Santa Cruz Reliability Project – South
Frequently Asked Questions

Project Need

How do you measure transmission reliability?

UNSE Transmission Planning Engineers model the transmission system annually based on the North American Electric Reliability Corporation (NERC) Reliability Standards approved by the Federal Energy Regulatory Commission (FERC). These standards address various aspects of grid reliability, including cybersecurity, physical security, operational performance, and resources adequacy based on contingency planning and risk assessments. In short, reliability is measured in many ways according to enforceable standards with the goal of maintaining uninterrupted power service even in the event of a failure in the system.

Why is a redundant line the only solution considered to supplement power?

Redundant transmission systems offer more reliable configurations than a radial line by providing a way for power to be supplied from different circuits at different substations. If one circuit requires an outage or experiences a fault, power is supplied almost instantaneously from the second circuit. The probability of multiple circuit failures from geographically separated power supplies is incredibly low. This project is designed to improve reliability for all customers in Santa Cruz County, not to increase system capacity.

Approval Process

Is it true that the ACC mandated a Redundant line to be built to Nogales?

Yes, although UniSource was later relieved of that requirement. In 1999, a settlement Agreement approved by the Arizona Corporation Commission (ACC) in Decision No. 62011 (Nov. 2, 1999), committed Citizens Electric to a Plan of Action which included a requirement that Citizens build a second transmission line to serve its customers in Santa Cruz County by December 31, 2003. Since acquiring the Citizens' electric assets in Santa Cruz County in 2003, UNSE made substantial improvements to operating procedures and significant investments in capital facilities that improve reliability and reduce outage restoration time. In 2005, the ACC (Decision No. 67509 Jan. 20, 2005) relieved the mandate to construct a secondary transmission line.

Can the public vote not to move forward with the project?

The public is welcome to share their thoughts and comments, which UniSource will include in its application for a Certificate of Environmental Compatibility (CEC).

Under state law, UniSource must secure a CEC to construct the transmission line. UniSource will file a CEC application with the Arizona Corporation Commission. The Arizona Power Plant and Transmission Line

Siting Committee would then review the CEC application in a public process and hearing that allows neighbors and others to provide comments. Following the hearing, the Arizona Corporation Commission must review and approve the CEC before UniSource can begin construction.

Cost & Funding

Are route alternatives evaluated by their construction and maintenance costs? How Much will the project cost?

Construction, maintenance, and operating costs are statutory considerations that must be evaluated by the Line Siting Committee when deliberating the impacts of the project. During the Siting Process, UniSource considers the estimated costs of acquiring easements, engineering, construction, long-term operation and maintenance for each alternative route proposed. Ultimately, the preferred alternative that UniSource will propose to the Line Siting Committee must balance the costs of the project with a host of other environmental, cultural and social considerations.

As of early August, UniSource has not determined any preferred or alternative routes for a cost analysis. As we progress through the process, a cost analysis will be conducted.

Private Property Impacts

How will the project impact real estate values?

UniSource does not expect that new transmission line projects will negatively impact property values because UniSource's lines are located above ground throughout the areas we serve, and that reality is already priced into local home values.

Project Alternatives

How will the final alignment be selected?

UniSource conducts a comprehensive analysis that considers environmental, cultural, socioeconomic, public health and safety, cost and other criteria – as well as public input – to winnow down the possibilities until a preferred route is determined. The process is designed to consider positive and negative aspects of each option to ensure a thorough, transparent process.

Has UniSource applied to the National Forest Service (NFS) for permits to run a new power line through Coronado National Forest?

UniSource has requested a Special Use Permit for potential placement of the line within the designated utility corridor. The Forest Service's lengthy review and approval process considers many of the same environmental and cultural factors used to evaluate an application for a Certificate of Environmental Compatibility. Although UniSource initiated the permit process for efficiency and coordination with the NFS as an interested party, routes that do not pass through the Coronado National Forest could be identified.

Project Design

What design standards are used to engineer the transmission line project from natural disasters such as earthquakes?

Design standards set forth by the American Society of Civil Engineers (ASCE) and the Institute of Electrical and Electronics Engineers (IEEE) are used to design the transmission line.

What laws or regulations exist about mixing a gas line with a high voltage line?

There are no laws specifically prohibiting the collocation of utility corridors. In fact, such collocations can limit environmental and visual disturbances. When natural gas and powerline utilities are collocated, geotechnical studies are conducted to guide appropriate mitigations that prevent corrosion of the underground pipeline.

Is putting the transmission line underground being considered for this project? What is the difference in reliability between overhead and underground transmission lines?

UniSource does not install transmission lines underground because it costs significantly more to build a transmission line underground than to build the same line overhead. Additionally, it doesn't really improve reliability. While underground lines are protected against certain types of damage, they're more vulnerable in other ways that can lead to longer outages. Maintenance of underground facilities also takes more time and requires specialized training for utility workers.

Wildfire

In response to their recent wildfires, California is burying new electrical lines. Can the Project's new electrical lines be buried in the ground?

Every electric utility has different considerations based on the location of its facilities. UniSource has a different risk profile compared to utilities like those in California, for example, that operate distribution equipment in heavily forested areas. Distribution lines operate at lower voltages, and their equipment is generally lower to the ground, have more mechanical components that are susceptible to damage, and they are affixed to wood poles that more susceptible to failing due to a collision, storms or degradation over the course of their life span.

In contrast, transmission lines like the ones needed for this project operate at high voltages that require taller, stronger steel structures that are more resilient and have greater clearances from vegetation than distribution lines. Transmission lines require fewer mechanical devices, reducing the number of components that can wear out or become damaged. These more robust poles support UniSource's wildfire mitigation efforts, which include continual maintenance and upgrades to our local energy grid, inspections and vegetation management. To learn more, visit uesaz.com/wildfire-safety-prevention.

South 32 Hermosa Mine

How much of the power from this new 138 kV line will be dedicated to the South32 Hermosa Project?

UniSource can meet the energy needs of the South 32 Hermosa Mine with existing infrastructure and this project is not designed specifically to provide service to the mine. Santa Cruz Reliability Project South is designed to strengthen the reliability and resiliency of the electric transmission system serving all customers in Santa Cruz County.