**100% carbon-free**  
energy grid

For a truly 100% carbon-free grid, load  
and carbon-free generation must be  
matched on an hourly basis

---

Thank you