

**Camilla Brom**

**Exhibit 23**

**AES County Planning Commission Power Point Presentation for the Rancho Viejo Solar + Storage Project; pgs. 8, 9, 17, 18, 20, 26, 43, 44, 50, 62, 63, 64, 67, 68**

# Rancho Viejo Solar + Storage Project

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*Accelerating Santa Fe's clean energy transition with locally-sourced, dispatchable solar power!*

## Planning Commission Meeting

February 3, 2025, presented by AES

115 MWdc / 96 MWac / 192 MWh

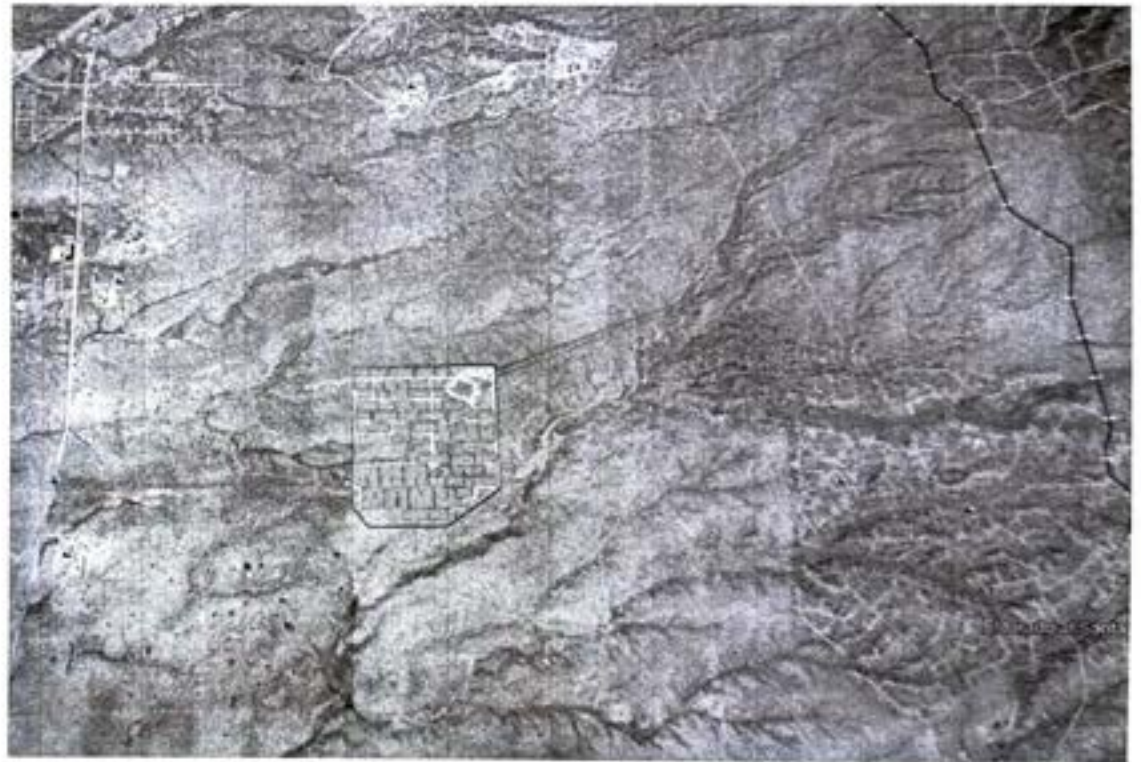
Solar + Battery Energy Storage System (BESS)

2 miles east of Hwy 14. Santa Fe County,  
New Mexico

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## **Project Location - Summary**

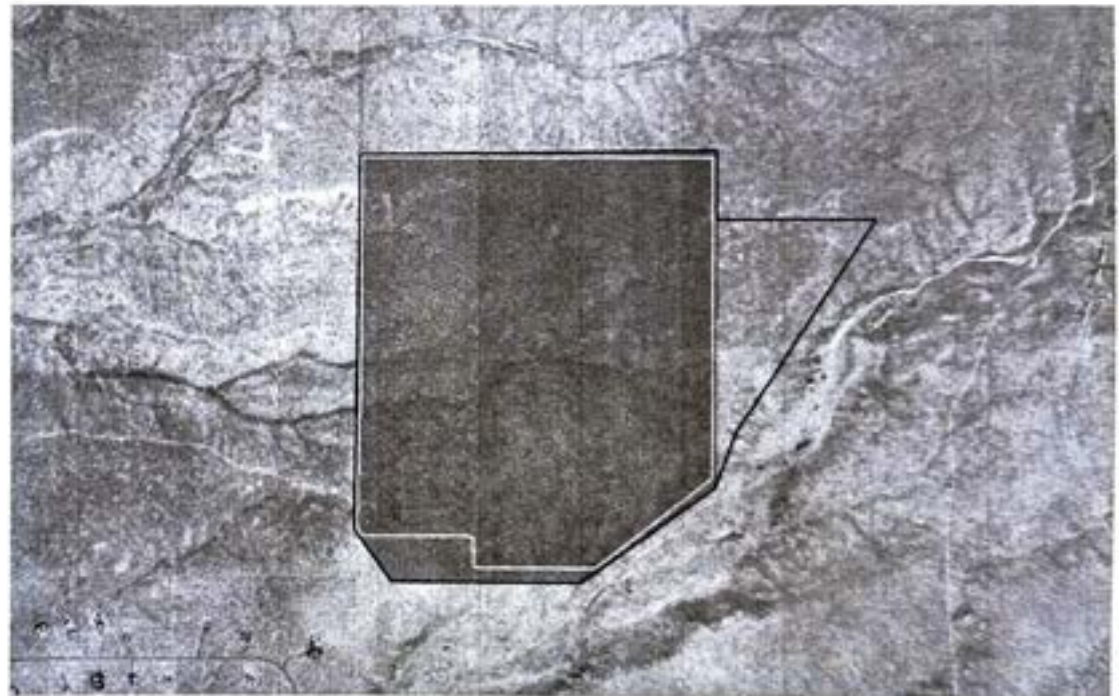
- 3 miles south from Santa Fe
- 2 miles east of Hwy 14
- 1.3-1.5 miles west of Eldorado neighborhood
- 1/3 mile from nearest residence in San Marcos
- BESS sited 1.5 miles from both San Marcos and Eldorado neighborhoods
- 680 fenced acres for project
- Located on private property, within a larger 8,225-acre tract





# **Property in Relation to Project Boundary**

- 828-acre property (blue boundary), as specified in the approved survey plat included with the CUP application
- 731-acre project boundary (red polygon)
- 680-acre fenced project area (pink boundary)
- 340 acres will remain natural opens space in conformance with SLDC open space requirements



# Project Location - Where does the power go?



The following types of resources are of specific interest to PNM under this RFP:

- Stand-alone short-duration and long-duration energy storage and hybrid renewable-storage projects that maximize benefits to PNM ratepayers by capitalizing upon the
- Resources located near PNM's load center or load-side resources that avoid transmission curtailment risks and/or the need for significant transmission upgrades;

**18) Transmission Deliverability:** To the extent applicable to the Proposal offered, provide proof that the quoted capacity can be delivered via the electric transmission system to PNM's load (including documentation demonstrating that either (i) firm transmission service is available or (ii) a viable plan for firm transmission service to enable the delivery of energy to PNM's load is in place) with a copy of any associated agreements included in the Proposal. Proposals must account for delivery to PNM's system at one of the following locations:

- Albuquerque and Rio Rancho Load Center;
- South of the Albuquerque Load Center (Los Lunas/Belen);
- San Juan;
- Four Corners;
- West Mesa;
- Cline's Corners;
- Zia; or
- Norton.

Excerpt: DRAFT PNM 2029-2032 Resource RFP

## SEARCHLIGHT NEW MEXICO

INDEPENDENT INVESTIGATIVE JOURNALISM

HOME TOPICS SERIES SUBMIT TOP ABOUT

NEWSLETTER

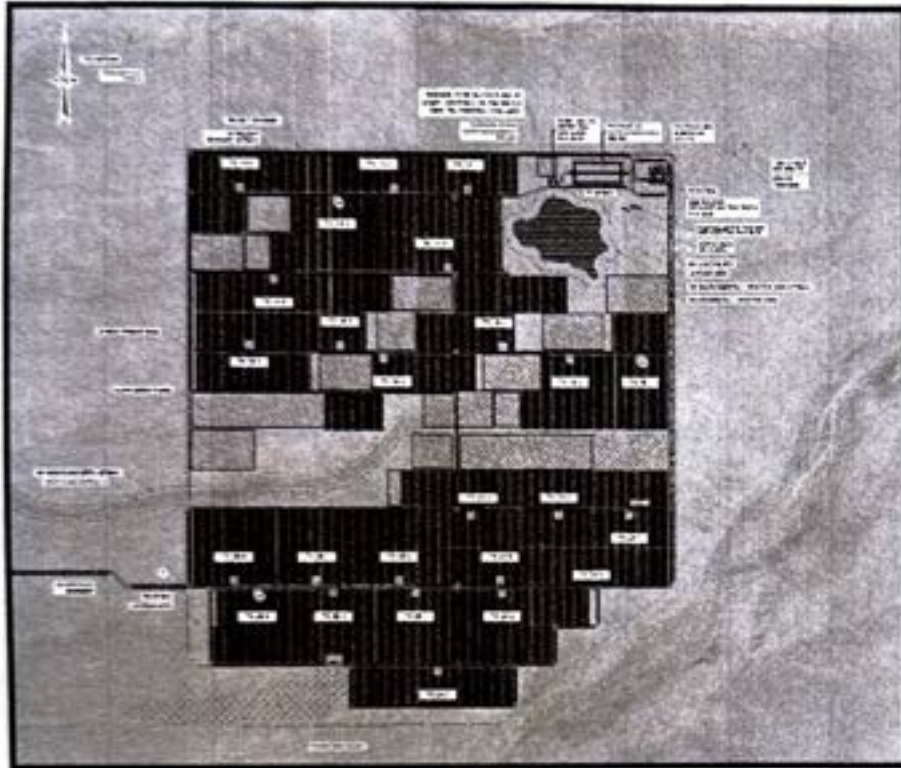
"When we have a contract, it's completely exclusive and the vendor cannot sell energy to anyone else," said Raymond Sandoval, a spokesman for PNM, the state's largest electricity provider. "PNM charges and discharges the battery at its sole discretion, and operates the facility to the sole benefit of PNM customers." While acknowledging that "there really isn't a way to know where the power is going to go," Sandoval said PNM wants to "use it first here in New Mexico." If there's excess energy in the system, that could be sold out of state and the profits used to reduce rates for PNM customers, he added. If PNM and AES reach an agreement on the project, he assumes the generated energy mostly would be sent to Santa Fe and Albuquerque.

<https://searchlightnm.org/burning-question-what-the-right-place-for-a-solar-farm/>

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# Project Overview



## Technical Specifications

- 115 MW DC solar photovoltaic source
- 96 MW AC output
- 48 MW / 192 MWh battery storage (4 hours)

## Utility-Scale Project

- Feed into PNM transmission grid
- ~268 GWh of clean energy, equivalent of entire annual residential load of Santa Fe
- Fully power Santa Fe at times of max output
- 100% renewable energy goal by 2045

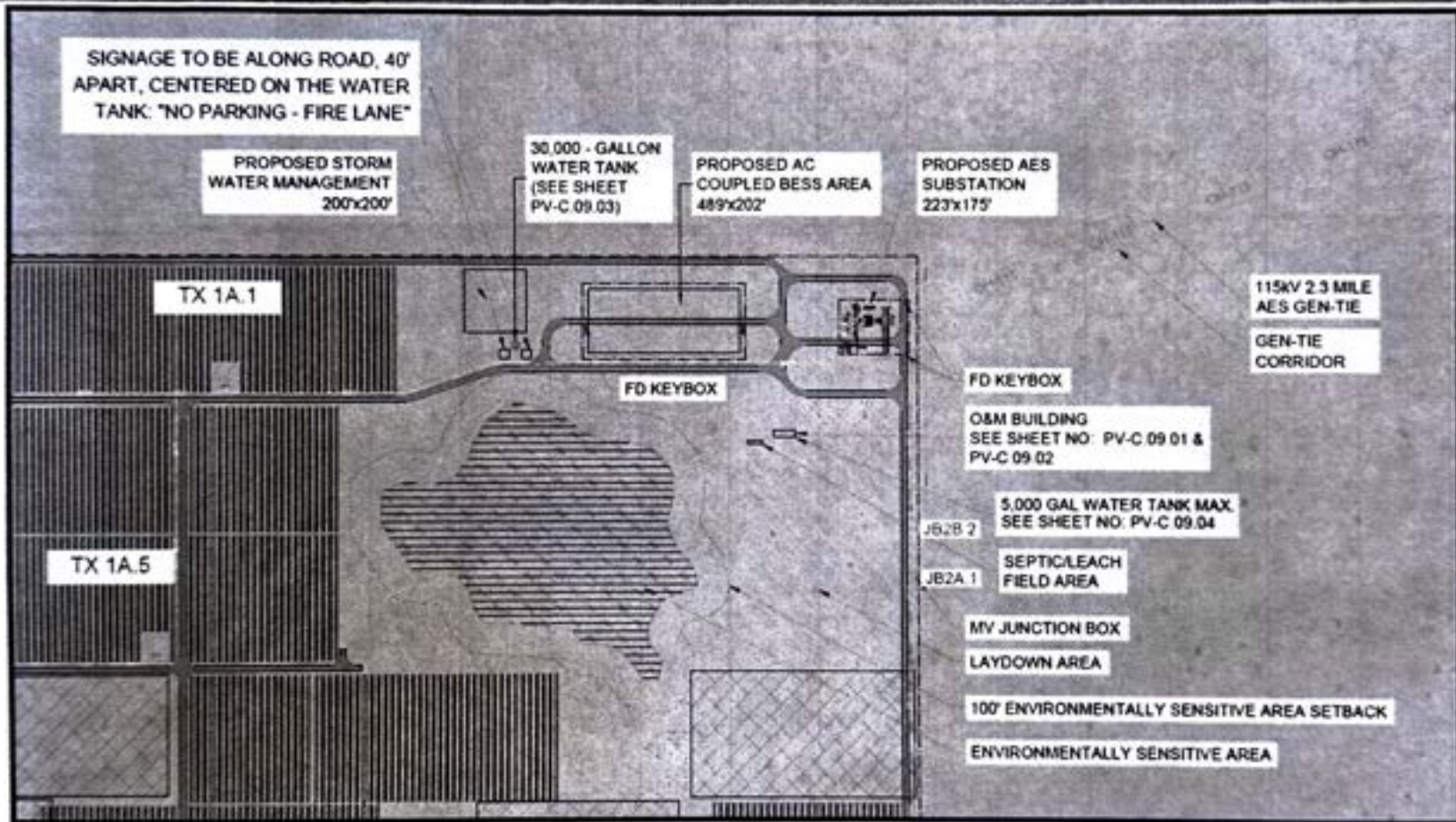
## Temporary Use

- 35-year asset life
- Decommissioning and Restoration

## Construction and Operation

- Year-long construction process
- Remote & on-site operation with limited site traffic
- Low impact - minimal noise, water, lighting

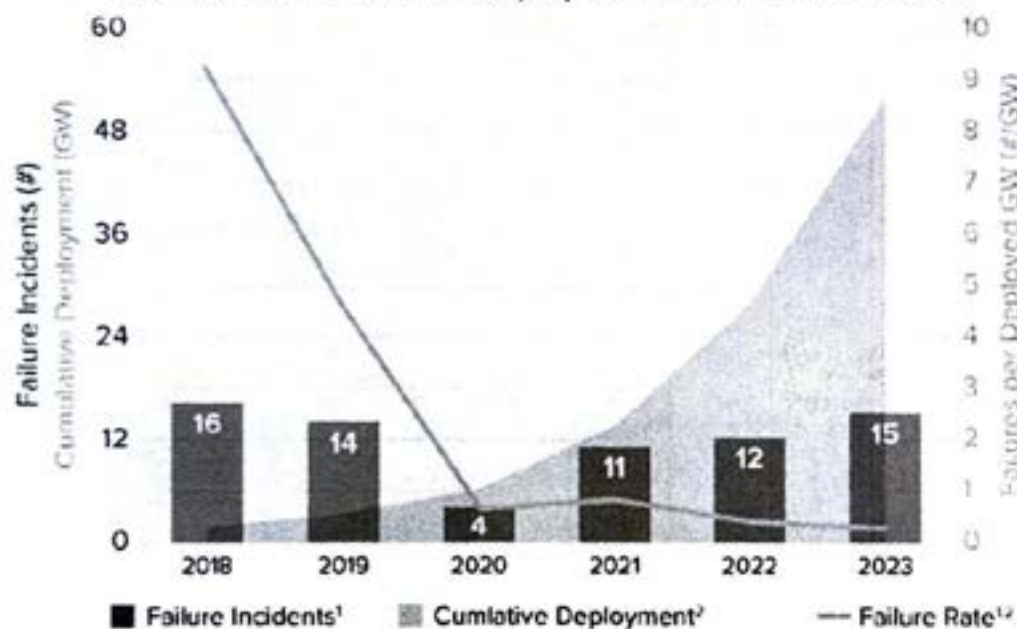
# Project Overview – Site Plan Updates





# BESS Failure Rate Decreasing

Global Grid-Scale BESS Deployment and Failure Statistics



- 90% of global battery capacity is Li-Ion based
- 2023 Global Installed BESS capacity: **+50 GW**
- 2023 U.S. new BESS capacity: **16 GW**
- 2024 BESS capacity will double to **30 GW**
- **+ 400 MW BESS operating capacity in NM**
- NM state goal to have 2 GW BESS by 2034
- **AES is a global leader in BESS**
  - Safety is AES' #1 priority, company value
  - Pioneer of technology for grid storage
  - Operator of BESS for more than 15 years
  - 871 MW of BESS in operation
  - +700MW of BESS construction in 2024

Sources: (1) EPRI Failure Incident Database, (2) Wood Mackenzie. Data as of 12/31/23.

Source: [BESS Failure Incident Database - EPRI Storage Wiki](#)



# Project Diligence

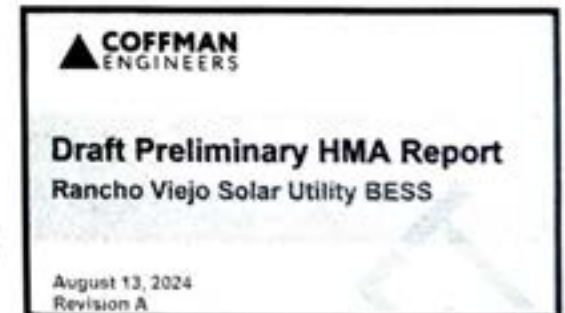


## Site Studies Performed

- **ALTA and topographical survey**
- **Aquatic Resources Inventory Report** – gen-tie to span crossing of jurisdictional feature
- **Biological Survey Report** – no federal/state T&E species, prairie dog/burrowing owl avoided
- **Phase I Environmental Site Assessment** - no REC, CREC, & HREC
- **Hydrologic and Hydraulic Study** - minimal flood hazard for solar project development
- **Cultural Resources Pedestrian Survey** – sensitive resources avoided
- **Site Thresholds Analysis** – additional traffic impact studies are not warranted
- **Visual Impact Assessment** – would not unduly impair visual resources
- **Appraisal Solar Impact Study** – no anticipated impacts to values; Matched Pair Analysis done to Uniform Standards of Appraisal Practice by Appraisal Institute



- **Environmental Impact Report** – no significant resource issues
- **Noise Technical Report** – Operational noise would not be perceived by a human observer
- **Geotechnical Investigation Report** – Completed to inform project design
- **Decommissioning Plan** – Prepared in accordance with the 2021 IFC; Section 1207.2.3 of the Santa Fe Fire Code; and the applicable sections of the Santa Fe County SLDC
- **Preliminary Hazard Mitigation Analysis** – Prepared in accordance with NFPA 855, Standard for the Installation of Energy Storage Systems and IFC
- **First Responder Mitigation Guidelines** – Developed to provide BESS response guidance, emergency planning and training to first responders and AES BESS personnel and contractors
- **Pre-Incident Plan** – Identifies fire protection, fire alarm and safety systems, special conditions and hazards, and response and staging information





# **Water Use - Construction and Operation**

## **Construction Water (Temporary)**

- 100 to 150 acre-feet over a 12-month construction period
- Approximately 50 percent of construction water used will be reclaimed water

## **Operation Water Use**

- 2-to-3 acre-feet per year for panel washing, and will be primarily reclaimed water
- O&M building potable water use will be 3,000 gallons per month



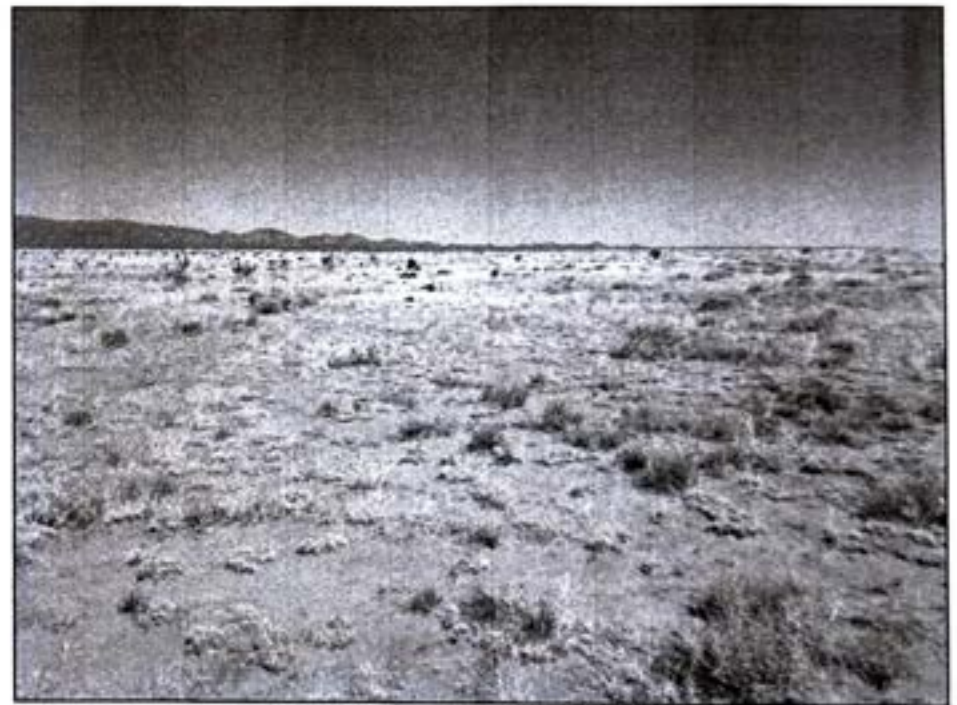
# Weed Management

## Avoidance and Minimization

- Equipment will be cleaned and inspected prior to being brought onsite
- Soil disturbance will be limited to the minimum area feasible
- Sediment control BMPs (e.g. hay bales) and imported gravel will be certified weed free

## Containment and Control

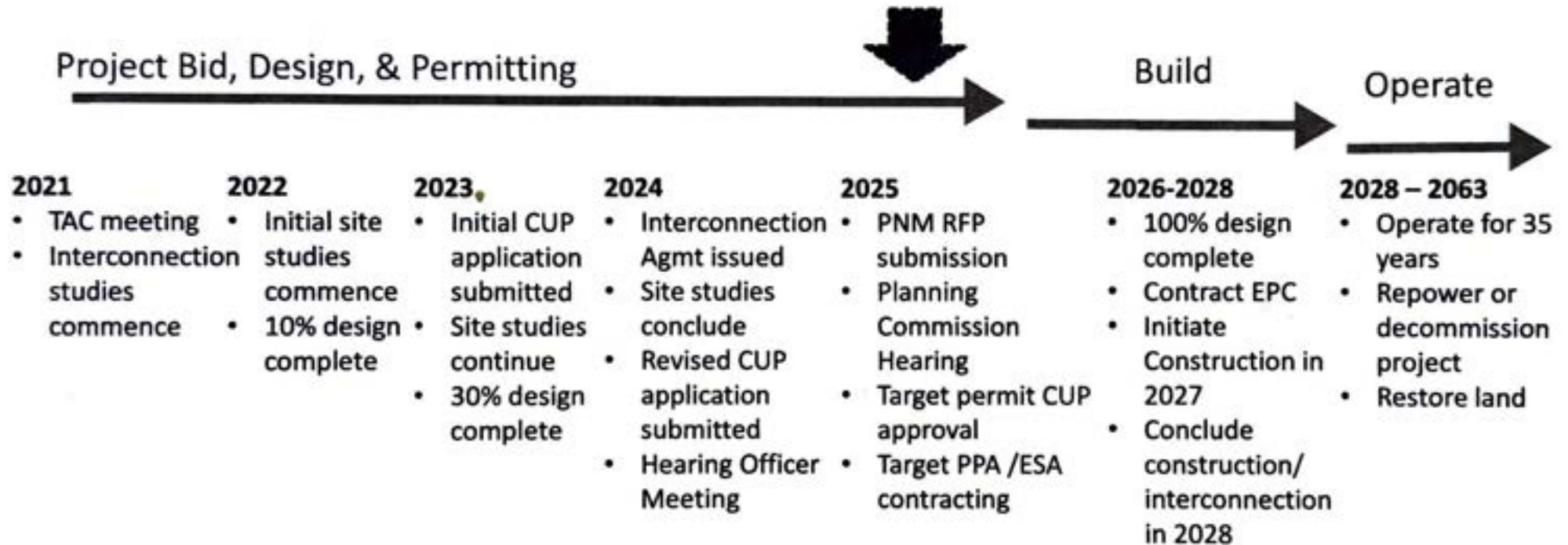
- Manual and mechanical treatment (hand pulling and weed trimmers)
- Herbicide application, by state-certified herbicide applicator per NM Pesticide Control Act, Chapter 76 Article 4 NMSA
- Herbicides will be used judiciously as an adjunct to manual and mechanical treatment



Typical vegetation/view at Rancho Viejo site



# Estimated Project Timeline



# CUP Approval Criteria

SLDC, Section 4.9.6.5, Approval Criteria. CUPs may only be approved if it is determined that the use for which the permit is requested will not:

**1. be detrimental to the health, safety and general welfare of the area;**

- The project is designed and will be implemented to not adversely impact the health, safety and welfare of the surrounding area.
- The project will be developed to comply with all applicable requirements contained in the SLDC and all state and federal laws, and all codes and standards as adopted in Santa Fe County, including IFC, 2021 Edition and NFPA 855, Standard for the Installation of Stationary Energy Storage Systems, 2023 Edition.

**2. tend to create congestion in roads;**

- Traffic added to NM14 primarily to support temporary construction. Operational traffic will be minimal.
- A Site Threshold Analysis (STA) was submitted to NMDOT District 5 in support of the NMDOT Access Permit. NMDOT accepted the STA and requested application for a NMDOT Access Permit.
- NMDOT Environmental Design Division provided environmental clearance of the application. NMDOT Drainage Design Bureau provided acceptance of the application.

☛ NMDOT Access Permit was approved.

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# **CUP Approval Criteria (continued)**

SLDC, Section 4.9.6.5, Approval Criteria. CUPs may only be approved if it is determined that the use for which the permit is requested will not:

## **3. create a potential hazard for fire, panic, or other danger;**

- The project will comply with the most current applicable codes adopted by the State of New Mexico, Santa Fe County, and other entities.
- The project will include 20-foot-wide roads, 28-foot turning radii, and a 30,000-gallon on-site water tank.
- The BESS containers will be equipped with internal fire suppression systems.
- All information required by the first responders will be included in the first responder plan part of the final approved Hazard Mitigation Analysis (HMA).
- The Applicant will provide on-site and in-person training to the local responders prior to commercial operation of the system.

## **4. tend to overcrowd land and cause undue concentration of population;**

- The project is a static, non-obtrusive, use of land that will not overcrowd the land nor cause undue concentration of population. The project includes 340 acres of designated natural open space which exceeds the requirements of the SLDC; and will be coupled with a TDR of 5,700ac of adjacent land

# CUP Approval Criteria (continued)

SLDC, Section 4.9.6.5, Approval Criteria. CUPs may only be approved if it is determined that the use for which the permit is requested will not:

**5. interfere with adequate provisions for schools, parks, water, sewerage, transportation or other public requirements, conveniences or improvements;**

- The project is in a remote area of Santa Fe County and will not interfere with adequate provisions for schools, parks, water, sewerage, transportation or other public requirements.

**6. interfere with adequate light and air;**

- Minimal lighting is included for security and will meet SLDC requirements and be shielded and downlit.
- The "Monopole" or "H-frame" structures allows for air and wind to flow through with minimal obstruction.

**7. be inconsistent with the purposes of the property's zoning classification or in any other way inconsistent with the spirit and intent of the SLDC or SGMP.**

- A commercial solar energy production facility within the Rural Fringe (RUR-F) Zoning District is an allowed use with the approval of a CUP.
- Chapter 7 of the SGMP explicitly supports the development and distribution of renewable energies at a regional scale.



## Response to Hearing Officer's Recommendations (continued)

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### Potential for wildfire

- The UL9540a is a *"installation level test did not result in propagation of a thermal runaway event from the failure of a single cell. No flaming or flying debris was observed outside of the enclosure."* Based on this result, and in combination with additional design measures such as adequate spacing between containers placed on concrete pads, along with an additional 30' of defensible space of crushed gravel without vegetative fuel, and a perimeter fire break, the facility has been designed to not only protect *itself* from an approaching wildfire, but also not be the cause of one.
- According to the most recent Santa Fe County Wildland Urban Interface fire risk map, the project is located in the lowest area of wildfire risk in the region. In fact, 30% of the ground within the project location is barren.

## **Response to Hearing Officer's Recommendations (continued)**

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### **The proposed system is older, less safe type of technology**

- This is not true and appears to be an unsupported conclusion borrowed from a statement made by a presenting member of the project opposition.
- The BESS system proposed by AES for Rancho Viejo incorporates the latest generation of battery energy storage system technology that fully complies with NFPA 855 and all other applicable fire codes and standards, including UL 9540a testing, which demonstrated successful prevention of thermal runaway from a single cell failure.

### **Impact of PFAS from fire suppressant on groundwater**

- Water is not employed to extinguish a BESS fire in the highly unlikely case that a thermal event or fire occurs. The industry standard guidance is for first responders to maintain a defensive perimeter (150ft away), apply water to adjacent areas to further bolster containment, and allow for the affected container to burn itself out in a matter of hours.
  - In combination with the IP55 ingress protection rating of the battery enclosure, which prevents egress of leaking fluids at low pressure, there is no means for FK-5-1-12 (the fire suppression clean agent) to enter groundwater.
- 62 FK-5-1-12 is non PBT (persistent, bio accumulative, toxic) clean agent fire suppressant