

Staff Presentation to the Board of County Commissioners

Rancho Viejo Solar Project Case #24-5200

August 11, 2025



Presented by:

Dominic J. Sisneros, Supervisor, Building and Development Division, Growth Management Department

Introduction by:

Alexandra Ladd, Director, Growth Management Department/Interim Land Use Administrator

Entitlement Process and Roles

- **County staff** – determine completeness of the application and whether the project is compliant with the dimensional requirements and the criteria for the CUP according to the SLDC requirements. Additionally, staff works with third-party consultants to determine what specific conditions should apply to the project if approved.
- **Hearing Officer (HO)** – reviews staff’s report and determines other facts pertinent to the case, conducts quasi-judicial proceedings, presides over a public hearing, and makes a recommendation of approval or denial to the Planning Commission.
- **Planning Commission (PC)** – Reviews staff’s report and determines additional facts pertinent to the case as necessary, conducts quasi-judicial proceedings, presides over a public hearing. The PC meeting is informed by the HO’s recommendation but is not bound by the HO’s conclusion. The PC makes final decision on a CUP application.
- **Board of County Commissioners (BCC)** – Hears any appeal of a Planning Commission decision that is brought forward by an aggrieved party. Appeals of BCC decisions are heard in district court.

Policies and Applicable Regulations for Solar Projects in Santa Fe County

NM Community Solar Act

- *State of NM legislation signed into law **April 5, 2021***
- *Solar Rule adopted by PRC on **March 30, 2022***

County of SF Ordinance **2022 – 05**

- *Adopted **July 13, 2022** to make SLDC compliant*
- *Added “community solar” definition and made community solar permitted by right in all zoning districts.*
- *Amended definition of commercial solar to add battery storage and make definitions consistent.*

County of SF Resolution **2022 – 054**

- *Adopted **July 12, 2022.***
- *Expresses policy intent of BCC to support community solar in SF County, particularly on public land.*
- *Includes letter of support template for proposed projects that meet criteria identified in exhibit to resolution.*

County of SF Ordinance **2023 – 09**

- *Adopted **December 13, 2023***
- *Amends SF County Fire Code through adoption of NFPA-855 standards for stationary energy storage systems*

Application Timeline for Rancho Viejo Solar

Original Application

- Submitted **Jan 2023**
- Community Q & A held virtually **January 2024**.
- Application deemed incomplete by County staff
- Withdrawn Early August **2024**

Current Application

- Submitted **Aug 2024**
- Additional third-party review and studies completed
- Deemed complete by County staff in **Sept 2024**.
- Application materials made available on dedicated County webpage, including public comments.

Public Participation

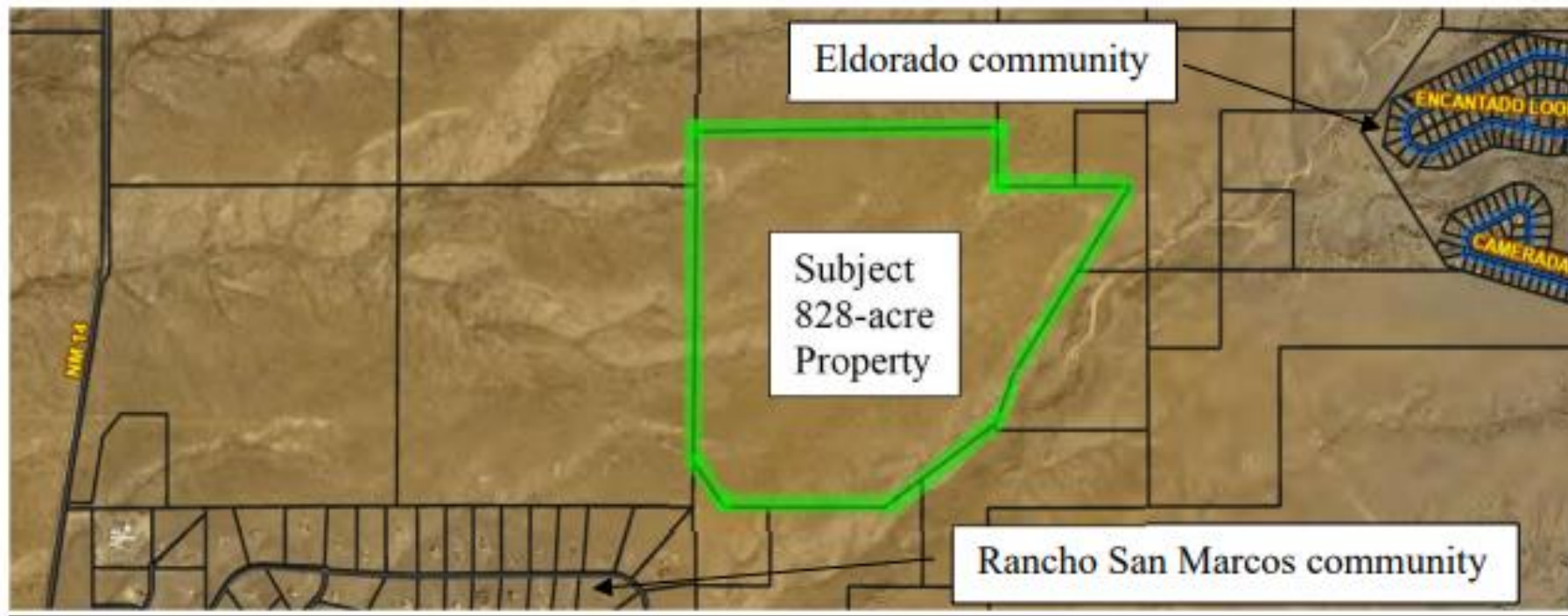
- Community Meeting hosted by Applicant **August 22, 2024**
- Community Q & A **October 22, 2024**
- Hazard Mitigation and ERP Q & A held virtually on **November 5, 2024**
- Public hearing in front of Hearing Office Hebert held on **December 4, 2024**.
- Public Hearing in front of Planning Commission held on **February 3, 2025**.

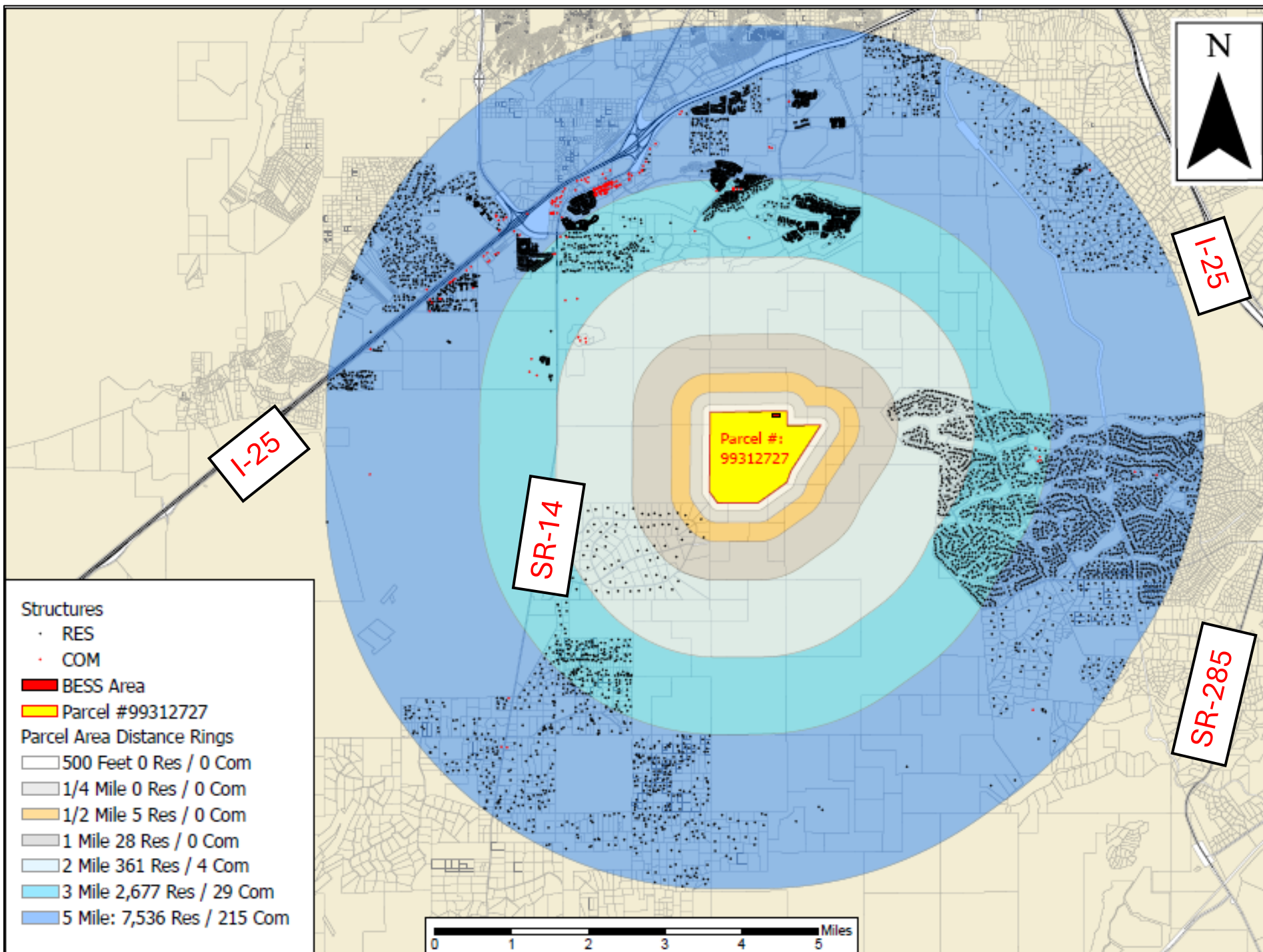
Board of County Commissioners

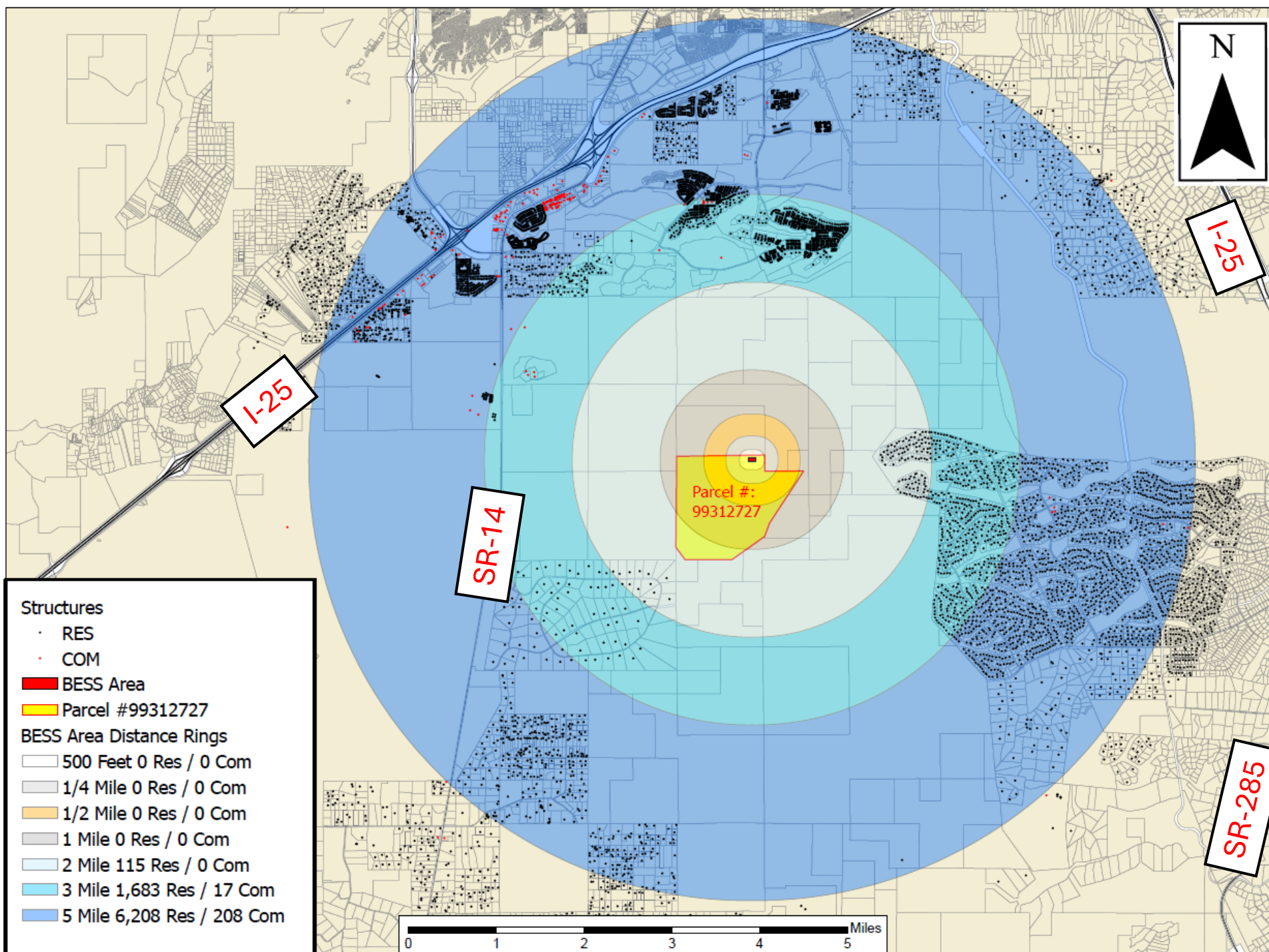
- Hear evidence, determine facts, and conduct public hearing.
- Make determination of compliance or noncompliance with SLDC requirements, CUP criteria, fire code.
- If approved, project must comply with staff's conditions, all fire code requirements, and submit 100% construction drawings for development permit

The Location

- Privately-owned site, zoned RUR-F (Rural Fringe), 828 total acres, of which 684 will be developed.
- The access point is on SR 14, addressed as 211 Twilight Way, in SDA-2 (Sustainable Development Area 2), Commission District 5







The Application

- Rancho Viejo Limited Partnership, Rancho Viejo Solar, LLC; AES Clean Energy Development, LLC (jointly, the Applicant), requests approval of a Conditional Use Permit (CUP) for a ninety-six (96) megawatt solar facility and 2.3-mile generation tie-in line (gen-tie) with either 70-foot-tall steel monopoles or 50-foot-tall steel H-Frame poles within existing easements. Application includes 12-month extension of approval, if granted.
- Appendix B, the Use Matrix of the Sustainable Land Development Code (Ordinance 2016-9, hereafter SLDC) allows commercial solar facilities and High-voltage electric power transmission lines as a conditional use within the RUR-F zone.
- A CUP application may be subject to other special reports and assessments (SRAs) and the “conditions of approval” require individual review of the proposed location, design and configuration of the proposed project.

Application Materials

- Applicant was required to submit several additional SRAs that are not usually required for a CUP Application.
- The initial Hazard Mitigation Assessment and Emergency Response Plan are also available for public review at the CUP stage although they will be further refined at the time of development permit (if the Board of County Commissioners approves the CUP).
- All materials related to this application are available for public review on the County's website: www.santafecountynm.gov



Special Reports and Assessments (SRA)

- Environmental Impact Report
- Adequate Public Facilities & Services Assessment
- Site Thresholds Analysis
- Aquatic Resources Inventory Report
- Biological Survey Report
- Class III Cultural Resources Survey and Report, and State Historic Preservation Officer concurrence letters
- Visual Impact Assessment
- Noise Technical Report
- Vegetation Management and Noxious Weed Control Plan
- Geotechnical Investigation Report
- Preliminary Hazard Mitigation Analysis
- First Responder Mitigation Guidelines
- Pre-Incident Plan
- Decommissioning Plan

Staff Review of SLDC Standards

- **Access** (§7.4), **Road Design** (§7.11) and **Traffic Impact** (§6.6): *Access from SR 14 will be subject to NM DOT standards, all interior roads will meet SLDC width and material standards; Site Threshold Analysis (STA) concludes that traffic impact is minimal, and Traffic Impact Analysis (TIA) is not required (per NMDOT standards).*
- **Water Supply** (§7.13, §6.5), and **Water Conservation** (§7.13): *Water for construction estimated at 100 – 150 ac ft with long term use 2 – 3 ac ft/year supplied via a combination of sources (offsite, reclaimed water, or other commercial water source); potable water at site for office use supplied via 5,000-gallon tank; portable toilets used during construction and NMED-approved septic system installed for permanent use.*

Staff Review of SLDC Standards

- **Landscaping and Buffering** (§7.6): *Given the nature of the facility, no new landscaping is proposed, which is allowable as per §7.6.8.6 “in open lands characterized by an absence of significant natural vegetation”.*
- **Fences and Walls** (§7.7): *An 8-foot-tall perimeter fence is proposed to enclosed the developed area of the parcel (likely chain link) with screening on the section closest to residences.*
- **Lighting** (§7.8): *Lighting will be motion-activated, downcast shaded security lighting at access gate, BESS and substation location, operations building/office and solar pads. A lighting study is not required.*
- **Signs** (§7.9): *A small identification sign may be posted at the entry gate, and interior signage will restrict parking to ensure fire lanes are kept clear.*

Staff Review of SLDC Standards

- **Parking and Loading** (§7.10): *Visitor and employee parking at the operations building will occur 7 am – 7 pm and applicant proposes gravel parking lot with 7 spaces.*
- **Open Space** (§7.15): *Approx 340 acres will remain natural open space which meets requirements.*
- **Protection of historic resources** (§7.16): *Three cultural resources surveys were conducted, finding 17 sites, 2 of which deemed potentially eligible for status, so applicant redesigned road to avoid the resources with a 100-ft buffer and State Historic Preservation Office concurred that there is no effect on historic properties. If any resources are unearthed during construction, applicant will notify appropriate authorities.*

Staff Review of SLDC Standards

- **Terrain Management** (§7.17) and **Flood Control** (§7.18): *During construction SWPPP in accordance with NLI will meet EPA standards. Applicant will use best practices to control runoff, reduce erosion, sedimentation, and turbidity; includes using silt fences, straw wattles as well as minimizing grading and removal of existing vegetation. A hydrologic study indicated that there are no impacts to the three unnamed arroyos on property. Development will be avoided in these areas.*
- **Solid Waste** (§7.20): *All waste generated during construction will be disposed of at a licensed solid waste facility. When the project is decommissioned, all materials will be disposed according to federal, state and local laws.*

Staff Review of SLDC Standards

- **Air Quality and Noise (§7.21):** *Construction will result in localized emissions, which are regulated by NMED. Reasonable precautions are required to limit airborne dust and pollutants including water, covering open-bodied trucks, establishing vehicle speed controls, installing wind-control fences, minimizing truck idling time. Once operational, the facility will require routine inspections and maintenance with minimal emissions. During construction, ambient noise levels will increase. Once in operation, there will not be a discernible increase in sound beyond the immediate vicinity of the facility.*

Fire Protection

- **§7.5:** *Project will be constructed with 20 ft wide internal roads with fire lanes, 28 ft turning radii, a 30,000 gallon above ground water storage tank for wildland fire protection.*

In addition to the SLDC requirements, the project must be compliant with the following federal fire safety laws:

- **International Fire Code**, 2021 edition
- **NFPA 855**, Standard for the Installation of Stationary Energy Storage Systems, 2023 Edition.



Santa Fe County Board of County Commissioners
Special Meeting
Atar Fire 3rd Party Review Summary
August 11, 2025

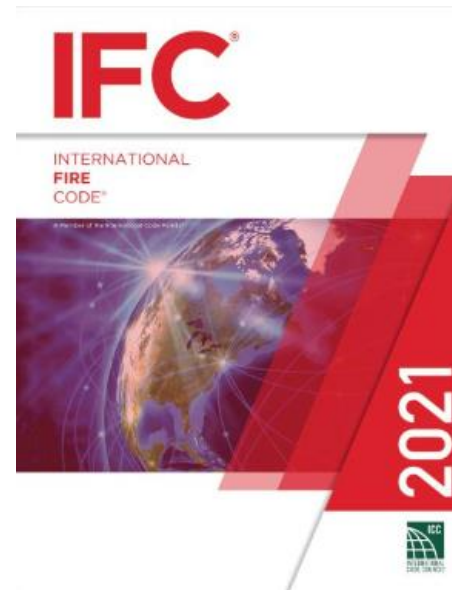
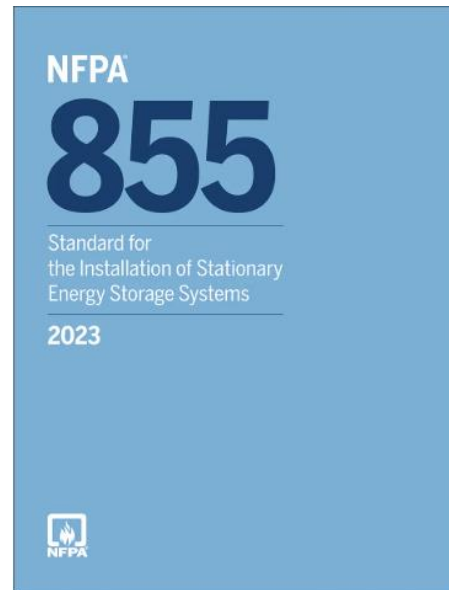
NICHOLAS BARTLETT, MS, P.E.

Nicholas Bartlett, Fire Protection Engineer, P.E.

- 18+ Years as a Fire Protection Engineer (UL, Jensen Hughes, Atar Fire, etc.)
- M.S Fire Safety Engineering
- Licensed Professional Engineer (CA, CO, NM, NY, NV)
- NFPA 855 – *Installation of Energy Storage Systems*, Principal Member
- NFPA 800 – *Battery Code*, Principal Member
- UL 9540/A – Technical Member
- UL 1487 – Technical Member
- UL 1973 – Technical Member

Applicable Energy Storage System Codes and Standards for Santa Fe County

- 1) NFPA 855, *Standard for the Installation of Energy Storage Systems*, 2023 Edition
- 2) International Fire Code, 2021 Edition



Reviewed Documents

Hazard Mitigation Analysis (Coffman Engineers)

UL 9540A Test Data (cell/module/unit – UL; installation - CSA)

UL 9540 Listing Test Report Draft (SGS Laboratory)

NFPA 68 Design Calculations (Vigilex)

Dispersion and Deflagration Modeling Report (Coffman Engineers)

Deflagration Test Report (CSA)

Site Development Plan Drawings (AES/PVinsight Inc)

Preliminary Emergency Response Plan (AES)

Preliminary Pre-Incident Plan (AES)

Plume Analysis (Coffman Engineers)

Sample Safety Features – Explosion Control

- Deflagration Venting System – Designed by Vigilex – Based on UL 9540A
 - Reviewed for compliance with NFPA 68, UL 9540A cell level report, deflagration testing report
- Combustible Concentration System – Exhaust Ventilation + Gas Detection
 - Has not yet been designed – will be reviewed for compliance with NFPA 69, UL 9540, NFPA 855, IFC

KEY TAKEAWAYS:

**NFPA 855 (2023) ONLY REQUIRES ONLY ONE EXPLOSION CONTROL SYSTEM
THIS PROJECT IS PROVIDING TWO REDUNDANT EXPLOSION CONTROL SYSTEMS**

ALL SYSTEMS ARE REQUIRED TO COMPLY WITH NFPA 68/69/855

Sample Safety Features - Thermal Runaway Propagation Protection (TRPP) System

NOT an extinguishing system – limits propagation

NOVEC 1230 injected into each module via piping

UL 9540A Unit and Installation level test data indicates thermal runaway event limited to initiating cell in both tests – no cell-cell propagation – due to extinguishing and cooling effects

KEY TAKEAWAYS:

TRPP IS NOT A CODE-REQUIRED SYSTEM

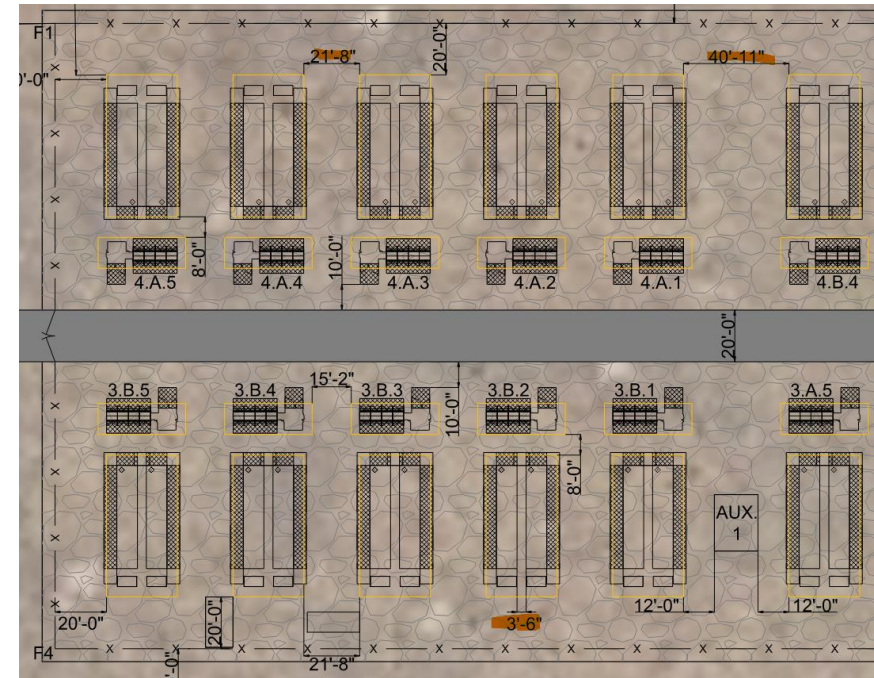
IT IS PROVIDED FOR ENHANCED SAFETY

UL 9540A TEST DATA FOR THIS SPECIFIC INSTALLATION INDICATES IT LIMITS
PROPAGATION TO A SINGLE CELL

Sample Safety Features – Separation Distances

Back-to-back containers are spaced 3'6" apart – 3' minimum per NFPA 855 (N/A for Remote Locations)

Pairs of containers are either 21'8", or 40'11" apart



KEY TAKEAWAYS:

SEPARATION DISTANCES EXCEED MINIMUM CODE REQUIREMENTS

Sample Safety Features

Listings

- UL 9540 Listing is required – draft report issued
- UL 1973 – Battery Modules
- UL 1741 – Inverters

Fire Alarm System

- Fire alarm system is required
- Detailed drawings and design will be reviewed, and must comply with the IFC, NFPA 855 and NFPA 72

Battery Management System

- Evaluated as part of UL 9540 Listing

Gas Detection

CO and LEL gas detection provided in every container (many projects utilize only one type of detector)

Plume Analysis – Peer Review

Technical Review Only

Scenarios Modeled:

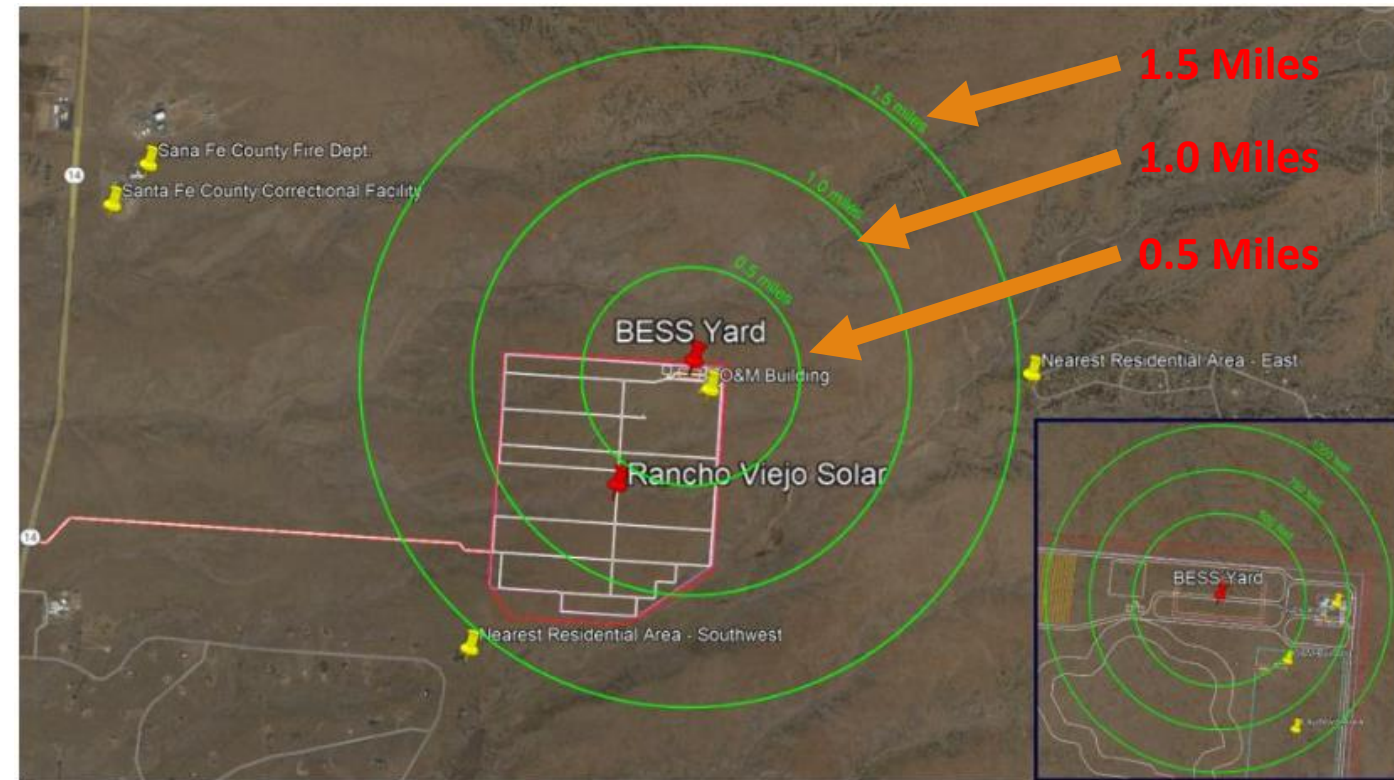
- 1) Pre-Combustion Thermal Runaway: **86 feet**
- 2) Combustion Phase Scenarios:
 - 132 modules over 8-hour burn: **1306' [.24 mi] (PAC-2)**
 - 252 modules over 1-hour burn: **2256' [.42 mi] (PAC-2)**

PAC = Protective Action Criteria

PAC-1: Mild/Transient Health Affects

PAC-2: Irreversible/Serious Health Effects

PAC-3: Life-threatening health effects



Differences between Conditional Use Permits and Code Compliance

Conditional Use Permits (CUP)

- CUPs are subjective in nature and require an approval independent from Code Compliance
- CUPs grant an applicant permission to pursue the development of construction plans and drawings for a specific operation at a specific location.
- A CUP is **NOT an approval to construct**. Its legal authority is limited an approval of the **potential** to perform construction of a specific project in a specific location, contingent upon additional legal requirements (Codes).

Code Compliance and Construction Permits

- Fire and Building Codes do not have a CUP concept. They set the minimum legal requirement for fire and life safety of a construction project. The requirements are compulsory, enforced by law.
- The codes are objective in their requirements – Pass or Fail.
- Most projects require more than one round of plan check and design correction to ensure total compliance

Differences between Conditional Use Permits and Code Compliance

Key Takeaways:

- A CUP grants the authority for a specific function to be performed at a specific location.
- A Code Compliance Evaluation and Construction Permit allow the construction of the facilities that will perform the function.
 - Many projects obtain a CUP but never pass Code Compliance for design and construction.
- Not all projects require a CUP. **Every project** subject to the provisions of the adopted Codes require compliance.
- The Santa Fe County Fire Marshal's Office is legally required to enforce the applicable Codes and Standards, independent of the CUP. Where a project meets the requirements of the Codes, Standards, and locally-adopted amendments thereto, the project is granted a construction permit.

Summary

- Overall installation must comply with 2021 IFC and 2023 NFPA 855 and all other local, state, and federal applicable codes and standards.
- Voluntary safety features are provided that are above the minimum requirements
- Voluntary implementation of thermal runaway propagation protection system reduces the potential of thermal runaway to propagate past a single cell based on UL 9540A testing
- Voluntary compliance with NFPA 69 (*Standard on Explosion Prevention Systems*), adds an additional layer of explosion prevention to the code required NFPA 68 (*Deflagration Venting*) system.
- All Atar Fire review items must be satisfactorily completed, prior to commissioning of the facility.
- Voluntary plume analysis report describes potential impact to human health criteria
- Should a CUP be granted, Additional drawing, project information, and submittals will be required to validate full compliance. This is a normal part of any project involving a Fire Department approval. **FULL COMPLIANCE WITH ALL APPLICABLE FIRE/LIFE SAFETY CODES AND STANDARDS IS REQUIRED.**
- It is the professional opinion of Atar Fire that the level of detail provided at this time is sufficient for the CUP approval process

What is the CUP Criteria?

A CUP is *NOT* approved if the proposed use will tend to cause:

1. Detriment to health, safety and general welfare of the area;
2. Road congestion;
3. A potential hazard for fire, panic, or other danger;
4. Overcrowding land and cause undue concentration of population;
5. Interference with adequate provisions for schools, parks, water, sewerage, transportation or other public requirements, conveniences or improvements;
6. Interference with adequate light and air; or
7. Inconsistency 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.

1. Detriment to health, safety and general welfare of the area

- Solar projects do not create significant noise, light, traffic or other significant operational impacts. The operation of solar panels is not detrimental to environmental conditions at the site. The project will be required to be developed to meet and comply with all applicable requirements contained in the SLDC as well as all applicable state and federal laws, and all codes and standards as adopted in Santa Fe County, New Mexico to ensure that public health and safety is protected.

Staff's response: *the proposed project will not be a detriment to health, safety and general welfare of the area.*

2. Road congestion

- Any traffic impact to NM-14 will be generated during the construction of the facility, including the 2.1-mile access road and 2.3-mile generation tie-in line. Once operational, traffic will be minimal as only 4 technicians will regularly work at the site (Mon – Fri with occasional work on Saturday).

Staff's response: *the proposed project will not create road congestion, as shown in the current traffic threshold analysis.*

3. A potential hazard for fire, panic, or other danger

The project will comply with or exceed all applicable fire codes including but not limited to:

- International Fire Code, 2021 edition, as adopted by 10.25.2 NMAC ("Fire Prevention and Public Occupancy") and 2021 International Wildland Urban-Interface Code (IWUIC) as amended Santa Fe County Ordinance 2023-06.
- Santa Fe County Ordinance 2023-06 and Ordinance 2023-09 as adopted by the Board of County Commissioners.
- National Fire Protection Association (NFPA) 855, Standard for the Installation of Energy Storage Systems (2023 edition)
- New Mexico Commercial Building Code as adopted by 14.7.2 NMAC ("2009 New Mexico Commercial Building Code") which adopts by reference the 2009 International Building Code.

3. A potential hazard for fire, panic, or other danger (cont.)

- The conditional use permit application has been deemed complete by the Santa Fe County Fire Department. Both Atar Fire and Santa Fe County Fire Department conclude that a sufficient level of information has been provided to validate the issuance of a Conditional Use Permit, as it pertains to the reviewed fire and life safety codes. However, all the items included in the review letter must be satisfactorily addressed prior to issuing a development permit and commissioning of the facility.

Staff's response: *Potential hazards for fire, panic or other danger will be appropriately mitigated through conformance with applicable local and federal fire codes.*

4. Overcrowding land and cause undue concentration of population

- The project will not result in any population increases and meets the open space requirement of the SLDC. The property owner owns the surrounding parcels and is considering a Transfer of Development Rights (TDR) to preserve the agricultural uses of the area in perpetuity.

Staff's response: *The project will not overcrowd land or result in concentration of population.*

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

- A solar facility does not result in population growth and therefore does not put additional demand on public services. Water for the ongoing operations of the facility will be much less than residential development, irrigated agricultural or most industrial uses. Onsite septic will handle any wastewater generated by the office use.

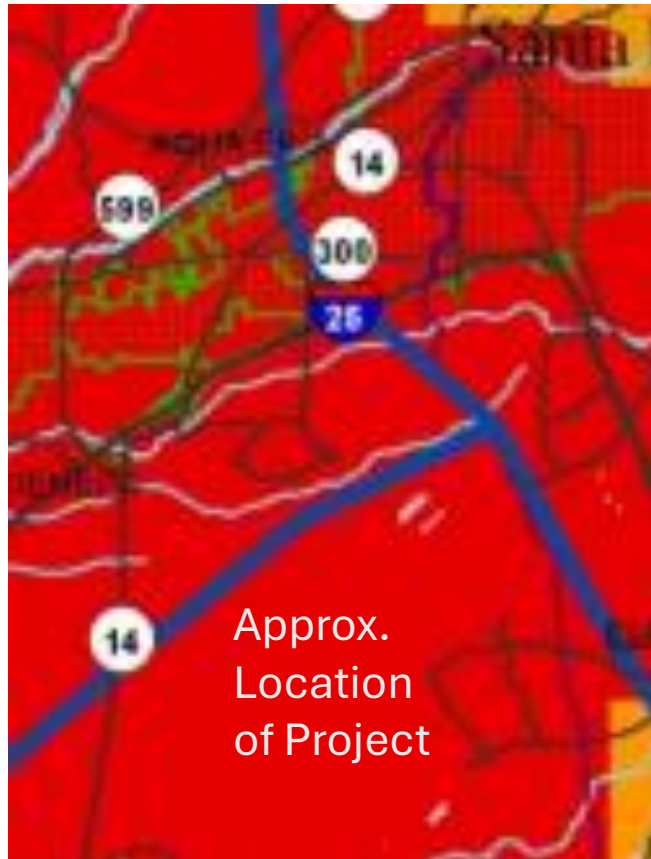
Staff's response: *The proposed solar facility will not interfere with adequate provisions for schools, parks, water, sewerage, transportation or other public requirements.*

6. Interference with adequate light and air

- The proposed solar facility includes minor lighting that will be required to 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. Emissions from construction will be short-term and ongoing maintenance will result in small amounts of fugitive dust and other emissions.

Staff’s response: *The proposed solar facility will not interfere with adequate light and air. Staff recommends that the “monopole” structure is used for the transmission line.*

7. Consistency with the purposes of the zoning classification or in any other way inconsistent with the spirit and intent of the SLDC or SGMP



According to Sect 7.2.2.2 of the SGMP,

“New Mexico gets approximately 6 full sun hours per day, on average, almost everywhere in the state. This coupled with gentle sloped terrain of Santa Fe County coupled with the annual mean total sunshine hours of 3,400 creates an ideal setting for solar energy applications.”

Solar Power - Annual Potential *



Map 7-1 A: Renewable Energy Potential-Solar and Wind

7. Consistency with the purposes of the zoning classification or in any other way inconsistent with the spirit and intent of the SLDC or SGMP (cont.)

- Appendix B, the Use Matrix of the SLDC allows commercial solar facilities as a conditional use within the RUR-F zone. RUR-F zone accommodates primarily large lot residential, grazing, ecotourism, equestrian uses and renewable resource-based activities. Solar facilities are not necessarily exclusive of these uses. The physical structure of the proposed project will be visually subordinate to the existing landscape.
- **Staff's response:** *The proposed solar facility is consistent with the spirit and intent of the SLDC and the SGMP.*

Recommendation

- Staff reviewed the application for conformance with SLDC design standards and found that it meets all of the applicable requirements of the code.
- Staff reviewed the proposed use and determined that it meets the criteria to be approved for a Conditional Use Permit.
- Staff recommends that if approved by the Board of County Commissioner, the project is subject to the following conditions.

Conditions of Approval

1. Compliance with all Reviewing Agencies' requirements, including the 93 conditions imposed by Santa Fe County Fire Prevention (see memo from Fire Marshal's office) before commissioning of the facility.
2. The drilling or use of individual and/or shared wells for this use on the Property is prohibited.
3. The Applicant shall provide proper buffering and screening by installing paneling to a portion of the proposed 8' tall fence that will be located on the southwest portion of the Property. This is to be indicated on the CUP Site Development Plan prior to recordation.
4. Permanent fencing will be required around all designated archeological sites to delineate and preserve the integrity of these areas. This is to be indicated on the CUP site development plan prior to recordation.
5. Prior to the recordation of the CUP site development plan, all access roads shall be permitted through Santa Fe County, built out and inspected, with financial guaranties in place.

Conditions of Approval

6. The CUP site development plan showing the site layout and any other conditions that may be imposed through the approval process shall be recorded at the expense of the Applicant in the office of the County Clerk in accordance with SLDC Chapter 4, Section 4.9.6.8.
7. Utilization of the 70-foot-tall steel monopoles will be required, as they have less of a visual impact. The poles will be required to blend into the natural landscape and shall be non-reflective.
8. A decommissioning bond (which may take into account salvage value) will be required prior to recordation of the CUP Site Development Plan, and must be in place for the life of the project.
9. The Applicant will be required to apply for all applicable Development Permits after the CUP recordation.

Conditions of Approval

10. Prior to recordation of the CUP site development plan, the Applicant will be required to renew its access permit from NMDOT.
11. The Applicant will need to provide a minimum of 1 Accessible Parking Space as per Table 7-9. This Accessible Parking space must be indicated on the CUP Site Development Plan.
12. Applicant shall obtain an approved liquid waste permit from NMED prior to the submittal for a Development Permit.
13. The Applicant is required to work in consultation with the appropriate flood zone authorities to address the requirements specified in Chapter 7, Section 7.18.9.1. of the SLDC for any steel monopole located within a Zone A flood hazard area and submit the findings to staff for the record.
14. Construction activity to be limited to Monday through Saturday, 7:00 a.m. to 7:00 p.m. Any deviation from these construction hours will require 48 hours' notice to Santa Fe County and neighboring property owners, and written approval from the County.

Conditions of Approval

15. Prior to operations, the Applicant shall request and pass all required inspections and obtain a Santa Fe County Business License.
16. A detailed water budget is to be submitted for review and approval by Glorieta Geoscience and Santa Fe County Utilities Division prior to the recordation of the CUP.
17. The Applicant will be required to provide a Smoke and Plume Model that will be reviewed and evaluated by Santa Fe County Fire Prevention and a subject matter expert reviewer. Applicant must satisfactorily address all review comments, and the model must be finalized and approved prior to the recordation of the CUP site development plan.
18. Santa Fe County shall be reimbursed by the Applicant for the third-party reviews conducted by Atar Fire and Glorieta Geoscience pertaining to this submittal prior to the recordation of the CUP site development plan.

Conditions of Approval

19. Per Santa Fe County Fire Prevention requirements, a 10' noncombustible defensible space will be required as part of an overall 30' defensible space around the perimeter of the proposed development and to be illustrated on the recorded CUP site development plan.
20. Construction debris must be disposed of in a solid waste container and hauled off to an authorized landfill as needed for compliance with NMED regulations.
21. Applicant to conduct a 24-hour ambient noise study at the nearest sensitive receiver which is located at the southwest corner property line to collect ambient readings to evaluate the lowest 30-minute readings for daytime and nighttime. Noise study is to be reviewed and evaluated by Glorieta Geoscience. Applicant is to address all review comments and incorporate mitigation measures as required to comply with SLDC §7.21.4, prior to the recordation of the CUP site development plan.

Conditions of Approval

22. Should an alternate source of water be identified (e.g., City of Santa Fe effluent), the traffic, noise and air quality studies are to be re-evaluated by the Applicant to validate that the impacts disclosed in those reports have not changed. This will be subject to review and comments from Glorieta Geoscience prior to the recordation of the CUP site development plan.