# Rancho Viejo Solar FAQ
# Updated 12.2.2024

The AES team has worked closely with the Santa Fe community over the last two years on the Rancho Viejo solar-plus storage project, and we have listened to the concerns, questions and needs the community has expressed. As a result, we have adjusted our plans to ensure that the Rancho Viejo Solar project reflects our commitment to being a good neighbor, as we build and operate a safe and sustainable renewable energy project that delivers a long-lasting, positive impact to the Santa Fe community. This document covers key topics and responds to the most frequently asked questions about the Rancho Viejo project.

## Project benefits

The Rancho Viejo Solar project will deliver both environmental and economic benefits to the citizens and communities of Santa Fe County. The project has been studied extensively, planned carefully, and will have no negative impact on regulated wetlands, watersheds, habitats, threatened or endangered species, or cultural/historical resources.

The Rancho Viejo facility will produce more than 268,000 MWh of clean energy each year, enough to offset nearly 120,000 tons of CO2 emissions and provide enough clean electricity to power the equivalent of 37,000 New Mexico homes annually.

## Accelerating achievement of New Mexico's clean energy goals

New Mexico has set ambitious targets for decarbonization at both the state and local levels, including the state's goal to generate 50 percent of our electricity from renewable sources by 2030 and 100 percent from carbon-free resources by 2045. These goals are achievable but require bold action. Success requires an all-of-the-above strategy, including solar, wind, energy storage and electric vehicles. It also requires a diversity of projects, including utility-scale, community solar, and rooftop solar, simultaneously. This is the only way to achieve the efficiencies and scale to meet these objectives in a cost-effective and timely manner.

The Rancho Viejo project addresses the urgent need for action to address climate change and energy equity in Santa Fe County. A strategy of relying on distributed rooftop solar only cannot begin to reach all of the community's families that live in rentals, mobile homes, etc., nor can the community or state achieve the clean energy goals they have set forth. According to the U.S. EIA, only 2% of New Mexico's electricity was generated by customer-sited PV in 2023.

## Grid reliability

When people say, “I have solar, so the Rancho Viejo project does nothing for me,” it’s important to understand how net metering and a regional grid system work. The Rancho Viejo project will bring nearly 100 MW of solar capacity onto the PNM grid, benefiting everyone connected to it and offering storage to help assure reliability among variable renewable energy sources, including distributed solar systems. Energy storage is also critical to making renewable energy work at scale. By storing clean energy generated when the sun is shining, storage enables that energy to be used when it’s needed most, whether that’s at night or when the demand for electricity is high. This results in a more reliable, flexible and resilient power grid.

## Long-Term Sustainability

The Rancho Viejo project will help the Santa Fe community move toward a more secure and sustainable energy future. The project will reduce reliance on fossil fuels and reduce carbon emissions while contributing to a healthier environment and planet for future generations.

## Why is the solar project located here?

The location for this project was selected based on an assessment of 1) PNM's transmission network, 2) available nearby substation capacity, and 3) an examination of the landowner's property to identify the most suitable lands.

## Economic Benefits

The project will provide significant financial benefits to Santa Fe County, its economy, public services and the local school district.

The Rancho Viejo project will create approximately 200 good-paying jobs during construction and four long-term operational jobs. The project represents a $200 million-plus capital investment. The project will generate an estimated $28 million in labor and wages, including at least $5 million in wages and material sourced from within Santa Fe county; $18M in New Mexico manufacturing output; more than $10 million of estimated new property tax revenue for the county during the project’s operational lifetime; an estimated $4M in Gross Receipts Tax collection, $2.9M of which would go directly to the county. The construction workers will also bring economic benefits to the local economy through lodging, purchasing goods and services, and eating at local restaurants. AES will also employ local contractors to handle long-term vegetation management at the site.

## Jobs for locals

AES works with local companies who hire locally to build our projects to the greatest extent possible. The labor pool will pull primarily from Santa Fe County

and Bernalillo County. We are working with the community and area colleges to support solar workforce development and training to help create new career opportunities for local residents and employment with local solar installation companies.

The project's construction will require skilled workers such as electricians, engineers, technicians, and installers who are in high demand and earn above-average wages. Once the project is completed, ongoing maintenance and monitoring jobs will be created to ensure the system runs safely and reliably, offering competitive salaries to those workers.

## Decarbonization and our health

The Natural Resources Defense Council estimates that cardiovascular and respiratory ailments directly related to our continued use of fossil fuels cost Americans an estimated $820 billion every year in healthcare costs. Add to this the enormous global costs of failing to slow climate change, and the case for accelerating the energy transition becomes clearer.

## Local decisions drive action

The success or failure of most climate and energy equity efforts will depend on small-scale efforts, local policies, and decisions to accelerate the energy transition. We hope the County will take action toward the timely development of this proposed project (with reasonable conditions) while providing consistent guidance for similar future projects in Santa Fe County. One approach is to establish a permitting policy for solar or solar-plus-storage on a utility-scale but cap project size at the 300-MW threshold for New Mexico Public Regulation Commission (PRC) review to meet the definition for CUP-provisioned renewable energy.

Clean energy projects of this size do not create impacts comparable to any reasonable definition of “electricity-generating plants” or “industrial-size” facilities. A fossil-fueled generation plant requires regular deliveries of fuel by train, truck, or pipeline, management of waste materials, huge amounts of water, mechanical infrastructure, emissions monitoring, lighting, and much more. These generating plants are fundamentally different from PV solar to solar-plus-storage facilities.

## Low-cost energy

The electricity generated and storage capacity provided by Rancho Viejo Solar would be sold to the Public Service Company of New Mexico (PNM) under a long-term power purchase agreement of 20-30 years. PNM will, in turn, sell that electricity to its customers in Santa Fe County and New Mexico. Solar energy costs have decreased significantly in the last decade, making solar cost-competitive or even lower cost than other traditional forms of generation.

Utility-scale solar offers several advantages, including a stable, no-cost fuel source; scale and efficiency to optimize costs; and the ability (compared to rooftop solar) to share the costs and benefits of renewable energy equitably across the

customer base. As is the industry standard for many utility-scale solar projects, after the 20- to 30-year PPA with PNM, the project would look to re-contract with PNM or sell the electricity in a wholesale market for the remaining solar project life, should one be in place in New Mexico at that time.

## Battery energy storage safety

Utility-scale battery energy storage systems (BESS) are familiar and tested technology. According to the U.S. Energy Information Administration, there is currently about 21 GW of commercially operational battery capacity deployed in the U.S and is expected to reach 30 GW by the end of 2024. Storage capacity has grown rapidly from around 1 GW just four years ago. At the end of this decade, the buildout of batteries across the U.S. will almost certainly exceed 100 GW. Along with this rapid growth, there have been steady and significant advancements in materials, standards, operations, safety and monitoring systems, and emergency response training compared to earlier systems built a decade, or even five years ago.

AES is one of the pioneers of utility-scale energy storage and we've have been operating a global fleet of BESS for nearly two decades. Fire incidents at energy storage facilities are rare occurrences and remain isolated. Earlier thermal events have reshaped AES' and the energy storage industry's approach to BESS system design and safety. Lessons learned have resulted in the adoption of UL9540 and NFPA 855 standards, in addition to safety and design improvements to AES' BESS projects.

We understand the technical and safety management of thermal hazards at a much greater level of detail today. The utility-scale BESS technology we deploy today looks and operates very differently from the technology used just five years ago, as AES continues to incorporate the most advanced technology and safety standards into our BESS facilities. AES' BESS projects are designed and tested to meet all the latest applicable codes and standards for battery energy storage systems.

Today's BESS installations are equipped with advanced safety monitoring and management systems to ensure that risks associated with the installation and operation of the battery system are addressed and mitigated. These safety improvements include fire suppression at the individual battery cell level and active exhaust ventilation and deflagration vents to prevent buildup of combustible gases in the enclosure in the unlikely occurrence of a thermal event.

## Safety planning for Rancho Viejo

A site-specific preliminary Hazard Mitigation Analysis (HMA) has been developed and will be finalized prior to obtaining a construction permit as part of the detailed project engineering process. This HMA includes site and product-specific fire risk assessment and a first responder plan. Local first responders will have full access to these reports. AES will also provide on-site and in-person training to local responders prior to the commercial operation of the system.

The facility will be equipped with advanced safety monitoring and management systems. No special materials are required for the containerized BESS units to respond to a thermal event. Only standard water application to the adjacent BESS containers is required, and only in the extremely unlikely case that all internal fire suppression systems fail. All information the first responders require will be included in the first responder plan part of the HMA. These containers are “non-occupiable,” meaning the first responders do not open or enter any container under any circumstance.

Solar systems are governed by the same building, electrical, and fire codes that govern the construction of homes and other buildings with electrical systems in the community. AES will provide on-site and in-person training to the local responders prior to commercial operation of the system. The local fire and EMS organizations will be thoroughly informed about the project and all available access points and turn radius areas to ensure local equipment can operate. The project will be fenced and secured with access-only approved personnel.

## Does the project pose a fire risk?

Fires and thermal events at battery storage facilities remain rare and isolated. According to research from the Electric Power Research Institute (EPRI), which collects and analyzes data about BESS fires, “the technology’s overall safety record is strong and improving.” There were about the same number of fires in 2023 as there were in 2019, even as global battery storage deployments have increased 20-fold. To put this in perspective, according EPRI there were fewer than 10 BESS failure events in the US in 2023, a rate of less than one per 1 GW of battery energy storage deployed. According to the National Fire Protection (NFPA), there are an average of about 358,000 residential home fires each year, nearly 1,000 a day, in the US. To summarize, the focus on new safety standards and technology for BESS installations over the past few years is showing strong results.

## Environmental impacts

As part of the development process, we conduct studies to identify sensitive features of our proposed project site. We design our facilities to avoid any impacts by identifying these resources at the front end.

These studies for Rancho Viejo include:

- Aquatic Resources Inventory Report: Update Completed July 2024
- Biological Survey Report: Update Completed July 2024
- Phase I Environmental Site Assessment: Completed May 2022
- Environmental Impact Report: Completed July 2024
- Cultural Resources Pedestrian Survey Report: Completed July 2022
- Hydrologic and Hydraulic Study: October 2022
- Site Thresholds Analysis: Completed October 2022
- Geotechnical Investigation: Revised Report Completed April 2024
- Noise Technical Report Rancho Viejo Solar Project, Revised Report November 2024

- Decommissioning Plan, Completed July 2024
- Vegetation and Noxious Weed Management Plan, completed July 2024
- Pre-Incident Plan, completed July 2024
- First Responder Mitigation Guidelines, completed July 2024
- Preliminary Hazard Mitigation Analysis, completed August 2024

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, historical, 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 the impacts on these resources associated with the project's construction, operations and maintenance, and decommissioning.

The EIR also identifies mitigation measures that would be implemented to avoid and minimize significant impacts. Based on the EIR, the Rancho Viejo Solar Project is not expected to unduly impair important environmental resources or values. Based on the results of these studies, AES modified the Rancho Viejo Solar project design to avoid identified Prairie Dog colonies, suspected Burrowing Owl habitats, and cultural findings.

Biological field surveys were performed in April 2022 by SWCA Environmental Consultants to evaluate the project's potential impacts on federally threatened or endangered species, state-threatened or endangered species, and the state's endangered plant species regulations. It was determined that the Mexican spotted owl habitation is unlikely to occur in the project area because of the lack of mountainous habitat, old-growth mixed conifer forest, and deep canyons preferred by the  species. SWCA also observed burrowing owls, protected by the Migratory Bird Treaty Act (MBTA), and Gunnison's prairie dog colonies which could provide habitat for the burrowing owl species within the proposed project area.

If construction begins during the burrowing owl nesting season (March 1–October 31), occupied nesting burrow surveys will be conducted, including verifying the presence/absence of prairie dogs and coordination with the New Mexico Department of Game and Fish. After which appropriate avoidance steps would occur. In addition, pre-construction nest surveys would be conducted to avoid potential impacts on MBTA-protected species. If active nests are observed, recommended buffers will be applied until the young have fledged.

The SWCA biologists identified two habitat types within the project area: 1) grasslands dominated by blue grama, prickly Russian thistle, and rubber rabbitbrush and 2) pinon-juniper savanna dominated by blue grama, two-needle pinon, one seed juniper, and rabbitbrush. The landscape has previously been disturbed by two-track roads and cattle grazing. According to the NRCS (2022a), none of the soils are considered prime farmland or of statewide importance.

## How much water will be used during construction and operation?

This project will require very little water to build and virtually no water to operate. Water use during construction will be approximately 100 to 150 acre-feet over a 12-month construction period. Water may be acquired from the following offsite sources, or a combination thereof: Santa Fe County bulk water station commercial pipe water; Ranchland Utility Company Class A reclaimed water; Santa Fe County reclaimed water; or any other legally permitted commercial water sales. Neither AES nor its construction partners will drill any wells or use any existing wells on the property for the project.

## How will soil conditions be impacted?

The project will be constructed at existing grade to the greatest extent possible, minor grading and/or grubbing may occur in portions of the solar facility. The area around the Project Collector (2AC) and BESS (4AC) 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 mountains for the solar tracking system and panels do not require leveling the land or require the installation of complex foundations. The installation method will be either pile or screw driven, depending on the compactness of the soil. Reclamation would include the re-establishment of native vegetation. Certified weed-free native seeds will be used.

## What are solar panels made of? Are the components a health risk?

Crystalline-silicon solar modules are largely made of glass, aluminum, copper, and silicon, along with other commonly used plastic and wires. The cells on solar modules that are used to capture sunlight are made of silicon, which is a naturally occurring element. 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.

## Can the solar array withstand intense storms, wind, and hail?

Solar panels are extremely durable and rigorously tested to withstand harsh weather, including strong wind and hail. AES utilizes panel vendors that use thick tempered front-side glass, significantly increasing the module strength. Rancho Viejo Solar has a design basis to withstand wind speeds up to 105 mph and golf ball-sized hail.

## Will the project emit concerning EMFs?

PV systems do not emit any material during their operation. Electromagnetic fields (EMFs), often referred to as non-ionizing radiation, do not have enough energy to

damage DNA. Studies show people are exposed to EMFs throughout their daily lives, including wall-sockets, mobile phones, and computers, without negative health impacts. Someone outside of the fenced perimeter of a solar facility is not exposed to any significant EMF levels from the solar facility. There is no evidence of negative health impact from EMFs produced by solar farms.

## As the project owner, who is AES?

The AES Corporation is a global energy company committed to accelerating the future of energy. AES is headquartered in Arlington, Virginia, and is a publicly-traded company listed on the New York Stock Exchange (NYSE: AES). With more than 9,600 employees in 13 countries, AES has been developing and delivering innovative energy solutions to its customers for more than 40 years. In the US, AES safely operates more than 580 utility-scale renewable energy projects (solar, wind, energy storage) in 28 states representing 8.6 GW of capacity. We have 2.5 GW of renewable projects under construction and 5 GW of projects contracted, with an overall development pipeline of 51 GW. AES is a diversified energy company, owning and operating two large investor-owned utilities in Indiana and Ohio and other generation assets in the US and worldwide.

## Will the project be noisy once operational?

The solar project will be a quiet neighbor. Only a few pieces of equipment at the site will make any sound. These are inverters and transformers, and they are equipped with cooling fans. AES engaged an independent third-party consultant to conduct detailed operational noise modeling for the project design. The study found that calculated noise levels emitted by the project would be below Santa Fe County Ordinance No. 2016-9 Chapter 7 for Sustainable Design Standards.

## How long will construction take? Will there be noise and disruption during construction?

The entire construction period for the project is expected to last approximately 12 months. Construction will begin once all permits are received and pre-construction work and standard site due diligence are completed. During construction, the noise will be limited to the pile driving that happens early in construction, lasting approximately 30 days. A strict noise ordinance is followed to ensure that work happens during appropriate hours. Further, water trucks will be used for compacting project roads and managing construction dust.

## Will the project produce any light pollution at night?

There will be standard, motion-sensored security lighting on the project. This lighting will be pointed downward and away from any surrounding neighboring properties. There will be no consistent nighttime lighting.

## Will the project produce any glare or reflection?

Solar panels are intended to capture the maximum light possible and are designed to reduce reflection and glare. Modern solar panels reduce reflection using anti-reflection coatings (ARC) and 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.

## How will the project affect the property values of adjacent and nearby residences?

In February 2023, Kirkland Appraisals, LLC and CohnReznick, LLP conducted site-specific studies to analyze the impact of commercial, utility-scale solar projects on neighboring property values across the U.S. Both studies provide data supporting the conclusion that solar generally does not have a negative impact on surrounding property values.

## Will a nearby solar array impact the cost of homeowner's insurance?

AES is not aware of any instance where installation of utility-scale solar or battery energy storage facility has resulted in increased homeowner's insurance costs for project neighbors.

## How will landscaping and vegetation be managed?

The vegetation throughout the arrays must be properly managed to minimize the shading of tall grass on the panels. As part of the project's operation and maintenance plan, the ground cover will likely be managed through seasonal mowing, if necessary.

## Is there any impact on the water table? Will the project increase stormwater runoff outside of the project area?

No, the solar project will not increase stormwater runoff outside of the project area and will be properly managed within the project area. Rain falls on the solar panel and runs off the edge of the panel, where it falls off the drip line and infiltrates the ground below.

## Will the project impact local roads and traffic?

The public may see or hear construction vehicles transporting material to the site during construction. Once construction is complete, there will be a minimal number of

vehicles accessing the site. We will coordinate closely with local and state transportation authorities before, during, and after construction to ensure local roads are cared for, and any necessary road improvement or use permits are obtained.

## What type of fencing will be used?

The project will use an agricultural-style fence with woven wire and wooden posts for the enclosure to preserve the rural character of the existing community.

## What is the setback of the project?

Setbacks are measured from property lines. The Rural Fringe Zone District (RUR-F) requires a minimum setback of 25' from the Front, Side, and Rear property line. The nearest residence is 1/3 mile from the project, two residences are within a ½ mile, and only 20 residences within 1 mile. The Eldorado neighborhood is approximately 1.3 miles away from the project at its nearest, with the vast majority of the neighborhood residences between 2 and 6 miles away.

## What is the decommissioning plan for the project's end of life? Will materials get recycled?

When a solar project reaches the end of its life, the owner/operator 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 solar panels, racking, equipment, and other structures associated with the project, as applicable. The land surface within the project area will be sensitively restored to allow a return to agricultural use, or other uses consistent with the land-use policies. Our supply chain process identifies and prioritizes equipment manufacturers that align with our environmental safety, and human rights commitments. Some of these commitments include buying equipment from manufacturers whose supply chains and suppliers comply with a national recycling program. We also seek to buy high-efficiency products, reducing the total raw materials and parts required for each project.