



**Diamond Tail  
Solar+BESS  
PCR Introduction**







*Accelerating Sandoval's clean energy transition with locally-sourced, dispatchable solar power*

## ***Public Meeting***

October 29th, 2024 presented by PCR

220 MWac / 110 MW 4h

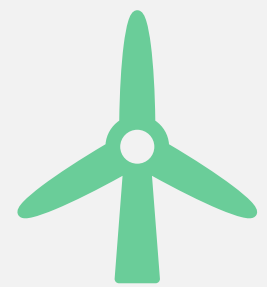
Solar + Battery Energy Storage System (BESS)



- PCR - Company profile
- Project Location
- Project Technical Details
- Special Use District Permit Process
- Environmental studies and others
- Estimate Project Timeline
- Economic Benefits
- Environmental Benefits



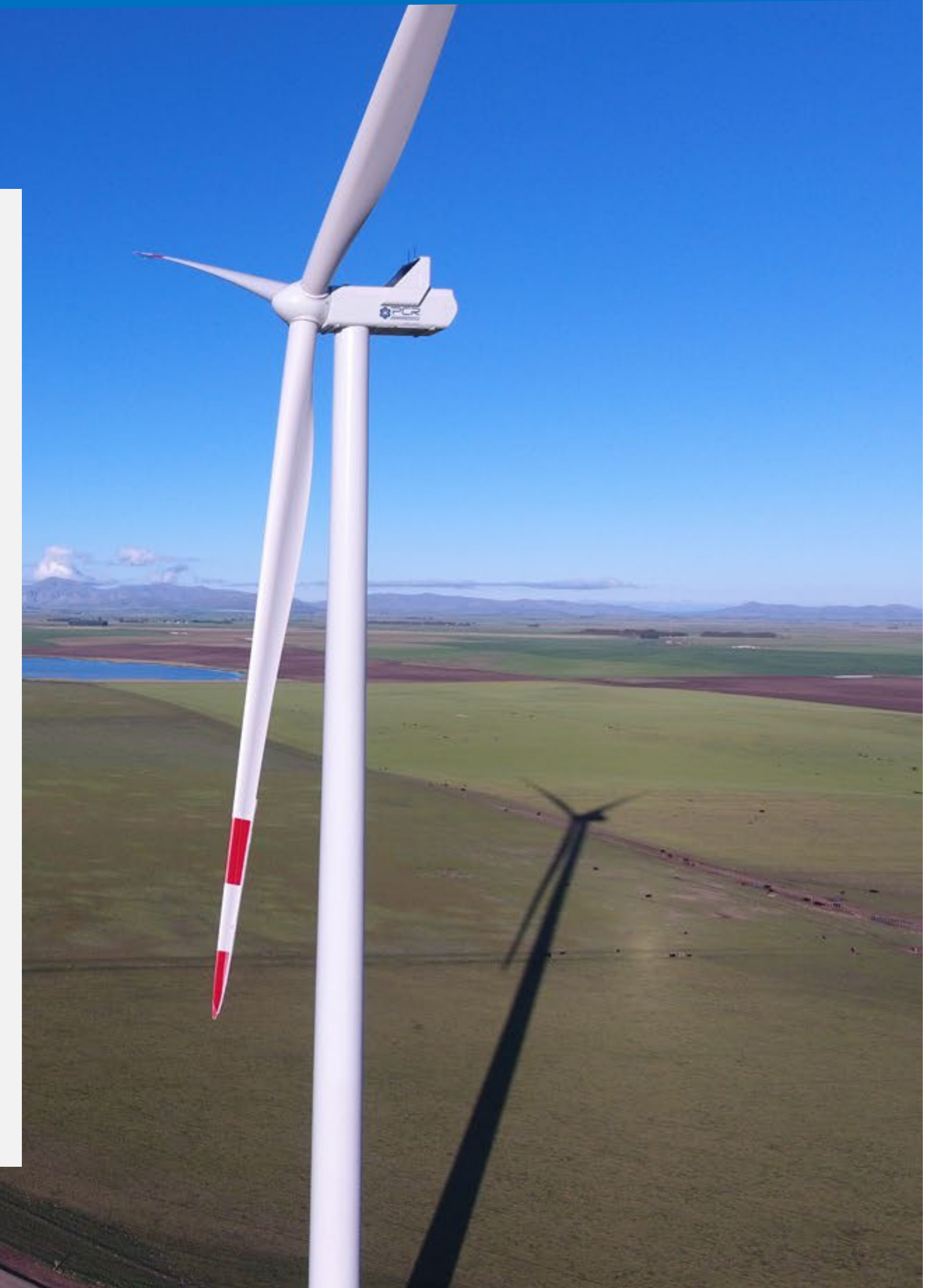
PCR is **fully integrated** in the **renewable energy supply chain**. Development, M&A, EPC, Financing and Operations of all renewable assets are performed by an **experienced management team**.



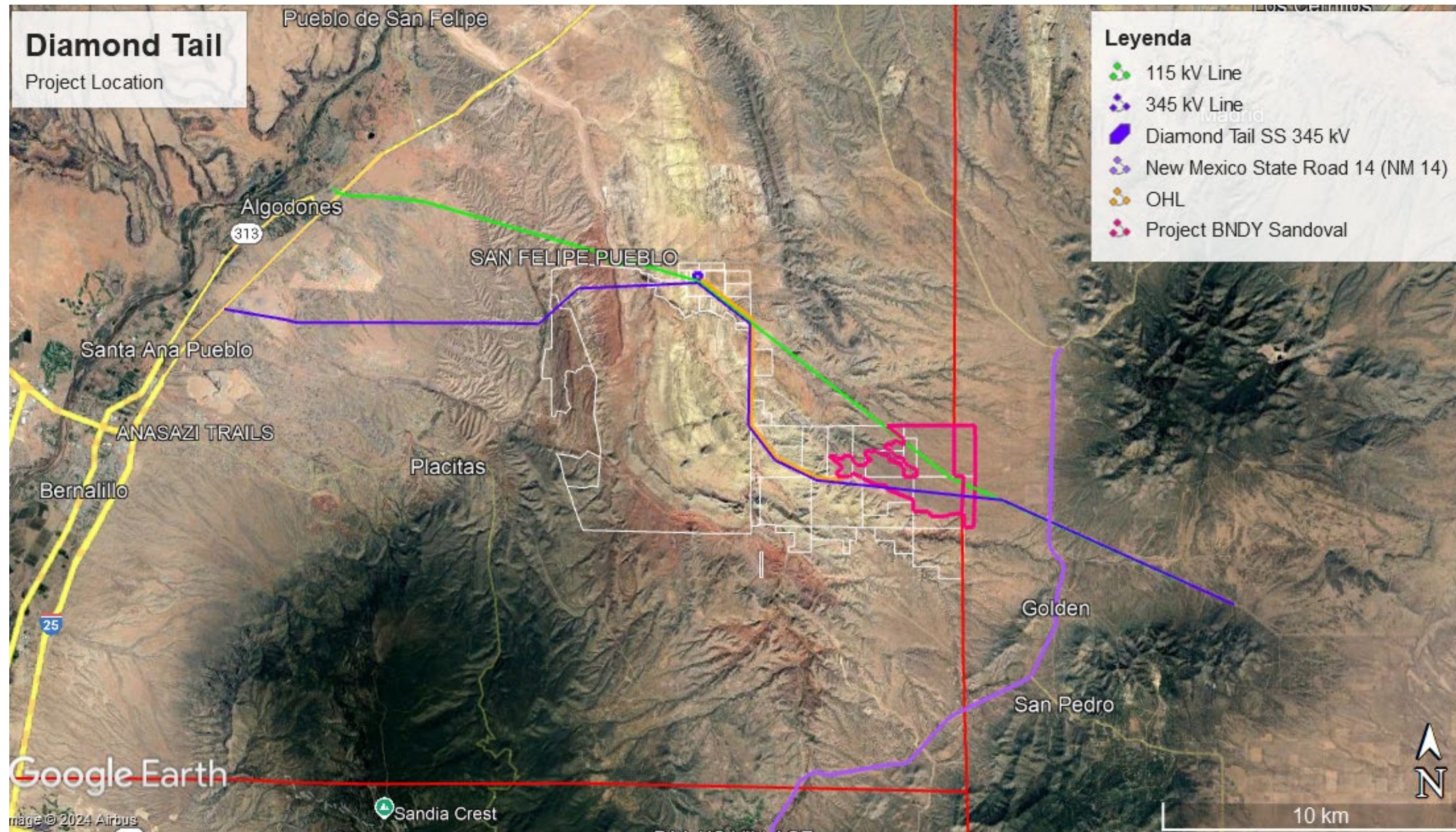
The Company is currently **operating** six wind farms, with a total capacity of **527 MW**



PCR is currently developing 700 MW of solar projects in the US with plans to **grow that pipeline** to support **construction** of the first **30 MW in 2025** for a total buildout of **800 MW in the next 5 years**







- 30 miles south from Santa Fe
- 23 miles north Albuquerque
- 1.5 miles west of Hwy 14
- 12 miles east of Hwy 25
- 1.2 miles north of nearer neighbor
- 12 miles fenced for project
- Located on private property, within a larger ~18,000-acre tract providing a substantial buffer between surroundings



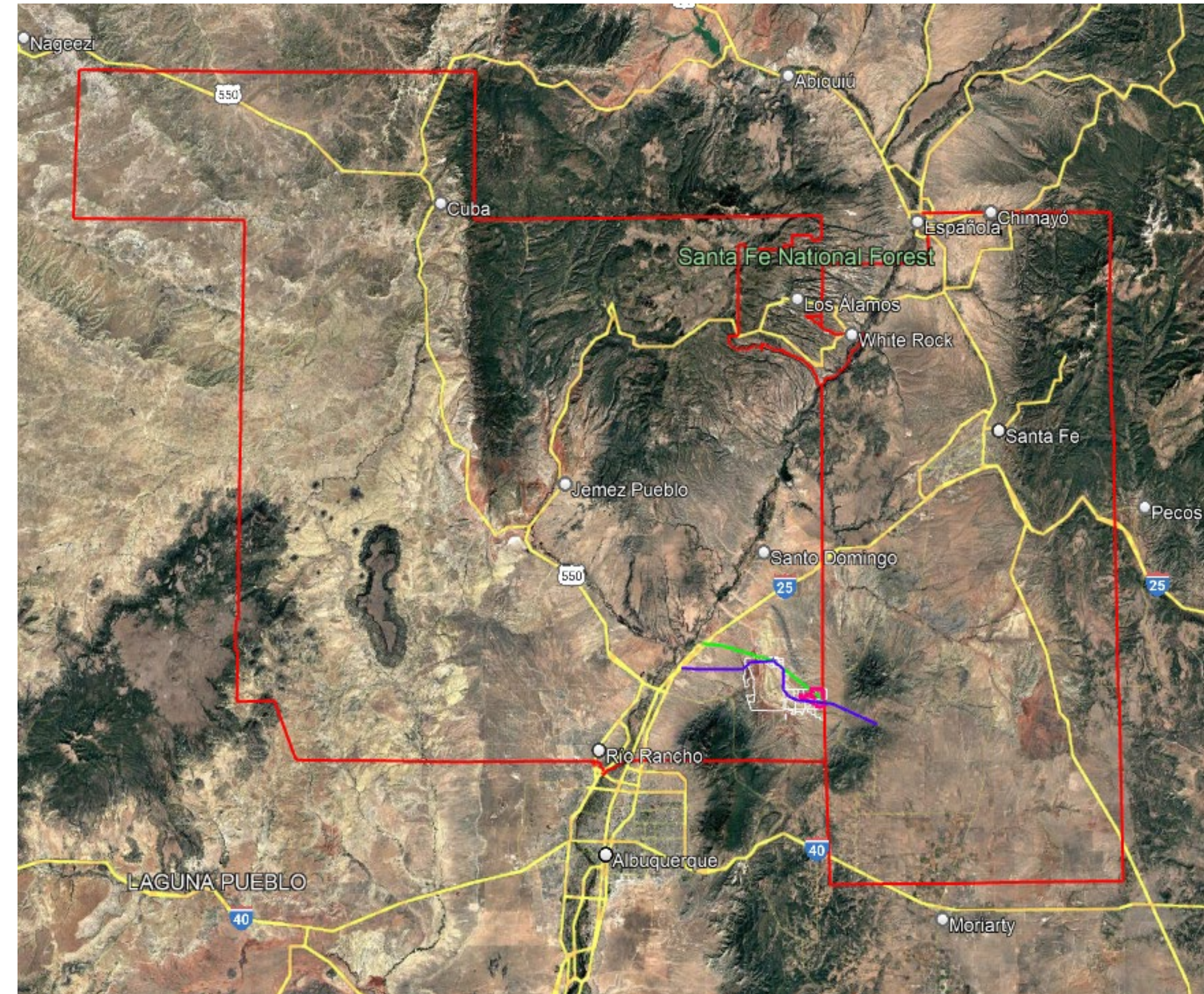
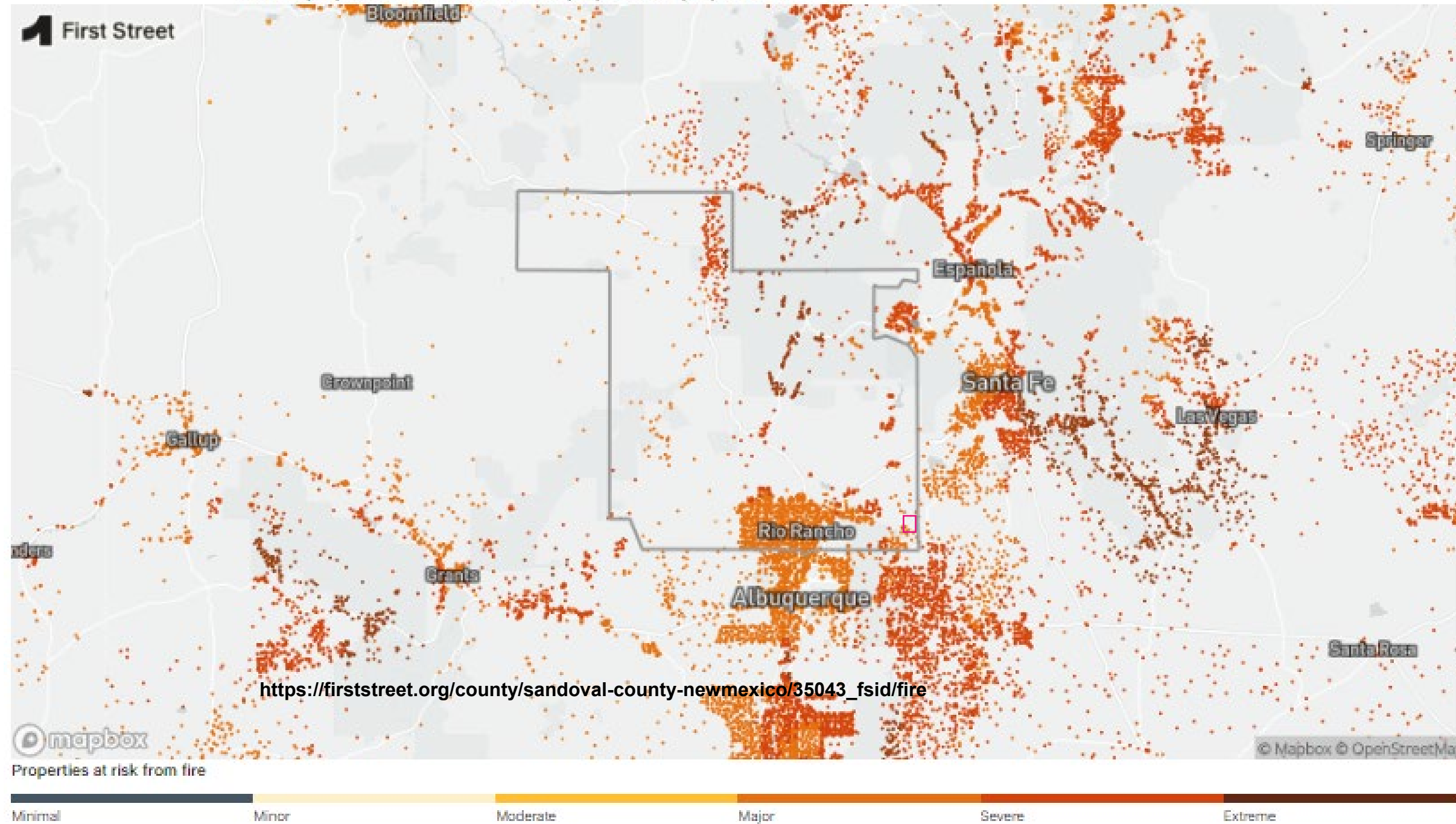
## Lowest Wildfire Risk

Does Sandoval County have Wildfire Risk?

**Major**  
FIRE  
FACTOR

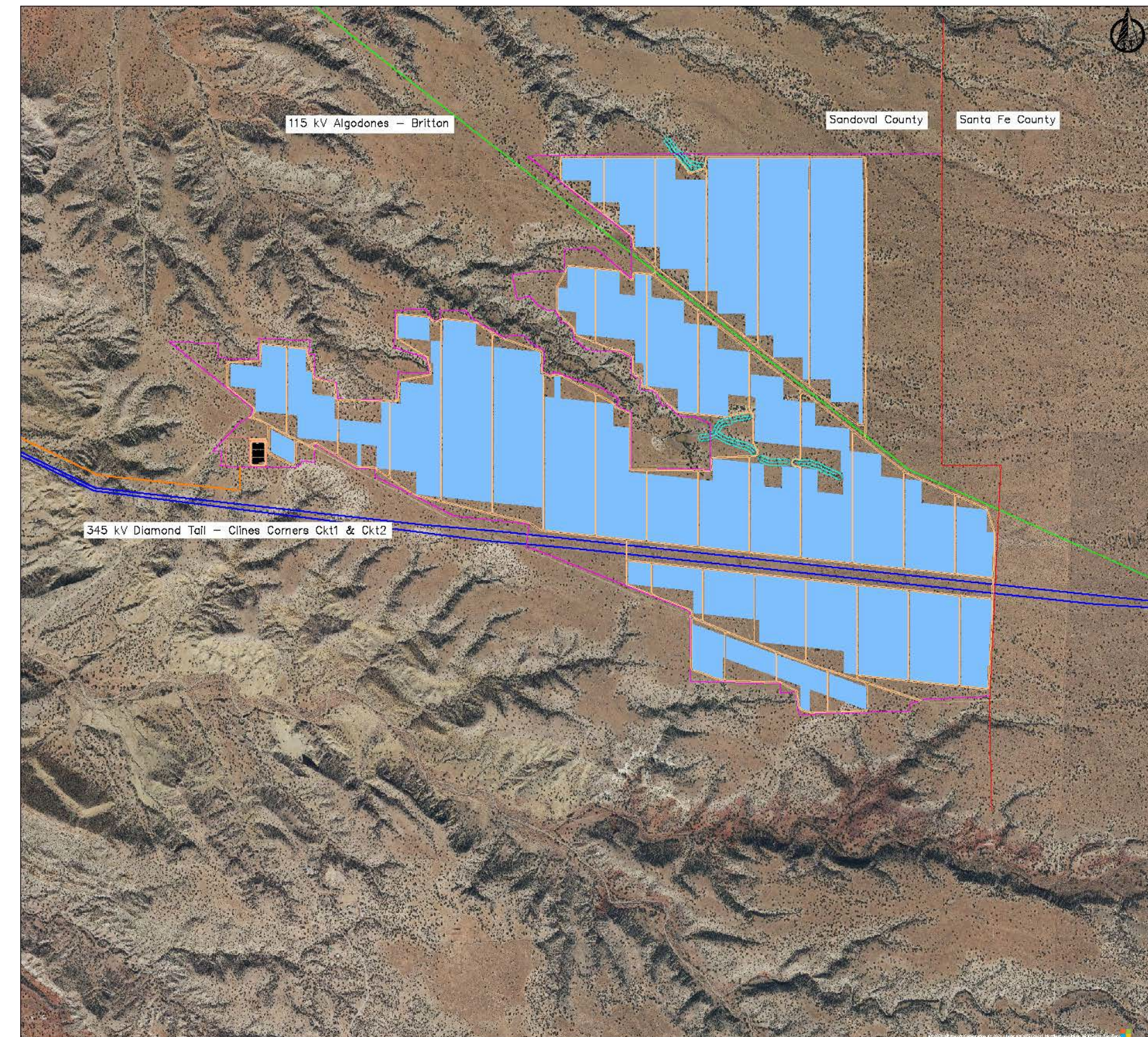
There are 148,510 properties in Sandoval County that have some risk of being affected by wildfire over the next 30 years. This represents 99% of all properties in Sandoval County.

In addition to damaging properties, wildfire can also cut off access to utilities, emergency services, impact evacuation routes, and may impact the overall economic well-being of an area. Overall, Sandoval County has a major risk of wildfire over the next 30 years. This is based on the level of risk the properties face rather than the proportion of properties with risk.



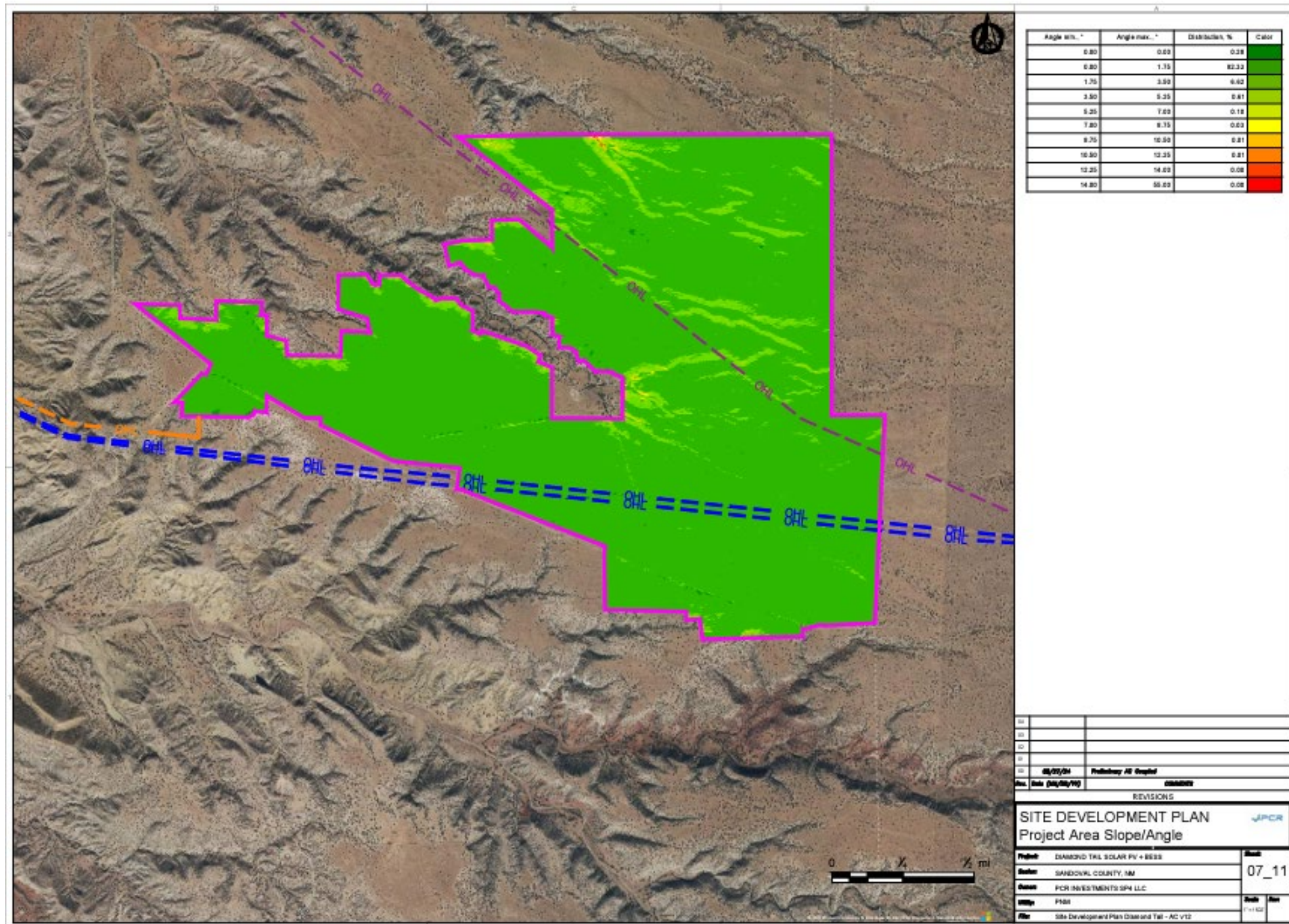


<b>Generation Type</b>	PV Solar Facility with BESS
<b>Project Size</b>	220 MWac + 110 MW/440 MWh Battery storage (4 hours) – AC Couple
<b>Production</b>	Estimated output of 607 GWh/year – more than the entire annual residential load of Sandoval and Santa Fe
<b>Location</b>	Sandoval/Santa Fe County, New Mexico
<b>Site Control</b>	Complete – leased the ~18,000-acre Diamond Tail Ranch with roughly 1,800 acres designated for the solar+BESS project and generation tie line to the Diamond Tail Substation.
<b>Proposed POI</b>	PNM Diamond Tail 345 kV Switching Station
<b>Interconnection</b>	Entered PNM DISIS Cluster #15 - Queue number: IA-PNM-2022-02
<b>Gen-Tie Route</b>	5.9 miles of 345 kV gen-tie route located on Diamond Tail Ranch.
<b>Asset life</b>	30-year - Decommissioning & Restoration
<b>Construction and Operation</b>	18/24 months construction process Remote & on-site operation with limited site traffic

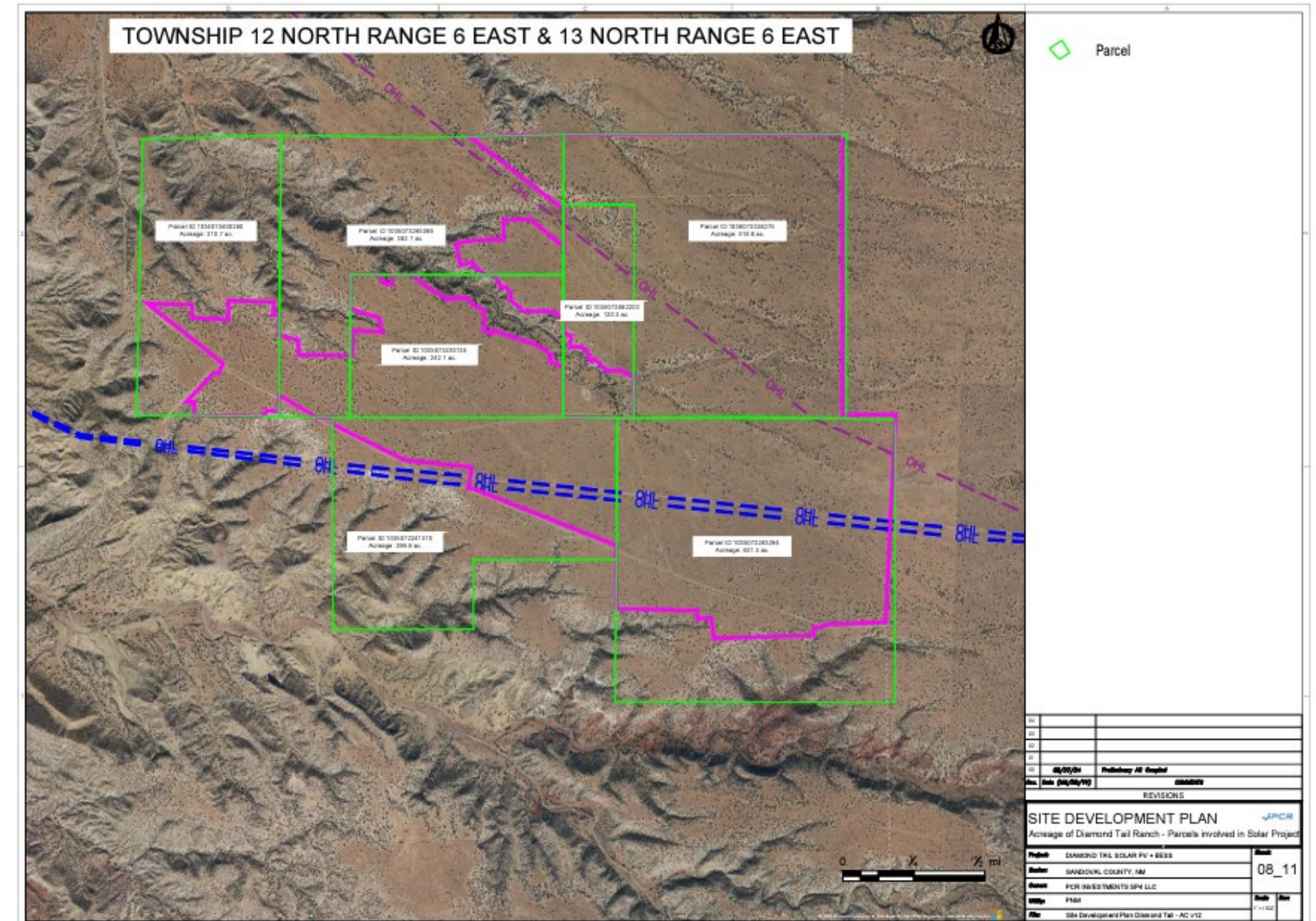




## Slopes

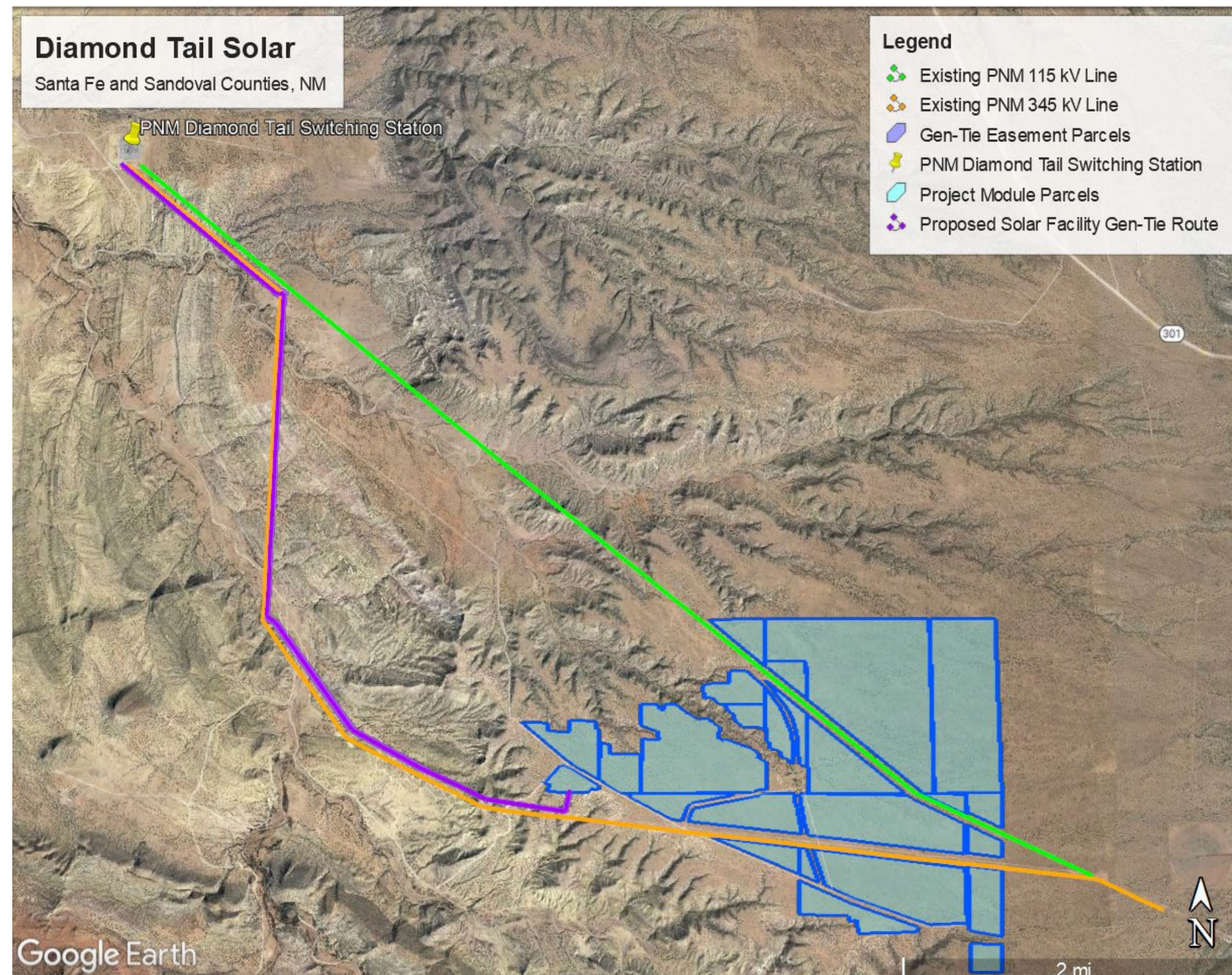


## Parcels involved - acres

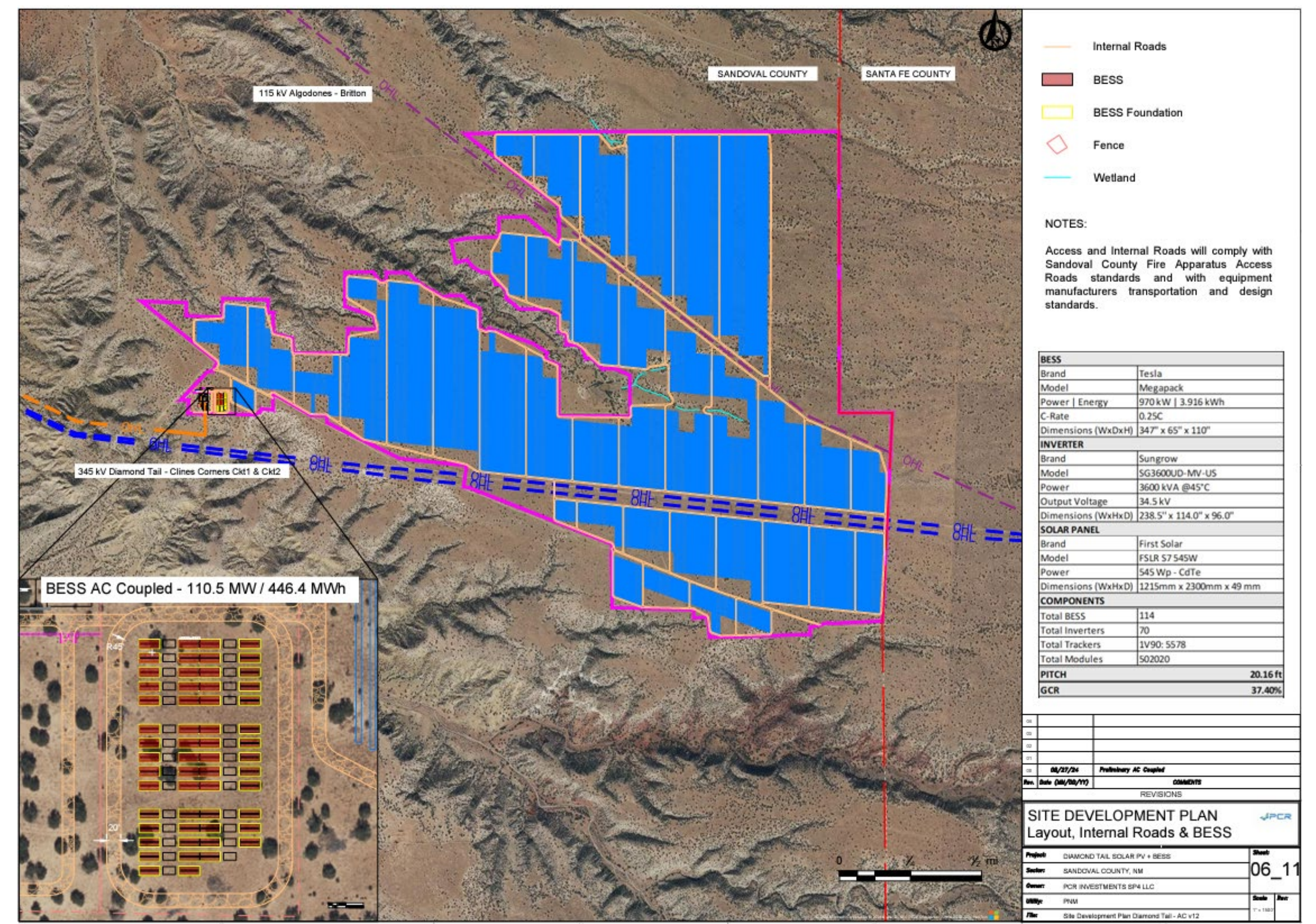




## Gen-tie route



## Preliminary design







## SG4400UD-MV-US

Turnkey Station for 1500 Vdc System MV Transformer Integrated

- HIGH YIELD**
  - Advanced three-level technology, max. inverter efficiency 98.9%
  - Full power operation at 40°C (104°F)
  - Effective cooling, wide operation temperature
- EASY O&M**
  - Integrated current, voltage and MV parameters monitoring function for online analysis and trouble shooting
  - Modular design, easy for maintenance
- SAVED INVESTMENT**
  - Low transportation and installation cost due to 30-foot container size design
  - DC 1500V system, low system cost
  - Integrated MV transformer and LV auxiliary power supply
  - Q at night optional
- GRID SUPPORT**
  - Compliance with standards: IEC 61741, UL 1741 SA/SB, IEEE 1547, Rule 21 and NEC code
  - Low / High voltage ride through (L/HVRT), L/HFRT, soft start / stop
  - Active & reactive power control and power ramp rate control

## ZN SHINE SOLAR

### ZXM7-UHLDD144 Series

16BB HALF-CELL N-Type TOPCon Bifacial Double Glass Monocrystalline PV Module

570-585W	22.64%	0.40%
POWER RANGE	MAXIMUM EFFICIENCY	YEARLY DEGRADATION

12 YEARS PRODUCT WARRANTY 30 YEARS OUTPUT GUARANTEE



- ### Key Features
- Excellent Cells Efficiency**  
SMBB technology reduce the distance between busbars and finger line which is benefit to power increase.
  - Better Weak Illumination Response**  
More power output in weak light condition, such as haze, cloudy, and early morning.
  - TIER 1**  
Global Tier 1 bankable brand with independently certified advanced automated manufacturing.
  - Excellent Quality Management System**  
Warranted reliability and stringent quality assurances well beyond certified requirements.
  - Bifacial Technology**  
Up to 25% additional power gain from back side depending on albedo.





**Manufacturer:** Tesla

**Model:** Megapack

**Electrical rating:** 3,900 MWh

**Dimensions:**

W: 7125mm (23 ft)

D: 1600 (5 ft)

H 2516 (8 ft)

**Layout:** Non-occupaible, Non-Walk in, Non Combustible

## Battery Storage Safety

Liquid cooled with external chiller

Direct injection fire suppressant at module level

Active monitoring of air, coolant and cell temperatures, smoke, cell off-gas, voltage, and current.

All tied to auto- shutdown, and alarm features.

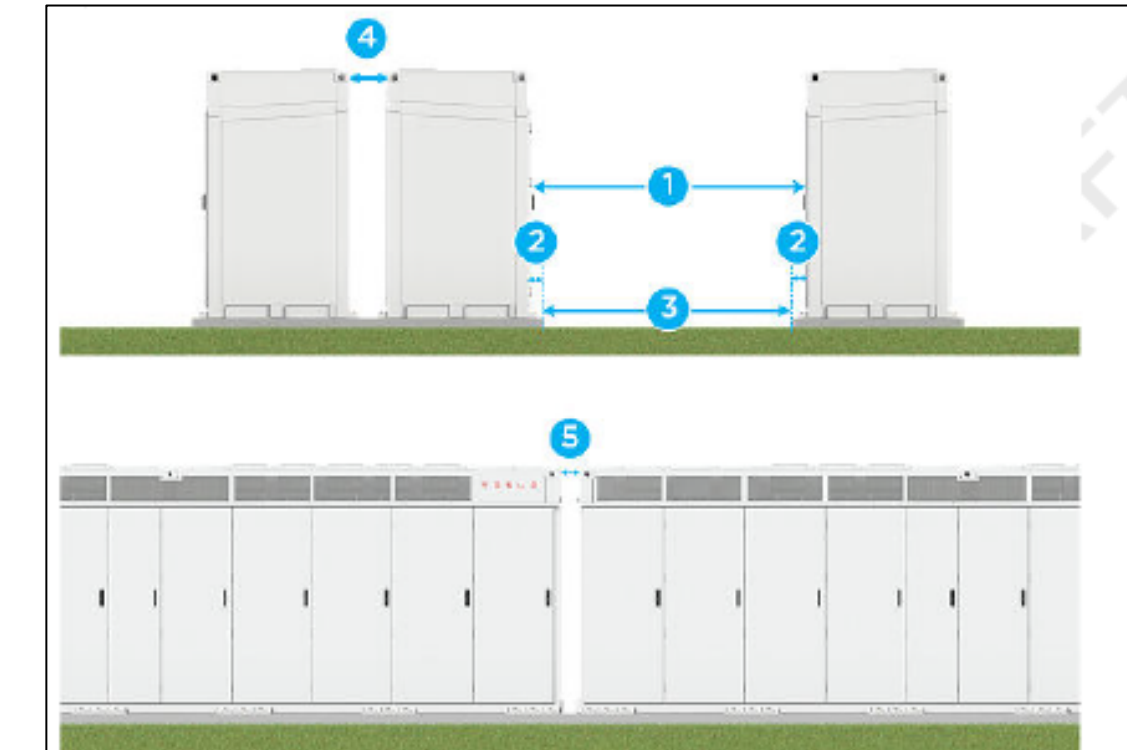
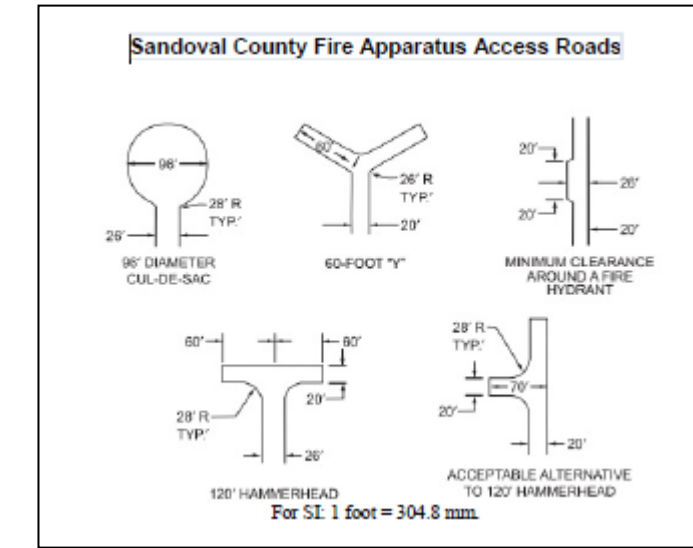
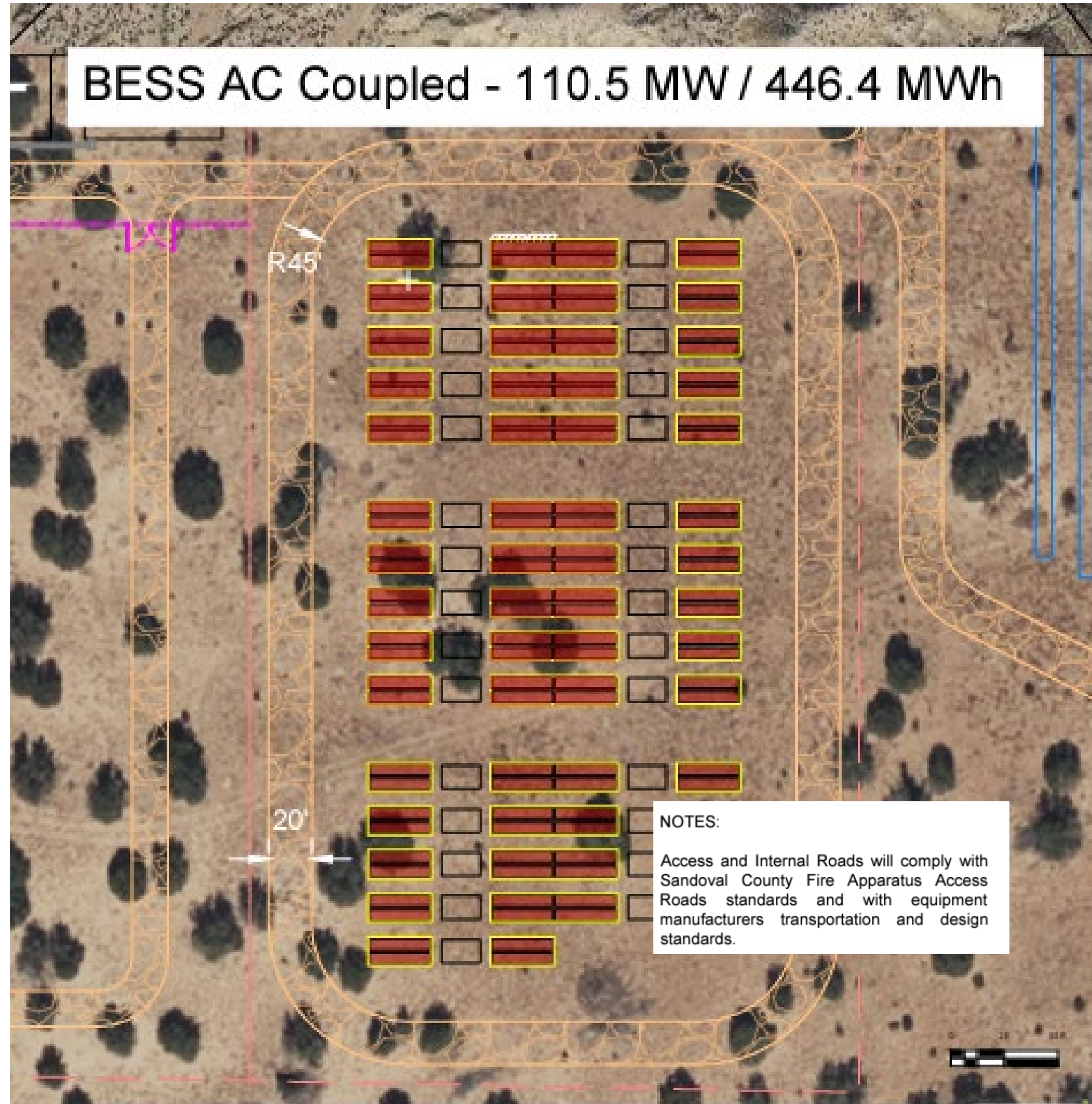
NFPA 855, 68/69 compliant.

Factory-listed to UL9540 & UL1973

MEGAPACK







**Table 14. Equipment Clearance Requirements**

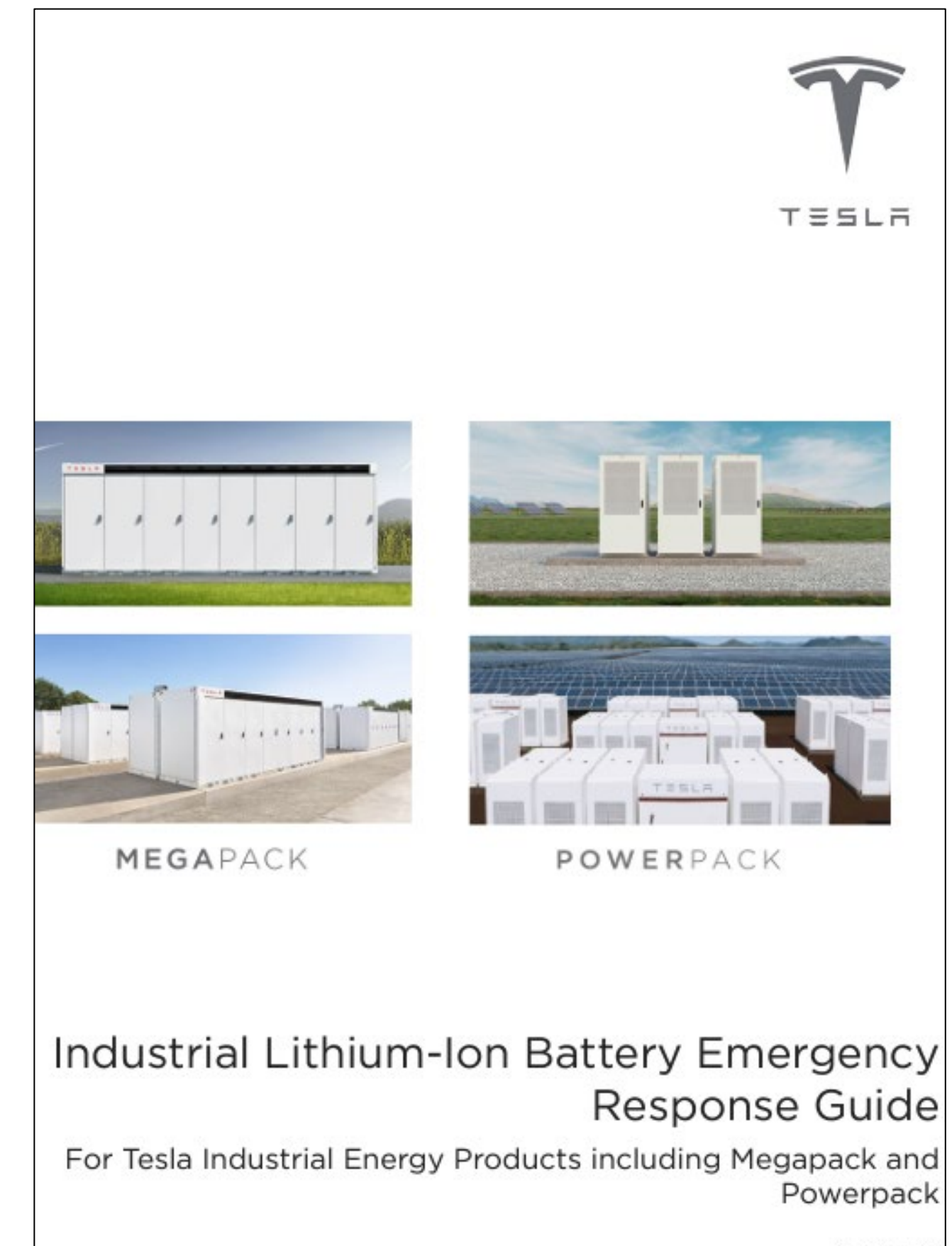
Callout	Type	Minimum	Maximum	Notes
1	Front	2440 mm (96 in)	None	Measured from face of doors. Tesla-required clearance for maintenance access.
2	Foundation overhang	100 mm (4 in)	305 mm (12 in)	Varies depending on anchor and site design but must fall within this range. See <a href="#">Equipment Bearing Areas and Anchoring</a> on page 40 for more information.
3	Drive aisle	1960 mm (77 in)	None	Measured from foundation. Tesla-required clearance for maintenance access.
4	Back-to-back	230 mm (9 in) <i>minimum</i> . 460 mm (18 in) <i>recommended</i> for access purposes.	None	Measured from the outside faces of the ISO corners at top of Megapack. See also <a href="#">Additional Anchoring Considerations</a> on page 42.
5	Side	150 mm (6 in)	None	Measured from the outside faces of the ISO corners at top of Megapack.



The same lithium-ion battery technology used in energy storage systems is present in many of today's most commonly used electronics, including cell phones, laptops, and electric vehicles

PCR always develops an Emergency Response Plan in collaboration with the local fire departments and emergency response personnel in accordance with National Fire Protection Association (NFPA) safety standards. As part of this emergency management preparation, appropriate local fire and EMS personnel are trained on the equipment and emergency response protocols.

PCR implements a multitude of risks management layers in its system designs (Active monitoring of air, coolant and cell temperatures, smoke, cell off-gas, voltage, and current. All tied to auto- shutdown, and alarm features).

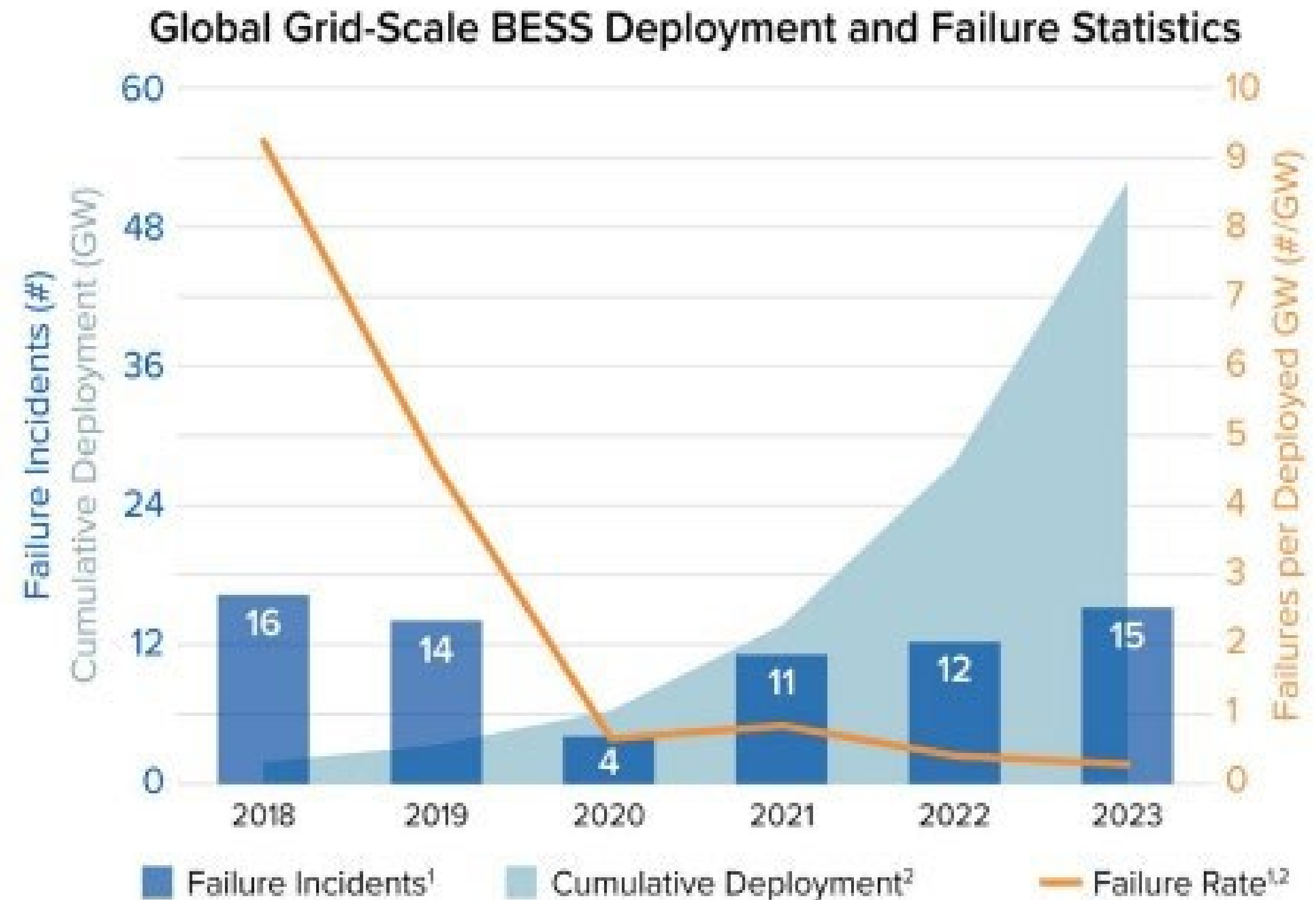




- 2023 Installed BESS capacity globally: +50 GW
- 2023 Installed BESS capacity in USA: 16 GW
- 2024 BESS capacity will double to 30 GW

The global installed capacity of utility-scale battery energy storage systems (BESS) has dramatically increased over the last five years. While recent fires afflicting some of these BESS have garnered significant media attention, the overall rate of incidents has sharply decreased, as lessons learned from early failure incidents have been incorporated into new designs and best practices. Between 2018 and 2023, the global grid-scale BESS failure rate has dropped 97%.

Electric Power Research Institute’s 2024 White Paper: Insights from EPRI’s Battery Storage System (BESS) Failure Incidents Database – Analysis of Failure Root Cause



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

**Figure 1.** Global Grid-Scale BESS Deployment and Failure Statistics



## ACCESS ROUTE

The Project will have **two access routes**, utilized for different purposes:

1. **During construction and for emergency cases**, the Project site will be accessed from NM-14 across the Rancho de Chavez, located in Santa Fe County. This access route across private land will also be used in the event of an emergency during the project’s operation period. The executed Memorandum agreement was recorded at Santa Fe County.

2. **During operations and maintenance** vehicles will access the Project site from NM-14 using Puertocito Road, which is open to public use under a Sandoval County prescriptive easement.

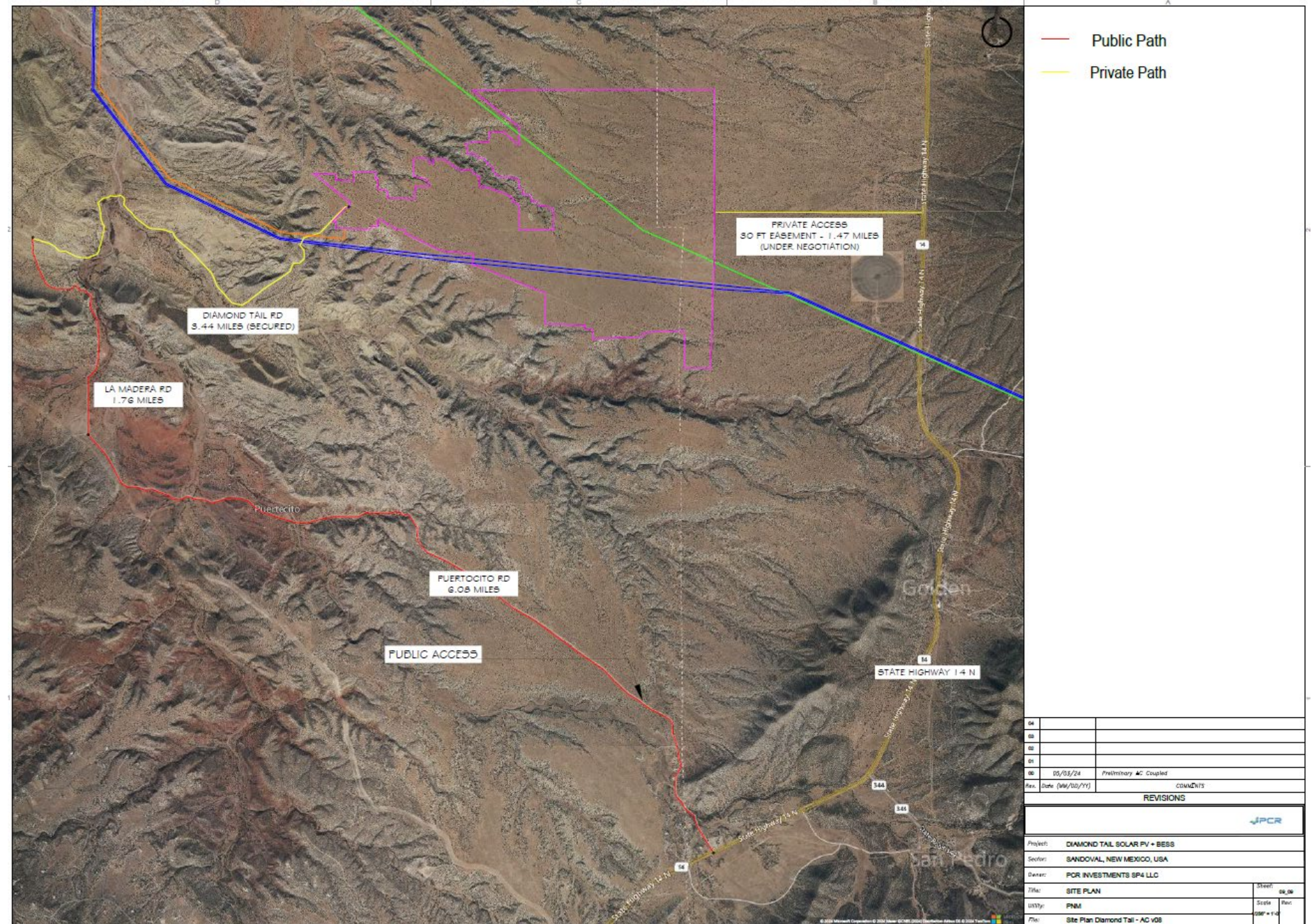
## TRAFFIC

During construction:

- an average of 120 trucks per month
- An average of 6 trucks per day
- 5 buses with labors + 5 SUV

During operation:

- 4 daily SUV

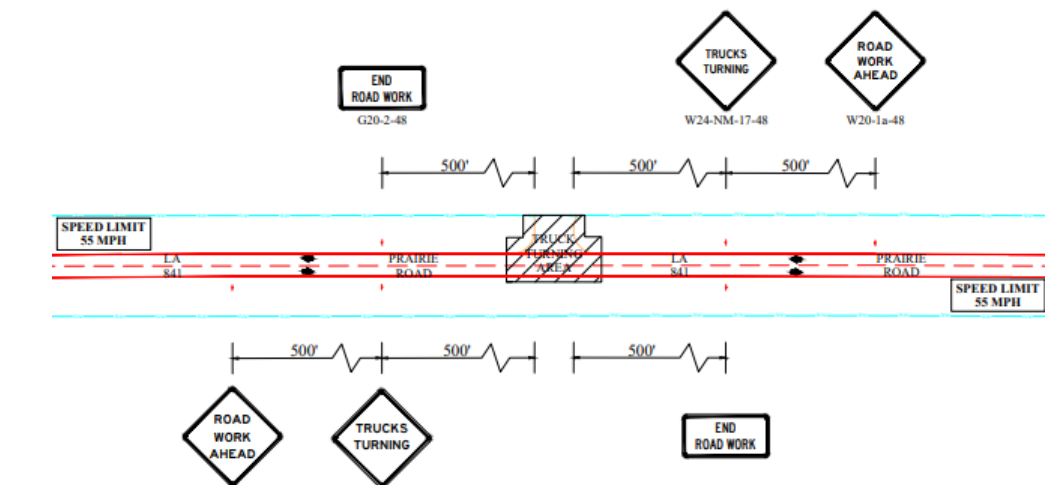
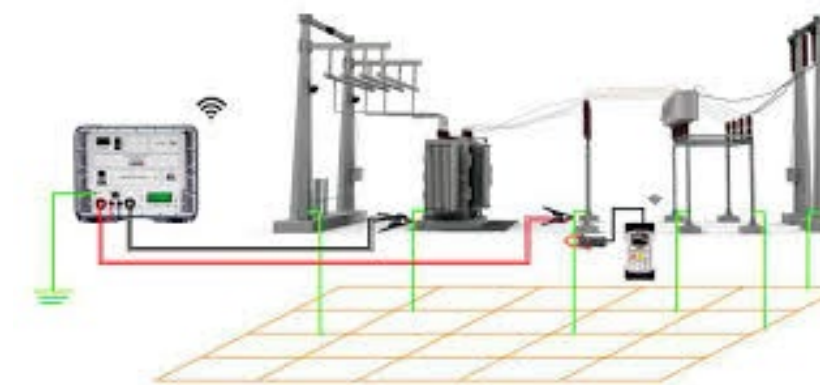




# Diamond Tail Solar: Risk mitigation – Safety & Studies



- 1) Drainage: current drainage will be maintained to not affect neighboring fields.
- 2) Grounding mesh and installation with lightning arrester will be installed to protect the people electrical risk.
- 3) Gravel around batteries, inverters and substation.
- 4) Reduced use of water, during construction: for concrete foundations of inverters and roads (15/20 trucks/day) ~water a golf course, and during O&M: for cleaning solar panels once a year (for 2 months) (1l/panel ~500k panels → 25 trucks/m), ~the annual water for 15 homes.
- 5) There shall be no light or sound impact. BESS Chiller Units – 70 db / Inverters – 60 db at 50 ft, 50 db at 165 ft, 44 db at 650 ft.
- 6) Fence: The perimeter of the solar project will be enclosed by an agricultural style fence, which is wildlife friendly, and posts will be 7 feet tall. The on-site collector substation and BESS may be enclosed by a chain-link fence.
- 7) Compliance with all the requirements of the ordinance in force.
- 8) Two possible access points for fire brigade access in case of emergencies.
- 9) Adequate access signals during construction



CAPACITY  
29,093-Gallons Nominal Capacity

DIAMETER  
26' 4" Diameter

WALL HEIGHT  
7' 2" Tank Wall Height



The following studies, reports, and assessments have been completed and without issues

ALTA survey

Phase I Environmental Site Assessment

Wetland and Waters of the United States Delineation Report

Geotech Report

Class III Cultural Resources Survey and Report, and State Historic Preservation Officer concurrence letters

San Felipe walkthrough site – Checking no to affect ancestral cultural

Natural Resources Assessment Report

Mineral rights

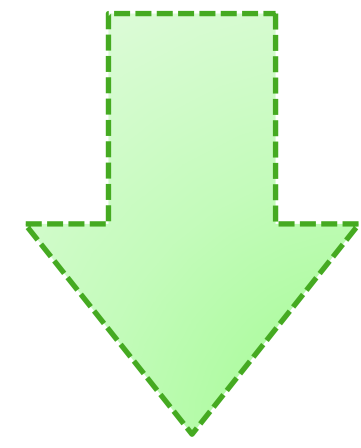
Grading and drainage

Topographic

Route survey

Decommissioning Plan





- | 2022   | 2023   | 2024   | 2025  | 2026-2028  | 2028 – 2058   |
|--|--|--|---|--|---|
| <ul style="list-style-type: none"> <li>• Secured land</li> <li>• Initial site studies commence</li> <li>• Interconnection Studies commence</li> <li>• 10% design complete</li> </ul> | <ul style="list-style-type: none"> <li>• Initial SUP application submitted</li> <li>• Site studies continue</li> </ul> | <ul style="list-style-type: none"> <li>• Site studies conclude</li> <li>• SUP application submitted</li> <li>• Public Meeting                             <ul style="list-style-type: none"> <li>08/15 Zocalo Plaza</li> <li>09/03 Vista Grande C. Center</li> <li>10/29 Vista Grande C. Center</li> </ul> </li> <li>• Public Hearing P&amp;Z                             <ul style="list-style-type: none"> <li>09/10 Sandoval County</li> <li>10/08 Sandoval County</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Target FAS PNM</li> <li>• Target permitSUD approval</li> </ul> | <ul style="list-style-type: none"> <li>• Target GIA PNM</li> <li>• Target PPA PNM</li> <li>• 100% design complete</li> <li>• Contract EPC</li> <li>• Initiate Construction in 1H '27</li> <li>• Conclude construction/interconnection in 2028</li> </ul> | <ul style="list-style-type: none"> <li>• Operate for 30 years</li> <li>• Repower or decommission project</li> <li>• Restore land</li> </ul> |

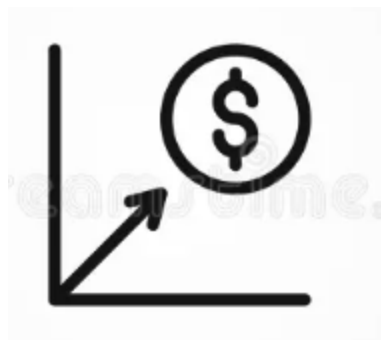




- Construction 300 Jobs (direct)
- Contributions to local services (accommodation, restaurants, professional services)



- >\$450 million capital investment
- \$40 million in labor and wages
- \$ 8 million in wages/material within Sandoval County

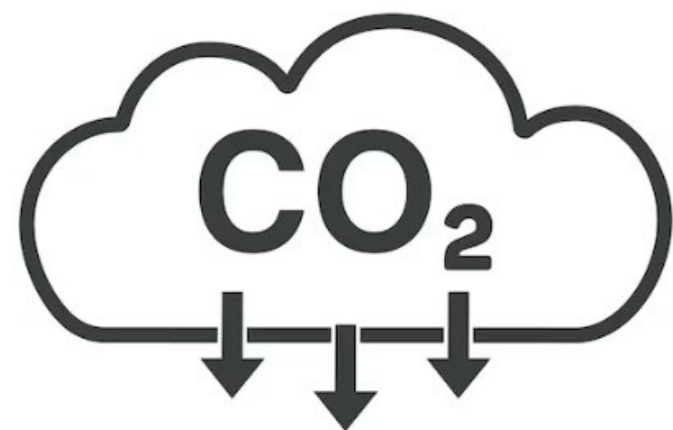
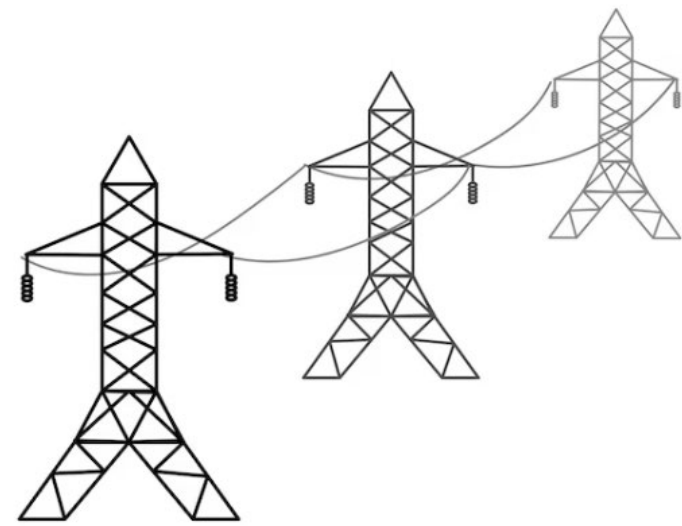
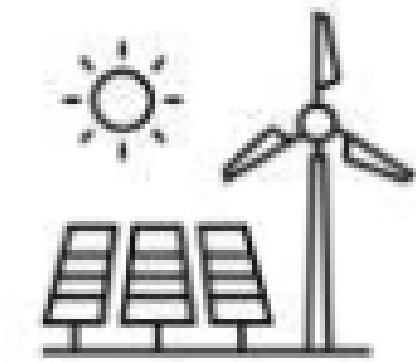


- >\$ 18 millions in NM mfg output
- >\$ 30 million in property taxes
- \$ 5.9 million in est. GRT tax



- Market-competitive supply of clean energy at a long-term fixed cost to PNM ratepayers.





- **Low impact development that diversifies and strengthens grid resiliency in Sandoval County & NM.**
- **Co-locating energy storage with other renewables like solar to provide maximum power during the day while charging storage that will be later dispatched to the grid when the sun goes down, and people return home, and the demand for electricity peaks without oversaturating or destabilizing the grid.**
- **Serve ~2% of all of New Mexico's load in support of its goal to procure 100% renewable energy by 2045.**
- **Renewable power for the equivalent of 60,000 homes' annual electricity use.**
- **Avoid emissions equivalent of ~75,000 gasoline powered cars annually.**



THANK YOU  
Questions?





**Contact Information**



**Mariano Brandi**  
CEO, PCR US  
[marianobrandi@pcr.energy](mailto:marianobrandi@pcr.energy)

**Manuel Arancibia**  
Chief Commercial Officer  
[marancibia@pcr.energy](mailto:marancibia@pcr.energy)

**Cynthia Schuchner**  
Chief Construction and Engineering Officer  
[cschuchner@pcr.energy](mailto:cschuchner@pcr.energy)



**PCR US Houston Office**  
(832) 955 1979  
1334 Brittmoore Rd, Suite 1327  
Houston, TX 77043

[www.pcr.energy/en](http://www.pcr.energy/en)





## **Mariano Brandi – Chief Executive Officer**

Mariano brings more than 10 years of experience in Management, Logistics and Supply Chain in the Renewables, Pharmaceutical, Consumer Electronics and Postal Services industries. He is a **member of the Brandi family**, majority equity holder at PCR. Mariano was involved in the development and **construction of 329 MW** of wind generation in Argentina and started PCR's US operations in 2021 with 500 MW currently under development. He holds degrees in Industrial Engineering from the University of Buenos Aires and an MBA from IAE Business School.



## **Manuel Arancibia– Chief Commercial Officer**

Manuel brings more than 20 years of experience in Sales, M&A, Portfolio Management and Development of Renewable Energy, Conventional Generation and Smart Grid Assets both in the US and in Latin America. He was involved in structuring and **securing off-take agreements for more than 4 GW of renewable** and conventional generation capacity while working at Exelon Generation and EDP Renewables North America. He joined PCR US in 2022 and is responsible for the Commercial Activities of the US pipeline. He holds degrees in Industrial Engineering from the Technical Institute of Buenos Aires and an MBA from the University of Texas at Austin.



## **Cynthia Schuchner– Chief Construction & Engineering Officer**

Cynthia brings more than 25 years of experience in Construction, Engineering, Supply Chain and Operations in the Renewable Energy, Industrial Gas and Telecommunications industries. For the past 12 years she was involved in the Engineering, Procurement and **Construction of 500 MW of Wind and 200 MW of Solar generation** as well as **Utility Scale Battery Storage**. She joined PCR US in 2022 and is responsible for the Development and EPC of the US Renewable Energy Portfolio. She holds degrees in Industrial Engineering from the University of Buenos Aires and a Masters in Renewable Energy from San Andres University.