SunZia Southwest
Transmission Project

Annual Progress Report: 2019

Submitted by
SouthWestern Power Group

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SunZia Southwest Transmission Project
2019 Annual Progress Report

I. Introduction and WECC History

The SunZia Southwest Transmission Project (SunZia or the Project) is a major new 500 kilovolt (kV) transmission project that will provide additional transmission interconnections and transmission capacity between central New Mexico and central Arizona. SunZia will enable the development of renewable energy resources by creating access to the interstate power grid across the Desert Southwest. SunZia consists of two 500 kV transmission lines and substations and is approximately 520 miles in length. SunZia has a Western Electricity Coordination Council (WECC) Accepted Rating of 3,000 MW and the expected operation date is 2020.

The Project Manager of SunZia, SouthWestern Power Group (SWPG) is a Class 3 member of WECC.

The concept for SunZia originated from the transmission planning efforts of the Southwest Area Transmission (SWAT) Subregional planning group. SWAT has reviewed the potential for adding additional transfer capability between New Mexico and Arizona, to provide increased reliability, and to facilitate the development and delivery of power from renewable sources such as wind, geothermal and solar. In the summer of 2006, SWAT hosted a workshop (also known as Project Zia) to review possible long-term resource locations and potential delivery paths for the load serving entities in Arizona and New Mexico. From this effort, SunZia was proposed as a new regional electric transmission project between New Mexico and Arizona.

The Project, once completed, will provide the following benefits:

1) Additional access to renewable energy zones in New Mexico and Arizona where limited transmission access and capacity currently exists
2) Diversity of the regional energy resource zones
3) Increases the transfer capability and reliability across the SWAT region
4) Increases the import capability to the Central Arizona Transmission system
5) Creates an additional source of EHV service to the Tucson load pocket
6) Makes efficient use of existing available transmission corridors

On December 15, 2006, SWPG submitted a notification letter to the WECC Planning Coordination Committee (PCC) and Technical Studies Subcommittee (TSS) formally initiating the regional planning project review process for SunZia. To achieve Phase 1 status in accordance with the WECC Three Phase Path Rating Process, a Regional Planning Compliance Report was submitted to PCC and TSS on May 17, 2007. On July 12, 2007, PCC accepted the SunZia regional planning compliance report as complete.

In compliance with the WECC Procedure for Project Rating, a Comprehensive Progress Report (CPR) was submitted to WECC on April 22, 2009 and Phase 2 status was subsequently granted by PCC and TSS on July 27, 2009.

On August 27, 2009, SWPG formed a WECC Project Review Group (PRG) to proceed and review the Phase 2 Path Rating Study. The study included validation of the Plan of Service
(POS) for non-simultaneous transfer conditions and evaluation of the possible interactions with other WECC major paths. In addition, the assessment of SunZia transmission alternatives and various system variables have been included. The PRG prepared the final SunZia Accepted Path Rating Phase 2 Study Report (Report) and submitted it on February 22, 2011 to WECC PCC, TSS and OC for a 30-day review. On March 25, 2011, SunZia was granted Phase 3 status and an Accepted Rating of 3,000 MW by the PCC Chair.

The Bureau of Land Management’s (BLM) Final Environmental Impact Statement (FEIS) and Preferred Alternative Route (PAR) for the Project were issued in June 2013 and necessitated a reexamination of the technical impacts due to the interconnection opportunities in New Mexico. The original POS included an interconnection at the Luna Substation. However, due to changes to the location of the BLM PAR that made an interconnection to the Luna Substation difficult and concerns expressed in September 2013 by El Paso Electric regarding direct connections to WECC Path 47, the POS was revised. The Modified POS does not include any intermediate interconnections in New Mexico at this time and will continue to include the proposed SunZia South 500 kV Substation as a reactive compensation station and to provide for future opportunities for interconnections.

SunZia reconvened the SunZia PRG to review revised studies on the Modified POS to determine if removal of an interconnection to WECC Path 47 resulted in different simultaneous impacts on Path 47 than the original POS included in the WECC Accepted Rating Report from February 2011. It was necessary to re-confirm that the Project can still achieve a rating of 3,000 MW on the SunZia Path simultaneously with WECC Path 47 at its maximum rating of 1,048 MW. Broader participation across WECC was achieved during this Modified POS study process.

The PRG prepared and reviewed technical studies required by the WECC Three Phase Rating Process and completed a final SunZia Path Rating Re-Study Report dated September 25, 2014 (Re-Study Report). A formal approval process on the Re-Study report was conducted between October 16, 2014 and November 14, 2014. Based on the finding in the Re-Study Report, the Modified POS did not materially alter the basis on which the original Accepted Rating was granted, thereby confirming SunZia’s Three Phase Accepted Rating of 3,000 MW.

In compliance with Project Rating Review Process, the Re-Study Report was submitted to WECC on January 14, 2015. Subsequently on January 27, 2015 the PCC reconfirmed SunZia Project’s Accepted Rating of 3,000 MW with the Modified POS.

II. Project Description

The SunZia Project has received federal and the State of Arizona permits to construct two 500 kV transmission lines and substations from the renewable resource energy zones in central New Mexico (referred to as the SunZia East 500 kV Substation) to the existing Pinal Central 500 kV Substation in central Arizona. SunZia is divided into three project segments as follows: (1) SunZia East 500 kV to SunZia South 500 kV; (2) SunZia South 500 kV to Willow 500 kV; and, (3) Willow 500 kV to Pinal Central 500 kV.
III. Plan of Service

The Modified POS is described below:

• Construct two new 500 kV transmission lines from the SunZia East 500 kV Substation near Corona, NM to the SunZia South 500 kV Substation near Deming, NM (approximately 235 miles with 70% series compensation) and loop into a new SunZia South 500 kV series capacitor bank location with no transformation.

• Construct two new 500 kV transmission lines from SunZia South 500 kV Substation to the Willow 500 kV Substation in southern Graham County Arizona near US 191 (approximately 124 miles with 50% series compensation) and one 500/345 kV transformer (approximately 725 MVA) to interconnect to the existing Tucson Electric Power 345 kV system (Springerville – Vail 345 kV system).

• Construct two new 500 kV transmission lines from the Willow 500 kV Substation to the existing Pinal Central Substation near Coolidge, AZ (approximately 161 miles with 50% series compensation).

• Install shunt compensation and reactance as required.

IV. Project’s Current Status

On March 25, 2011 the SunZia Project achieved WECC Phase 3 status with an Accepted Rating of 3,000 MW.

The Project completed the Re-Study with the Modified POS and the Re-Study Report was submitted to WECC on January 14, 2015. Subsequently on January 27, 2015 the PCC confirmed SunZia Project’s Accepted Rating of 3,000 MW with the Modified POS.

The BLM issued a Record of Decision on January 23, 2015 approving SunZia’s request for right-of-way on federal lands managed by the BLM. SunZia executed a fifty-year Right-of-Way Grant Agreement with the BLM on September 1, 2016. SunZia is currently negotiating rights-of-way with the New Mexico State Land Office, Arizona State Land Department and private landowners.


SunZia applied for a location control permit and approval of its right-of-way width from the New Mexico Public Regulation Commission (PRC) on March 12, 2018. Following hearings conducted by a hearing examiner, on September 5, 2018 the PRC (1) approved the right-of-way width of 200 feet for each 500 kV transmission line and, (2) denied without prejudice the request for approval of the project location in the state. SouthWestern Power Group is planning to reapply for location approval with the PRC during 2019 providing the additional information cited in the PRC decision.
A Plan of Development (POD) has been completed and is under review by the BLM. A Notice to Proceed (with construction) is expected from the BLM following approval of the POD.

V. Planned Project In-Service Date

The SunZia Project’s first of two 500 kV transmission lines and the Willow 500 kV, SunZia South 500 kV and SunZia East 500 kV substations, along with interconnection to the existing Pinal Central 500 kV substation, are anticipated to be placed into commercial operation by end-2020.

VI. SunZia Southwest Transmission Configuration

Modified POS: SunZia Southwest Transmission Project

![Diagram of SunZia Southwest Transmission Project](image-url)
VII. Arizona and New Mexico EHV System

The map below provides an electrical overview of the EHV transmission system for Arizona and New Mexico. The SunZia Project’s route is shown as two dashed red lines.

Figure 1: Arizona-New Mexico Regional EHV Transmission Map
### VIII. Project Milestone Schedules

A listing of major project milestone schedules from planning to operation is provided below.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
<th>Duration</th>
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</thead>
<tbody>
<tr>
<td>Concept Emerges in Regional Planning</td>
<td>June 2006</td>
<td>Pre-Permitting 2 Years</td>
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<tr>
<td>Sponsors Sign MOA</td>
<td>April 2008</td>
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<tr>
<td>Submit BLM SF-299 ROW Application</td>
<td>September 2008</td>
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<tr>
<td>Initial Scoping</td>
<td>May 2009</td>
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<tr>
<td>Draft EIS</td>
<td>May 2012</td>
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<tr>
<td>Final EIS</td>
<td>June 2013</td>
<td>Federal Permitting 6.3 Years</td>
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<tr>
<td>EA and FONNSI</td>
<td>December 2014</td>
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<tr>
<td>Record of Decision</td>
<td>January 2015</td>
<td></td>
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<tr>
<td>Arizona State Permit</td>
<td>February 2016</td>
<td>State Permitting 3 Years</td>
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<td>New Mexico Permit</td>
<td>December 2019</td>
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<tr>
<td>Financial Close</td>
<td>December 2019</td>
<td>Engineering, Procurement &amp; Construction 3 Years</td>
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<td>Final Design, ROW Acquisition, Procurement, Construction</td>
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<tr>
<td>Commercial Operation</td>
<td>2020</td>
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