

**APPLICANTS' RESPONSE TO STAFF'S SECOND SET OF DATA REQUESTS
REGARDING NOGALES TRANSMISSION, L.L.C. AND UNS ELECTRIC, INC., JOINT
APPLICATION FOR CECS
DOCKET NOS. L-00000CCC-17-0246-00176 AND L-00000F-17-0246-00176
August 24, 2017**

BG 3.15

Have the Applicants resolved all concerns raised by other agencies relating to the Project, including but not limited to, Department of Homeland Security, Border Patrol, State Land Department, and Game and Fish?

RESPONSE:

The Applicants have discussed with each agency the concerns raised by that entity regarding the Nogales Interconnection Project and/or the Nogales Tap to Kantor Upgrade Project. Below is a summary of the status of those discussions.

During the pre-filing conference on July 11, 2017, Department of Homeland Security/U.S. Customs and Border Patrol ("CBP") raised the following issues concerning the Nogales Interconnection Project: (1) the effect of electromagnetic frequency ("EMF") on the CBP's Nogales station Mustang horse patrol; (2) interference with CBP's radio and microwave frequency towers; (3) clearance from the CBP rappel tower, particularly in regard to potential lightning strikes; (4) proximity of transmission lines to the CBP Nogales station heliport; (5) the potential for the Gateway to U.S.-Mexico Border 230-kV transmission poles to be used as a tool for illegal border crossings; and (6) potential restrictions to access to its border road. Applicants intend to continue to work with CBP regarding these issues and, as discussed below, believe these concerns can be resolved.

1. Applicants do not anticipate any significant effects on the health or behavior of the CBP's Mustang horse patrol. As noted in Exhibit H-1 to the Joint Application, several studies have been conducted on the possible effects of EMF on the health, behavior, and productivity of wild or domestic animals, including cattle. The research does not suggest that electric or magnetic fields result in significant adverse effects on the health, behavior, or productivity of domestic livestock such as cattle, or other mammals such as deer or elk. The Nogales Interconnection Project would not be anticipated to result in long-term impacts to livestock or the facilities used to house them, as the proposed transmission line ROW would be located adjacent to existing facilities and transmit power at a lower voltage than those tested the above in cited research and determined to not result in significant effects on the health or behavior of the study animals.
2. Applicants do not anticipate significant adverse impacts to CBP's radio or microwave communication signals. Applicants are not aware of any complaints related to radio interference resulting from the operation of existing transmission lines located near the Nogales Interconnection Project, and the transmission line

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Tucson Electric Power Company ("TEP")
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hardware will be designed to minimize gap and corona discharges that have the potential to create such interference.

Interference from transmission line corona discharges associated with the project could occur for an amplitude modulation ("AM") radio station within its primary coverage area. That situation is unlikely, however, because AM radio frequency interference typically occurs immediately under a transmission line and dissipates rapidly with increasing distance from the line. Frequency modulation ("FM") radio receivers usually do not pick up interference from transmission lines, because corona generated radio frequency noise currents decrease in magnitude with increasing frequency and are quite small in the FM broadcast band (88–108 Megahertz). The interference rejection properties inherent in FM radio systems make them virtually immune to amplitude type disturbances.

Microwave antennae are operated as high-frequency, unidirectional, point-to-point systems and depend on line-of-sight between antenna receivers. These systems are unlikely to be adversely affected by electrical noise, but could be affected by infrastructure located directly between two microwave signal points. If a two-way mobile radio is located immediately adjacent to and behind a large metallic structure (e.g. a steel transmission line structure), moving either mobile unit by less than 50 feet so the metallic structure is no longer immediately between the two units should restore communications.

3. Applicants do not anticipate a significant increase in the potential for lightning strikes on the CBP rappel tower located at the Nogales station. The location of well-grounded transmission structures and their associated overhead ground wire should reduce potential strikes to the rappel tower because they will be a better path to ground for lightning in the area.

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4. Please refer to Applicants' response to CCE 3.23 for information regarding impacts of the Nogales Interconnection Project on the CBP Nogales station heliport.
5. Applicants do not anticipate that the structure type or location of the Gateway to U.S.-Mexico Border transmission poles will enable them to be used as tools for illegal border crossings. Applicants do not include ladders for climbing on their structures and the design and size of the structures does not lend itself to climbing. Furthermore, in discussing the issue with Mr. Hecht of the CBP the final transmission pole for this line would be located approximately 300 feet north of the

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international border which would not be of concern to the CBP relative to using the pole to get over the border fence.

6. Applicants do not anticipate that the Nogales Interconnection Project will restrict the CBP's access along the border road. Applicants will span the border road.

During the pre-filing conference, the Attorney General representative for the Arizona State Land Department ("ASLD") stated that he was unsure of the status of communications between the Applicants and ASLD.

UNSE has made application to ASLD for right of way for the proposed Upgrade Project. UNSE has continued to engage in ongoing discussions with ASLD regarding the ASLD's preference for the Nogales Tap to Kantor Upgrade Project to remain on the east side of Wilmot Road versus UNSE's proposed relocation of the line west of Wilmot Road. On August 22nd, 2017 in a conference call with ASLD UNSE was told that ASLD would likely would issue a partial denial of UNSE's application regarding the portion of the request along Wilmot Road. As a result, UNSE is evaluating the additional cost and construction issues related to remaining on the east side of Wilmot Road.

During the pre-filing conference the Arizona Game and Fish Department ("AGFD") identified some issues that they wanted to discuss.

The Applicants met with AGFD on August 18, 2017 to discuss the AGFD concerns. All concerns of the AGFD can be resolved by implementation of the mitigation measures identified by AFGD and the parties will have continued discussions as the project develops. See Exhibit 3.15.

RESPONDENT:

Ed Beck, Director of Transmission Development, UNS Electric & Tucson Electric Power

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CCE 3.23

Are there any airports, airfields or air strips with residential access located within the vicinity of project transmission lines? Will project facilities include measures such as high visibility "balls" to improve visibility of project facilities for low flying aircraft?

RESPONSE:

The Nogales International Airport is the closest airport to the U.S. to the Nogales Interconnection Project and is located over six miles from any of the alternative routes and therefore will not be impacted by the construction of the project. CBP operates a heliport 1.4 miles north of the Mariposa Port of Entry at the Nogales Station, which is east of Nogales Interconnection Project Route Segment Variation 10. CBP has indicated that construction and operation activities for Route Segment Variation 10 (which is part of Alternatives 1 and 3) would permanently impact all helicopter traffic approaching from the western side of the Nogales Border Patrol Station Area of Operation and require rerouting of all incoming helicopter traffic from the west to avoid collision with the proposed transmission line. All future take-offs to the west would likely be precluded due to the short distance between the heliport and the proposed transmission lines. CBP has indicated that this permanent impact would not be significant in terms of CBP mission and operational costs.

As the proposed towers for Route Segment Variation 10 will be 75-110 feet tall and the FAA threshold for 14 CFR Part 77, Objects Affecting Navigable Airspace is 200 feet, in most cases wires and their supporting structures fall into the discretionary category of structures less than 200 feet above ground level. Applicants will work with landowners and various agencies that might have an interest in high visibility aerial marker balls to improve visibility of facilities for low-flying aircraft.

The Applicants have not identified any residential airports or airfields in the vicinity of the NT to Kantor Upgrade Project. The closet airport/airfield to the project are Tucson International Airport and Davis Monthan Air Force Base. This project has no impact on flights out of either facility.

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