

memorandum

DATE: NOV 05 2013

REPLY TO
ATTN OF: G0400

SUBJECT: Determination to Prepare an Environmental Assessment for the ED2 Saguaro No. 2
115-kV Transmission Line Rebuild Project for Central Arizona Project, near Eloy, Pinal
County, Arizona

TO: D. Moe, G0000, Phoenix, AZ

Western proposes to rebuild the 35.6-mile-long, ED2 Saguaro No. 2 115-kV Transmission Line located near Eloy, Pinal County, Arizona. Western operates and maintains this transmission line under an agreement with the Central Arizona Project. Central Arizona Project is funding Western for this work, because they are responsible for the facilities. U.S. Bureau of Reclamation holds the easement for the transmission line, which crosses Arizona State Trust land, U.S. Bureau of Indian Affairs San Carlos Irrigation Project facilities, and private lands.

As we begin environmental planning activities, we request you approve the attached Determination to Prepare an Environmental Assessment. Mr. Matthew Bilsbarrow will be the National Environmental Policy Act (NEPA) Document Manager for the Environmental Assessment. If you have any questions, please contact me at (602) 605-2524.



Linda Marianito
Environmental Manager

attachment

cc (w/attachment):

G0400 (Marianito)
G0420 (Bilsbarrow)
G5637 (Kelly)

FILE: 5440.02 EA for ED2 SGR2 TL

DETERMINATION TO PREPARE AN ENVIRONMENTAL ASSESSMENT

Name of Project: ED2 Saguaro No. 2 115-kV Transmission Line Rebuild Project

Location: Near Eloy, Pinal County, Arizona

Description of the Proposed Action: Western Area Power Administration, Desert Southwest Region, (Western) proposes to rebuild with 60 to 75-foot-tall steel monopoles the 35.6-mile-long, ED2 Saguaro No. 2 115-kV Transmission Line, which is composed 3.1 miles of wood H-frame structures and 32.5 miles of wood single-pole structures. The 795 MCM ACSR conductors will be replaced. The overhead protection ground wire will be replaced with one containing fiber optic cables for utility communications. Existing access roads will be used to the extent possible and improved as needed. The design, operation, and maintenance of this transmission line must meet North American Electric Reliability Corporation (NERC) and Western Electric Coordinating Council (WECC) reliability standards, as well as National Electric Safety Code requirements and Western's Power Systems Safety Manual guidance.

Western operates and maintains this transmission line under an agreement with the Central Arizona Project (CAP). This line serves three CAP pumping stations: Brady, Picacho, and Red Rock. CAP is funding Western for this action, because they are responsible for the project's facilities. U.S. Bureau of Reclamation, Phoenix Area Office (BOR), holds a 100-foot-wide easement for the transmission line, which crosses Arizona State Trust and private lands. U.S. Bureau of Indian Affairs, San Carlos Irrigation Project may issue an encroachment permit to BOR for spanning the Casa Grande and Casa Grande Extension Canals. U.S. Army Corps of Engineers may also require a permit for access road improvements at McClellan Wash and other dry wash crossings.

The proposed action is located on the east side of Interstate 10 near Eloy, Pinal County, Arizona (Figure 1). It starts at ED2 Substation located on the east side of Eleven Mile Corner Road, a half mile south of State Route 287, and ends at Saguaro Substation located next to Arizona Public Service's Saguaro Steam Plant situated alongside Interstate 10 one mile south of Exit 226 (Red Rock). The transmission line parallels portions of Eleven Mile Corner, Hanna, Brady Pump Plant, and Pecan Roads and crosses State Route 87 at Hanna Road. Table 1 lists the land sections associated with the proposed action. The line starts in the Santa Cruz Flats, follows the western edge of the Picacho Mountain, goes through Picacho Pass, crosses McClellan Wash, and ends in the northern Tucson Basin.

Township	Range	Section
6 South	8 East	30, 31
7 South	8 East	6, 7, 13, 14, 15, 16, 17, 18
7 South	9 East	7, 16, 17, 18, 21, 28, 33
8 South	9 East	4, 9, 16, 20, 21, 29, 32, 33
9 South	9 East	3, 4, 10, 11, 13, 14
9 South	10 East	7, 8, 9, 16, 18, 21, 28, 33, 34
10 South	10 East	2, 3, 11, 14, 15, 23
On the Gila & Salt River Baseline & Meridian		

Western's proposed action increases the reliability and safety of the bulk electric system so that the risk of a catastrophic failure on the ED2 Saguaro No. 2 115-kV Transmission Line is reduced to the lowest practical level and the greatest long-term benefit is obtained. This line experienced five major failures in the past 10 years, of which the most recent occurred in 2012 when a storm destroyed 30 structures in a three-mile-long section. Steel monopoles are stronger and more storm resistant than wood structures carrying 795 MCM ACSR conductors. Rebuilding the entire line provides a cost-effective opportunity to replace the overhead protection ground wire with one containing fiber optic cables to meet redundant communication requirements. Steel poles require less maintenance than wood. Maintenance costs will be further reduced, since 8 to 10 steel structures are needed per mile depending on terrain, instead of 10 to 12 wood ones per mile.

Western's plans to start rebuilding the transmission line in October 2016 and complete it by April 2018. The work will occur in stages so that the electrical supply to the CAP pumping plants is uninterrupted. Western will coordinate with customers about planned outages to minimize disruptions. Once built, Western will operate and maintain it per an agreement with CAP. This line was originally built in 1984.

Western's construction contractor and maintenance crews may use the following equipment: all-terrain vehicle, auger or drill rig, backhoe, bucket or boom truck, bulldozer, cement mixer or truck, compressor, crane, crew truck, dump truck, front-end loader, grader, pole truck, spool rig, tensioners, and tractor-trailer. A helicopter may be used to lift pole sections into place or string wires. The contractor may splice the conductor using either hydraulic compression or implosive sleeving methods. For structure foundations, the contractor will typically auger holes, 10 to 20 feet deep, and backfill it with concrete; excess dirt spoils may be spread on the ground surface around the base. The contractor may remove the existing wood poles entirely or cut them off near ground level. Equipment will be set up within the transmission line easement or a staging area with the exception of conductor pulling equipment, which may be located up to 400 feet away from selected turning structures. Operators of equipment, such as bucket trucks, cranes and tensioners, require level, brush-free areas to work safely. Dirt road surfaces may be smoothed and leveled, and steep grades, usually associated with dry wash crossings, may be reduced so that equipment operators can drive safely.

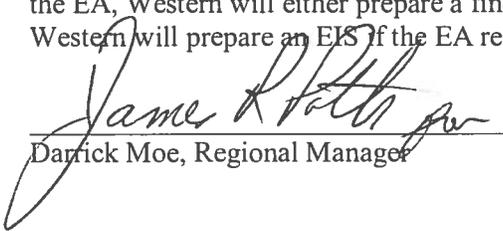
Western's action, per 10 CFR 1021.104, consists of 1) rebuilding the transmission line with steel monopoles, new conductors, and new overhead protection ground wire with fiber optic cables; 2) removing the existing wood pole structures; 3) improving existing access roads and equipment work areas for safety; and 4) operating and maintaining the transmission according to an agreement with CAP.

Class of Action from Department of Energy (DOE) National Environmental Policy Act (NEPA)

Regulations: The items listed in Appendix C are classes of actions that normally require Environmental Assessments (EAs), but not necessarily Environmental Impact Statements (EISs). Appendix C4 states "Upgrading or rebuilding more than approximately 20 miles in length of existing powerlines; or construction of powerlines (1) more than approximately 10 miles in length outside previously disturbed or developed powerline or pipeline rights-of-way or (2) more than approximately 20 miles in length within previously disturbed or developed powerline or pipeline rights-of-way." Appendix C4 applies to the proposed action, because it entails rebuilding more than 20 miles of transmission line within a previously disturbed or developed right of way.

"Previously disturbed or developed" applies to the ED2 Saguaro No. 2 Transmission Line easement based on the definition in DOE NEPA regulations at 1021.410 (g) (1). It states "previously disturbed or developed refers to land that has been changed such that its functioning ecological processes have been and remain altered by human activity. The phrase encompasses areas that have been transformed from natural cover to non-native species or a managed state, including but not limited to, utility and electric power transmission corridors and rights-of-way, and other areas where active utilities and currently used roads are readily available."

Determination: Based on the DOE National Environmental Policy Act Implementing Procedures, I determined that an EA will be prepared to assess the proposed action's impacts. Based on the analysis in the EA, Western will either prepare a finding of no significant impact and proceed with the action, or Western will prepare an EIS if the EA reveals the potential for significant environmental impacts.


Darrick Moe, Regional Manager

11/5/13
Date

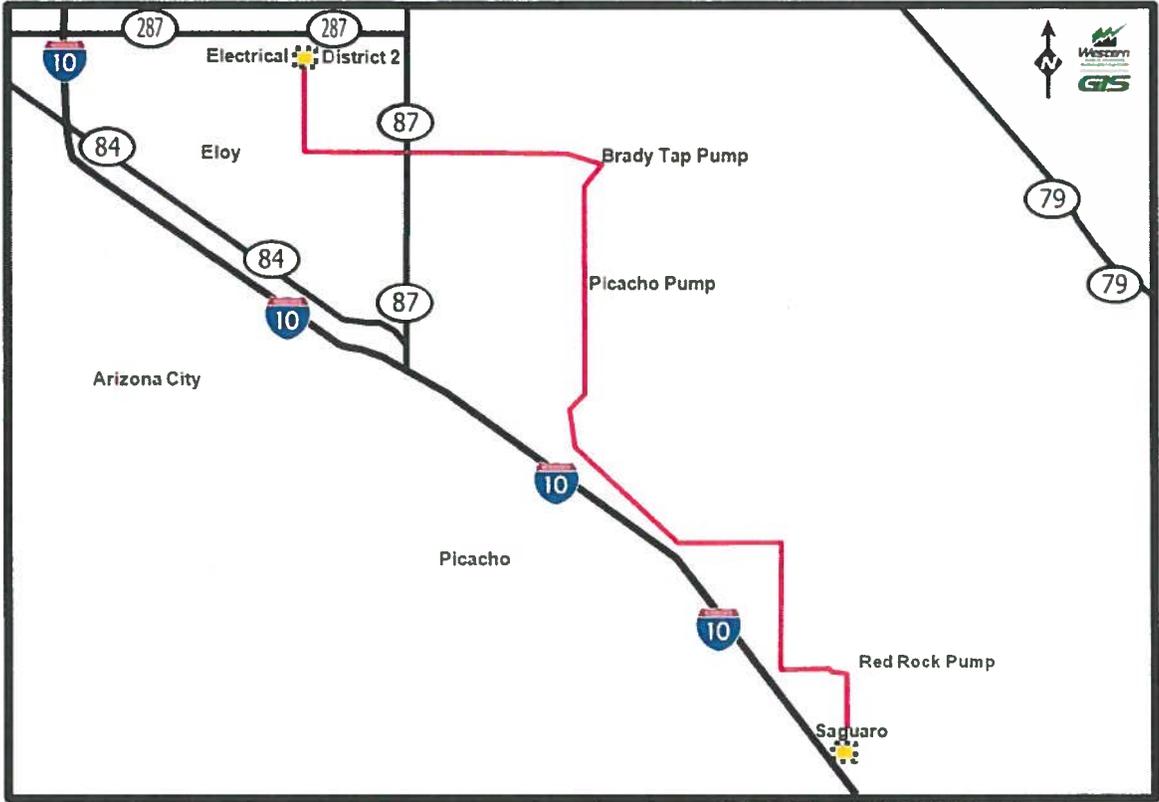


Figure 1: ED2 Saguaro No. 2 115-kV Transmission Line Route

