



# SunZia Southwest Transmission Project

The background of the slide is a collage of images related to renewable energy. On the left, there are rows of blue solar panels. In the center, there is a power substation with tall metal towers and power lines. On the right, there are several white wind turbines against a blue sky with light clouds.

**Tom Wray**  
*Project Manager*

**September 15, 2015**  
Alamogordo, NM

New Mexico Legislature  
Military and Veterans' Affairs Committee

# Project Sponsors



**SOUTH WESTERN**  
**Power Group**  
*A MMR Group Company*

**SouthWestern Power/  
MMR Group**



**Shell WindEnergy**

**Shell Wind Energy**



**Salt River Project**



**TRI-STATE**  
Generation and Transmission  
Association, Inc.  
A Touchstone Energy® Cooperative

**Tri-State G&T**



**Tucson  
Electric  
Power**

A UniSource Energy Company

**Tucson Electric Power**

# Project Summary

- ⚡ 515 mile transmission project in New Mexico and Arizona
- ⚡ Possible configurations are two 500 KV AC lines, or one AC and one DC 500 kV lines
- ⚡ Brings high-quality renewable energy to western markets
- ⚡ Obtained Declaratory Order from FERC in May 2011
- ⚡ BLM Issued a Record of Decision on January 23, 2015
- ⚡ Letter of Intent with First Wind (now owned by SunEdison) for up to 1,500 MW of transmission capacity
- ⚡ Total capital cost estimated at \$2 billion
- ⚡ Commercial operation expected by 2020

# All Alternatives Studied (2009-2014)

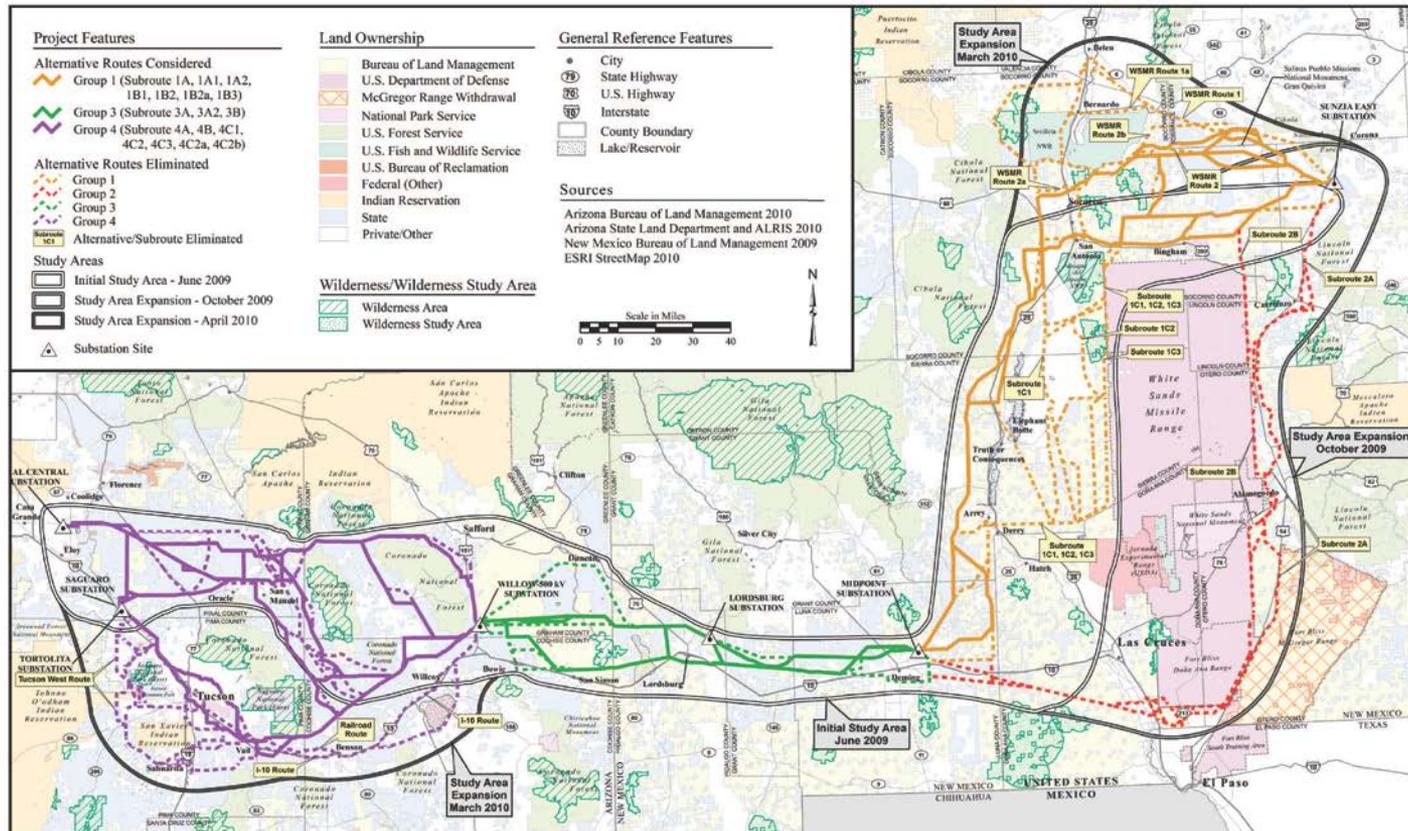


Figure 2-7. Alternatives Considered but Eliminated

# BLM Approved Route

## Exhibit B

### Right-of-Way Grant NM - 114438

### SunZia Southwest Transmission Project

### Map 1 of 3



#### SunZia Southwest Transmission Project Features

##### 500 kV Transmission Line Right-of-Way

- Route Group 1
- Route Group 3
- Route Group 4

- Proposed SunZia 500 kV Substation Site
- Other 500 kV Substation
- Mitigation Proposal Segment (buried transmission line)

#### General Reference Features

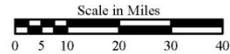
- City
- State Highway
- U.S. Highway
- Interstate
- Lake/Reservoir

#### Land Ownership

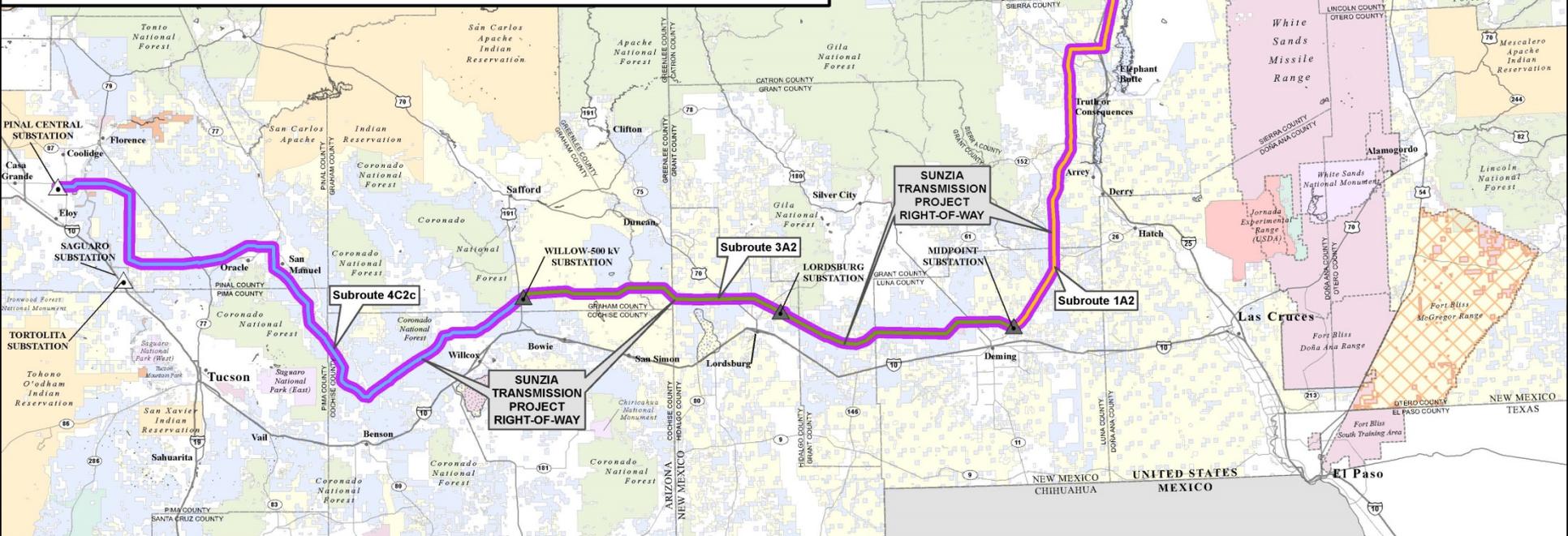
- Bureau of Land Management
- U.S. Department of Defense
- McGregor Range Withdrawal
- National Park Service
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- U.S. Bureau of Reclamation
- Federal (Other)
- Indian Reservation
- State
- Private/Other

#### Sources

- Arizona Bureau of Land Management 2010
- Arizona State Land Department and AALRIS 2010
- New Mexico Bureau of Land Management 2013
- Esri StreetMap 2010
- Environmental Planning Group LLC. 2014



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# BLM Cooperating Agencies

1. U.S. Army Corps of Engineers
2. Department of Defense, Energy Siting Clearinghouse, Office of the Deputy Under Secretary (Installations and Environment)
3. Department of the Army, Fort Bliss
4. Department of the Army, White Sands Missile Range
5. Department of the Army, Fort Huachuca
6. U.S. Air Force, Holloman Air Force Base
7. U.S. Fish & Wildlife Service
8. National Park Service
9. Bureau of Indian Affairs
10. New Mexico State Land Office
11. New Mexico Spaceport Authority
12. Arizona State Land Department
13. Arizona Game and Fish Department
14. Arizona Department of Transportation

# Project Concept to Operation

## 14 Years +

MILESTONE	DATE	DURATION
✓ Concept emerges in regional planning	Starting 2006	<b>Pre-Permitting</b> <b>2 years</b>
✓ Sponsors sign MOA	April 2008	
✓ Submit BLM SF-299 ROW Application	Sept 2008	<b>Federal Permitting</b> <b>6 years (estimate)</b>
✓ Initiate Scoping	May 2009	
✓ Draft EIS	May 2012	
✓ Final EIS	June 2013	
✓ EA and FONNSI	Dec 2014	
✓ Record of Decision	Jan 2015	
✓ State permits	Q4 2015	<b>State Permitting</b> <b>1 year (estimate)</b>
✓ Financial Close	2017-2018	
✓ Final Design, ROW Acquisition, Procurement, Construction	2016-2020	
✓ COD	2020	

### Solar Thermal Resource

Direct Normal Insolation  
(kilowatt-hours/SqMeter/Day)

Below 6.5      7.0 - 7.5

6.5 - 7.0      7.5 +

 Solar Energy Zones  
(2010 DOE Programmatic EIS)

### Qualified Resource Area (QRA)

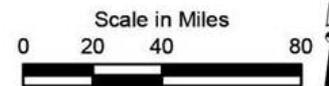


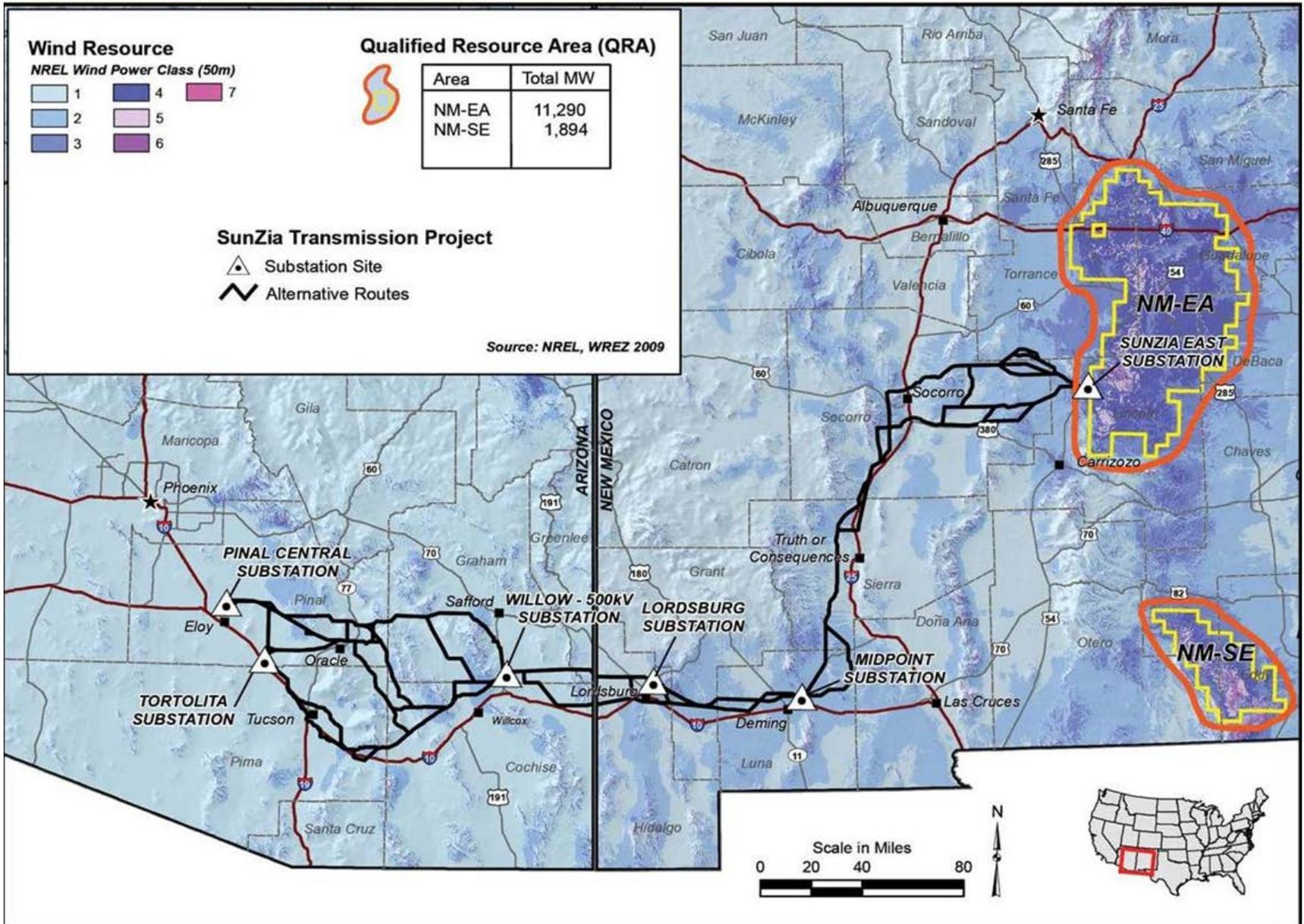
Area	Total MW
NM-CT	3,183
NM-SO	4,347
NM-SW	6,149
NM-EA	83
AZ-SO	6,623

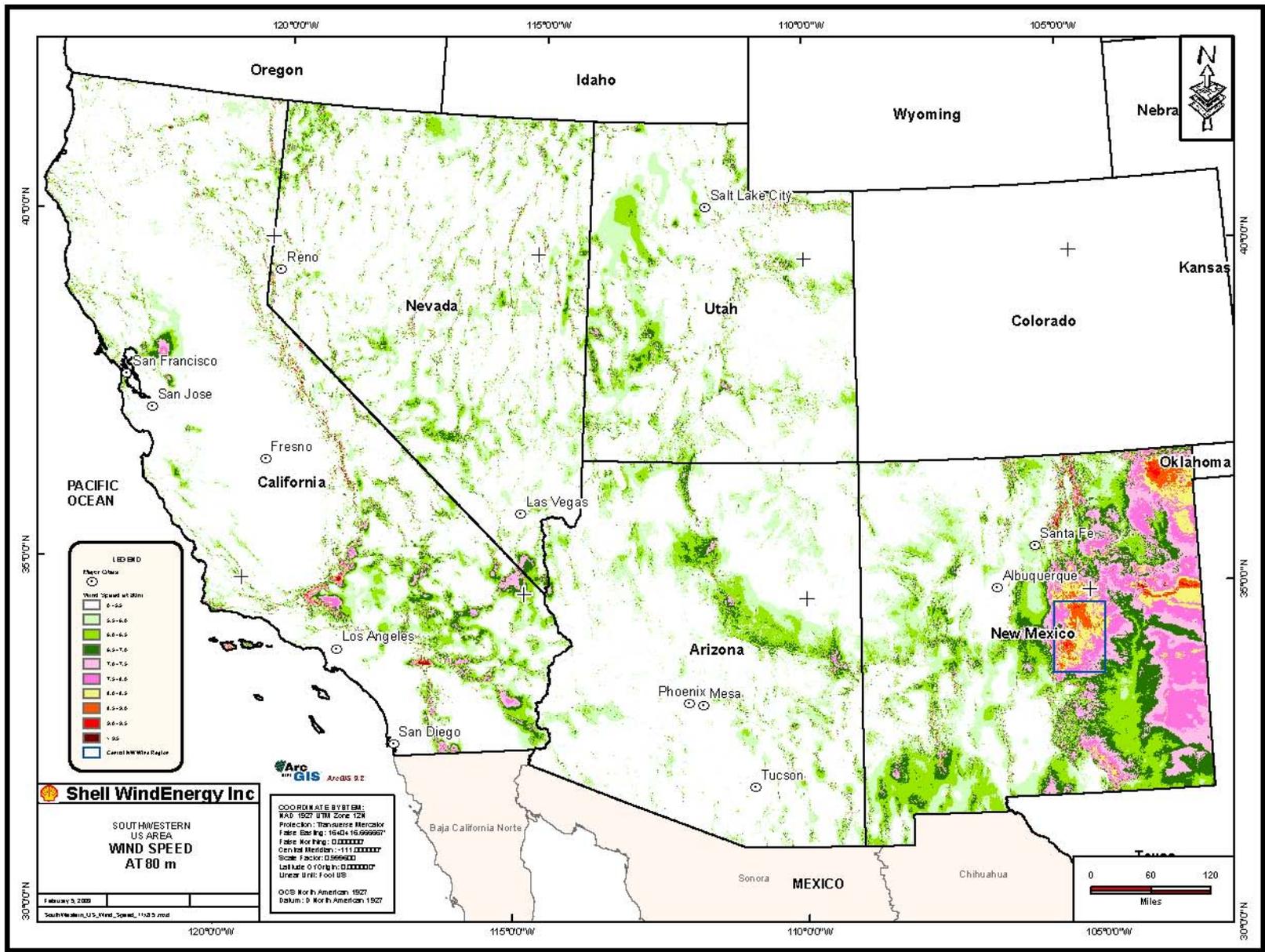
### SunZia Transmission Project

-  Substation Site
-  Alternative Routes

Source: NREL, WREZ 2009







# DOD Mitigation Proposal to Resolve Conflicts with Military Operations

- ⚡ 5/27/2014 letter from Secretary Hagel to Secretary Jewell approves the BLM's PAR if SunZia accommodates the following mitigation commitments:
  1. Hold Harmless mutual covenants;
  2. Close coordination and non-interference with WSMR testing activities;
  3. Micro-siting of tower locations; and
  4. Undergrounding up to three segments accumulating to a total of five miles
- ⚡ Agreement to these terms will allow DoD to rescind its prior objection to the BLM's PAR
- ⚡ BLM conducted an EA to review/assess the environmental impacts of 500 kV underground line construction along the BLM PAR. BLM issued a Finding of No New Significant Impact as a result of this analysis.
- ⚡ This is a unique circumstance and underground construction is not standard for long distance EHV transmission projects

# 1. Hold Harmless Clause

- ⚡ Negotiated with DoD, a Hold Harmless Clause for incorporation in the BLM ROW Agreement
- ⚡ SunZia will hold the US government harmless against any tort claims should the transmission facility be damaged by military testing performed in the Northern Call Up Area

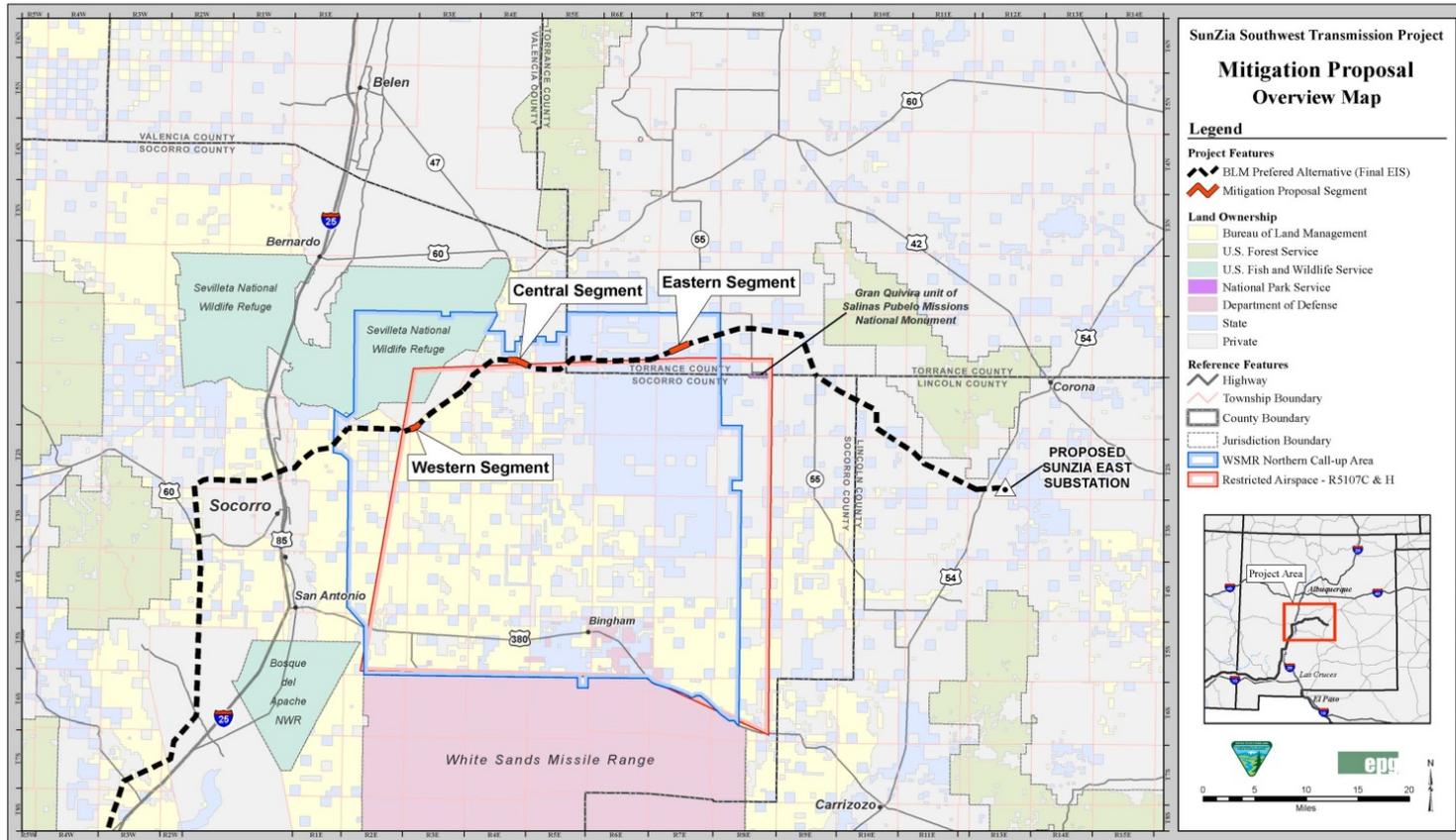
## 2. Non-Interference with WSMR Activities

- ⚡ Currently drafting a Memorandum of Agreement with the Office of the Secretary of Defense (OSD) that:
  - ~ Establishes coordination procedures between SunZia and WSMR to prevent transmission construction and maintenance work from interfering with scheduled military testing activities performed in the Northern Call Up Area
  - ~ Establishes points of contact and emergency access protocols during military testing events

# 3. Micrositing of tower locations

- ⚡ SunZia agreed to allow WSMR to review the final design and locations of the project facilities within the Northern Call Up Area
- ⚡ This agreement will be made part of the Memorandum of Agreement previously discussed

# Underground Segments



# 500 kV Underground Cable

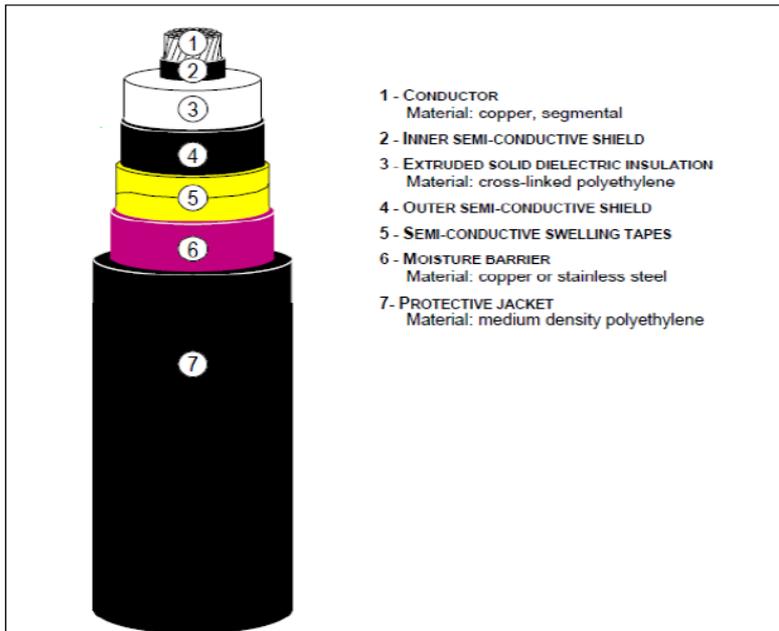


Figure 2-2 Typical Cable



# Excerpt from DoD *Report on the Impact of the SunZia Project on Current and Future Capabilities of WSMR*

(February 2015)

## Conclusion

The mitigations proposed by the Secretary of Defense will allow WSMR to continue with current and known future test activities for the foreseeable future. DOI and the applicant have agreed to the four mitigations proposed by the Secretary of Defense. As this report states, there may be test requirements not currently foreseeable that cannot be accommodated within the NEA using these four mitigations. Should new mitigation options be required in the future, DoD will alert appropriate federal agencies and the Congress of new requirements as they arise so weapon systems can be realistically tested against these currently unknown but emerging threats.

**Source:** Department of Defense, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics *Report on the Impact of the SunZia Southwest Transmission Project on Current and Future Capabilities of White Sands Missile Range, New Mexico*

Pursuant to pages 327-330 of the Joint Explanatory Statement accompanying the Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015



SECRETARY OF DEFENSE  
1000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1000

MAY 27 2014

The Honorable Sally Jewell  
Secretary of the Interior  
Washington, DC 20240

Dear Madam Secretary:

As you know, the Department of Defense (DoD) identified, and the Massachusetts Institute of Technology Lincoln Laboratory confirmed, that the proposed SunZia Southwest Transmission Project as originally proposed would adversely impact test missions at the White Sands Missile Range (WSMR). DoD formally objected to the Preferred Alternative Route described in the Final Environmental Impact Statement unless four specific mitigations were incorporated into the Record of Decision.

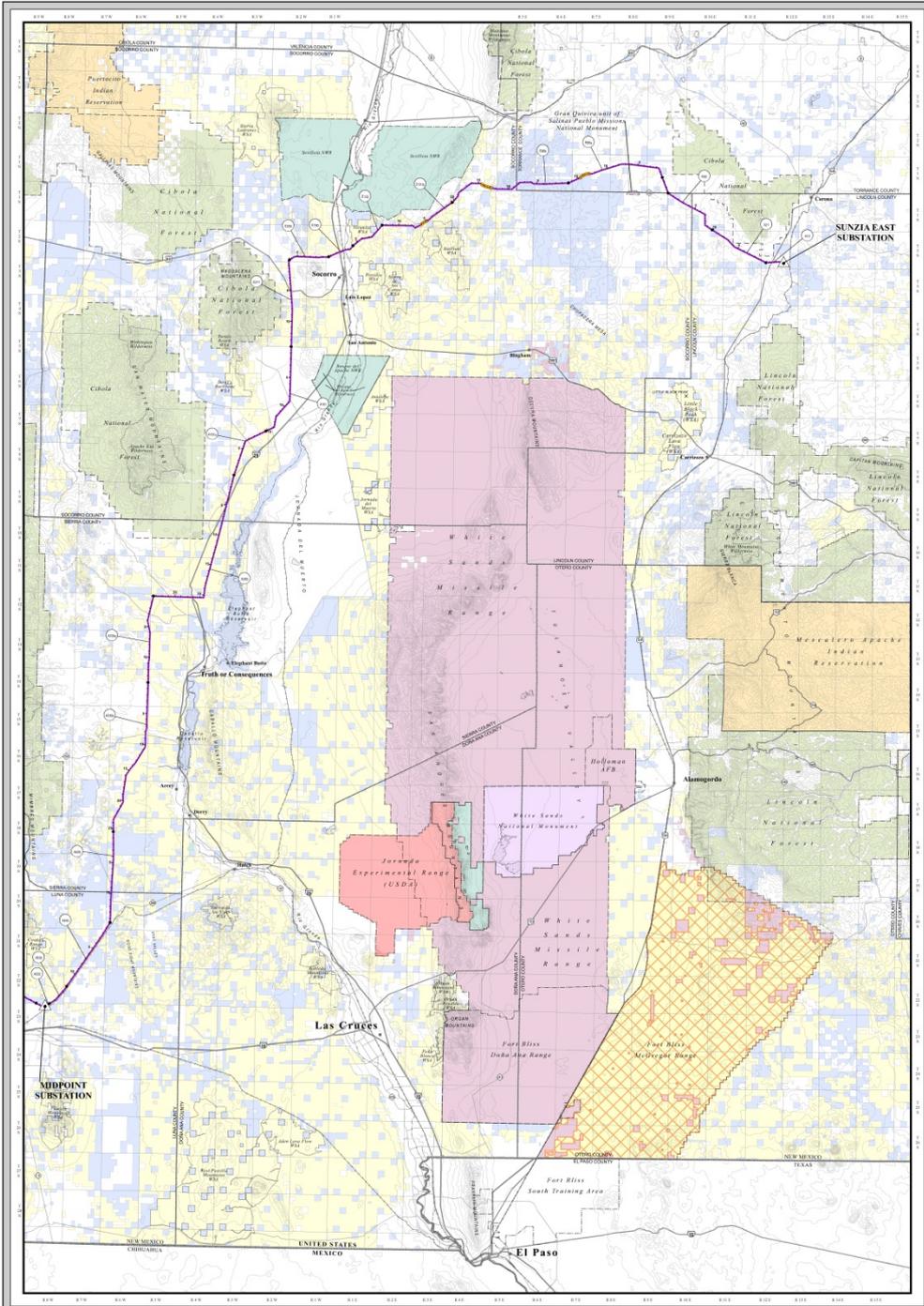
The applicant has for some time indicated acceptance of three of these mitigations (incorporation of appropriate hold harmless agreements, non-interference with WSMR operations during power line construction and maintenance, and micro-siting of the power line to avoid interference with test operations), and I understand that they are now prepared to consider a version of the fourth mitigation (burial of a portion of the line).

To mitigate mission impacts, in consultation with the Deputy Secretary of Defense, the Department of the Army, and the Chairman of the Joint Chiefs of Staff, I have determined that a total of five miles of the power line needs to be buried, in up to three separate segments, so that some low-altitude flight operations can occur. I will have my staff provide you with a mitigation proposal identifying the location of those segments by June 2, 2014.

I am hopeful that this mitigation proposal, which addresses our previous national security concerns, will be acceptable both to the Department of the Interior and to the applicant. If so, DoD formally rescinds its objection to the Preferred Alternative Route as described in the Final Environmental Impact Statement, with the expectation that the Bureau of Land Management will move promptly towards issuing a Record of Decision once it completes any other necessary steps.

Thank you.

WESTERN AREA | EASTERN AREA  
Map Location



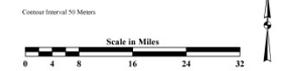
- General Reference Features**
- City
  - State Highway
  - U.S. Highway
  - Interstate
  - River/Stream
  - Railroad
  - County Boundary
  - State Boundary
  - Jurisdictional Boundary
  - Wilderness/Wilderness Study Area (WSA)
  - Lake/Reservoir

- Project Features**
- Substation Site
  - BLM Preferred Route
  - Mitigation Proposal Segment

- Inventory Key**
- Milepost Identifier
  - Link Node
  - BLM Preferred Route
  - Link Identifier

- Land Ownership**
- Bureau of Land Management
  - U.S. Department of Defense
  - McGregor Range Withdrawal
  - National Park Service
  - U.S. Forest Service
  - U.S. Fish and Wildlife Service
  - U.S. Bureau of Reclamation
  - Federal (Other)
  - Indian Reservation
  - Arizona/New Mexico State Trust Land
  - Local or State Parks
  - Private/Other

**Sources:**  
 United States Geological Survey, National Elevation Dataset 1999-2010  
 Arizona Bureau of Land Management 2010  
 Arizona State Land Department 2010  
 New Mexico Bureau of Land Management 2013  
 ESR Surveyday 2010  
 Environmental Planning Group LLC 2014





**[www.sunzia.net](http://www.sunzia.net)**

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