Southline Transmission Project
Frequently Asked Questions

About the Project

1. What Is the Southline Transmission Project?

The Southline Transmission Project is a proposed transmission line designed to collect and transmit electricity across southern New Mexico and southern Arizona. The project will enable bidirectional use of power both west and east along its route, relieving congestion, strengthening the existing electrical system, and improving transmission access for local renewable and other energy sources.

The Southline Transmission Project consists of two proposed sections:

- The New Build Section would involve the construction of approximately 240 miles of new 345-kilovolt (kV) double-circuit electric transmission lines in New Mexico and Arizona, and would provide capacity of up to 1,000 megawatts (MW). The New Build is defined by end points of the existing Afton Substation, south of Las Cruces, New Mexico, and the existing Apache Substation, south of Willcox, Arizona. This section includes an approximately 30-mile segment between Hwy 9 and I-10, which would facilitate potential access to the rich renewable resource areas of southern New Mexico, and a 5-mile loop between the existing Afton Substation and the existing Luna-Diablo 345-kV transmission line (a technical requirement of the project which serves to strengthen the existing system).
- The Upgrade Section would convert approximately 120 miles of existing single-circuit 115-kV transmission lines, currently owned by the Western Area Power Administration (Western), to double-circuit 230-kV lines between the existing Apache Substation and the existing Saguaro Substation northwest of Tucson, Arizona. This would provide up to 1,000 MW of transmission capacity between these substations. A new line segment approximately 2 miles in length will be required to interconnect with the existing Tucson Electric Power Vail Substation, located just north of the existing Western line.

The Project will interconnect with up to 14 existing substation locations and may include development of a new substation in Luna County, New Mexico.

The selection of the Southline Transmission Project's route is guided by an approach to minimize land use and environmental and cultural resource impacts by following existing infrastructure corridors wherever possible.

2. Why Is the Southline Transmission Project Needed?

The Southline Transmission Project would meet multiple electric system needs in the Desert Southwest. The project has been designed to improve the electric transmission infrastructure in

southern New Mexico and southern Arizona in order to strengthen the existing system and to cost effectively provide up to 1,000 MW of initial bidirectional transmission capacity between southern New Mexico and southern Arizona.

- *To improve reliability* – There is limited existing electrical transmission capacity in the region, which causes system reliability risks.
- *To relieve congestion* – Since existing transmission capacity is fully used, additional transmission capacity in the region is needed to relieve congestion and help local utilities access the most cost-efficient energy sources.
- *To sustain growth* – The Desert Southwest area is expected to experience substantial long-term growth, creating increased demand for power and therefore a greater need for transmission capacity to provide that power.
- *To facilitate renewable energy* – Satisfying the renewable energy requirements of western states will require access to transmission for renewable resources; a major challenge facing renewable energy development is insufficient transmission access.

To meet these principal needs, the project has been designed to achieve the following project-specific objectives:

- Create a link that provides benefits to population load centers on both ends of the line.
- Provide multiple intermediate access points with proposed connections to up to 14 existing substation locations, whose inclusion is prioritized by regional planning.
- Provide a solution that fits with broader regional utility planning and needs.
- Provide for the efficient, cost-effective, and bidirectional transmission of up to 1,000 MW of initial rated capacity.
- Utilize an innovative public-private partnership to select lines for upgrade that would create effective transmission capacity additions.
- Maximize the use of existing infrastructure corridors, such as electric transmission lines, in order to help minimize environmental and cultural impacts.
- Meet North American Electric Reliability Corporation and Western Electricity Coordinating Council standards and guidelines.
- Provide a path consistent with renewable resource land use efforts.

3. What Are the Benefits of the Southline Transmission Project?

- *Cost-effective, reliable electricity* – By interconnecting with up to 14 existing substation locations along its route, the Southline Transmission Project will enable local utilities to meet energy demands.
- *Local economic development* – The Southline Transmission Project will enable local economic development through project construction, enhanced power reliability, and by enabling additional local renewable energy development.
- *Resource conservation* – The Southline Transmission Project will minimize land use conflicts by working from federal and state energy and land use planning efforts, using existing infrastructure, and developing a route along existing infrastructure corridors.

- *Renewable energy* – The Southline Transmission Project will facilitate the connection of renewable energy projects to the electric system, allowing states in the Desert Southwest to meet renewable energy requirements.
- *Smart, coordinated approach* – The Southline Transmission Project team has worked closely with local utilities and other transmission providers since 2009 to ensure the Southline Transmission Project meets local needs and improves the regions' electric system.

About the Project Team

4. Who Is the Southline Transmission Project Team?

The Southline Transmission Project team includes two entities and their consulting team:

- The Southline Transmission Project is sponsored by Southline Transmission, L.L.C., a subsidiary of Hunt Power, L.P. Hunt Power, L.P. develops and invests in entrepreneurial electric and gas utility opportunities, and is part of a larger privately-owned group of entities managed by the Ray L. Hunt family that engages in oil and gas exploration and production, refining, power, real estate, ranching, and private equity investments.
- Black Forest Partners, L.P. is the project manager of the Southline Transmission Project and is led by Southwest natives Bill Kipp and Doug Patterson. Black Forest Partners created the concept for the Southline Transmission Project in 2008 as a transmission solution to minimize land use challenges and strengthen the existing system, while enabling the development of renewable energy projects.

5. What is Western's Involvement with the Project?

Western Area Power Administration and Southline Transmission, LLC, have signed an Advanced Funding Agreement (Agreement) that funded Western staff support for the Southline Transmission Project during its development phase. Western served as joint lead agency with the Bureau of Land Management in the preparation of the environmental impact statement for the proposed project.

As part of its agency mission, Western routinely studies power system requirements, plans for transmission line upgrades and additions, facilitates and finances transmission projects, and constructs, owns, operates, and maintains transmission infrastructure. Such projects may be solely Western projects, or may be projects undertaken with the participation of others. Southline is proposing to upgrade approximately 120 miles of Western's existing transmission line between Saguaro and Apache substations as part of its proposed Project. Western is evaluating to what extent it will participate in the proposed Project.

Under the Agreement, Southline will cover Western's costs related to National Environmental Policy Act compliance, Western Electricity Coordinating Council path rating, Western's review and due diligence of the proposed project and development of interconnection agreements. At

the conclusion of the development period it is anticipated the proposed project's progress will be evaluated by both parties and decisions will be made regarding construction funding.
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Project Development and Analysis

6. What Was the Study Area and How Was It Used?

The Southline Transmission Project is defined by its major interconnection points: the existing substation at Afton in New Mexico and the existing substations at Saguaro and Apache in Arizona. The study area was a defined region surrounding those interconnection points within which reasonable route alternatives were identified and evaluated through federal, state, and local environmental review processes.

7. How Were the Southline Transmission Project Route Alternatives Developed?

The Southline Transmission Project's route is guided by an approach to minimize impacts by following existing corridors wherever possible. This approach includes:

- Working within, or next to, existing infrastructure corridors (such as existing transmission lines, highways and roads, natural gas pipelines, and railroads);
- Minimizing impacts to sensitive environmental and cultural areas while selecting alternative routes;
- Incorporating information from existing federal and state energy and land use planning efforts;
- Working closely throughout project development with interested stakeholders and land managers to understand, and where possible, avoid or minimize impacts to sensitive areas; and
- Considering sensitive resources during engineering design, construction, and future operations and maintenance.

The Southline Transmission Project team conducted an initial routing process in 2011, prior to environmental review, in order to formulate a solid project proposal for environmental review by BLM and Western. Based on information gathered during the National Environmental Policy Act (NEPA) scoping process and through subsequent coordination with cooperating agencies, BLM and Western developed additional project route alternatives for evaluation. These are described in the Draft Environmental Impact Statement which is available on the BLM project website (www.blm.gov/nm/southline).

8. How Were Route Alternatives Evaluated?

During the federal, state, and local environmental review processes, the potential project route alternatives were studied to understand their possible impacts to environmental, cultural, and social resources. A full description of the Federal review process can be found in the Council on

Environmental Quality's A Citizen's Guide to the National Environmental Policy Act (NEPA).[1] The BLM's NEPA handbook[2] provides information about how NEPA regulations are applied to projects on BLM lands. Western's NEPA Implementing Procedures, applicable to all agencies that are part of the U.S. Department of Energy, can be found in the Code of Federal Regulations (CFR) at 10 CFR Part 1021[3].

9. What Does It Mean to Upgrade the Existing Transmission Lines between the Apache and Saguaro Substations in Arizona?

Upgrading these existing transmission lines will involve removing the current wooden H-frame structures that carry a single circuit and replacing them with new structures, such as steel monopoles, that can carry two circuits of higher-capacity transmission lines. The Upgrade Section of the project will also involve construction of a new line segment approximately 2 miles in length in order to interconnect with the existing Tucson Electric Power Vail Substation.

10. Can These Upgrades Be Made Inside the Existing Rights-Of-Way, or Will Additional Rights-Of-Way Be Needed?

The project upgrades will seek to maximize the use of existing rights-of-way and access roads to the greatest extent possible. Further studies and analysis will determine where the project will require widening of, or deviations from, the existing rights-of-way and access roads. The construction of the proposed new 2-mile line segment looping in the existing Vail station will require new rights-of-way.

11. What is the Anticipated Southline Transmission Project Timeline?

The anticipated schedule includes routing and associated public engagement and permitting through 2015; right-of-way acquisition and construction starting in 2016; and transmission operations phased into service in 2018-2020.

Public Engagement and Permitting

12. What Are the Permitting and Regulatory Processes for the Southline Transmission Project?

Two federal agencies, the Bureau of Land Management (BLM) and the Western Area Power Administration (Western), jointly led the environmental review process associated with the National Environmental Policy Act (NEPA). As part of this process, BLM and Western coordinated with numerous federal, state, and local agencies. The Southline Transmission Project team is working with many state and local permitting and regulatory agencies to ensure compliance with all state and local requirements and obtain all necessary permits.

[1] A Citizen's Guide to the NEPA: http://ceq.hss.doe.gov/nepa/Citizens_Guide_Dec07.pdf
[2] BLM NEPA Handbook: http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_handbook.Par.24487.File.dat/h1790-1-2008-1.pdf
[3] Western's NEPA Implementing Procedures: http://ceq.hss.doe.gov/nepa/regs/nepa1021_rev.pdf

13. How Can I Participate?

The Southline Transmission Project team continues its commitment to working with as many stakeholders as possible throughout project development and construction.

In early 2016, BLM and Western concluded their joint development of the Federal environmental review process. Information about that process, including links to the Draft and Final Environmental Impact Statements and Records of Decision for the project, is provided on the Southline Transmission Project website. More information about the BLM and Western processes can be found at the BLM project website (www.blm.gov/nm/southline) and the Western project website (http://go.usa.gov/3FTPh).

The Southline Transmission Project team will be conducting engineering, procurement, and construction related activities in 2016. If you have questions about those processes or inquiries for the project team, please visit the Southline Transmission Project website, www.southlinetransmissionproject.com or direct your questions and comments to the project phone line (1-888-752-2822) or project email address (connect@southlinetransmissionproject.com).

About the Project and the Electric System

14. What Does "Bidirectional Use" Mean and Why Is It an Important Function of the Southline Transmission Project?

Bidirectional use is the ability to schedule power to flow in two directions, in this case both east and west on the transmission route. This allows the Southline Transmission Project to serve multiple purposes, since generally for Arizona and New Mexico, bringing power from western hubs to utilities in the east helps meet customers' energy needs, while scheduling power flows east-to-west brings renewable energy from rich resource areas to the locations where the power is needed.

While many lines collect energy from a remote source and take it generally in one direction over a long distance to where it is needed, the Southline Transmission Project is designed to meet energy demand located on both ends and at multiple locations along the proposed route. Bidirectional use greatly increases the utility of the Southline Transmission Project and lowers the cost to entities using the transmission line.

15. How Many Substations Will Be Connected to the Southline Transmission Project?

The project will connect with up to 14 existing substation locations to facilitate the transmission of energy to multiple locations along the approximately 360-mile route. The Southline Transmission Project team anticipates developing one new substation in Luna County, New Mexico.

16. What is the Capacity of the Southline Transmission Project?

As proposed, the Southline Transmission Project will have a capacity of up to 1,037 megawatts (MW) of power for the Afton (NM) – Apache (AZ) New Build Section from east to west, and 971MW from west to east. For the Apache (AZ) to Saguaro (AZ) Upgrade Section, the capacity will be up to 1,000 MW from east to west and 430 MW from west to east, pending final project approval.

17. What Renewable and Other Energy Sources Will Have the Ability to Connect With the Southline Transmission Project?

The Southline Transmission Project intersects some of the highest quality renewable resource areas in the U.S., including several major solar energy areas (or hubs) identified by the Western Renewable Energy Zones (WREZ) process conducted by the Western Governors' Association[4]. The Southline Transmission Project could facilitate the collection of energy from proposed solar energy projects in the region and from areas identified by the Bureau of Land Management's (BLM) Solar Programmatic Environmental Impact Statement (Solar PEIS), which identifies preferred areas for solar energy development on BLM lands[5], such as the Afton Solar Energy Zone in southern New Mexico.

For Arizona, BLM issued a Record of Decision for its Restoration Design Energy Project, an effort to identify and evaluate lands across the state that may be suitable for the development of renewable energy[6]; several of the identified Renewable Energy Development Areas are in the vicinity of the Southline Transmission Project. The Southline Transmission Project could also facilitate collection of energy from some prime geothermal resource areas and facilitate the transmission of wind power and other existing power sources to major population centers where the energy is needed.

Lastly, the project will improve the ability for utilities to access existing conventional energy generation sources in the region, such as coal and natural gas. The Southline Transmission Project is independent of any power generation projects in the region.

18. Which companies will use the Southline Transmission Project?

In March 2016, the Southline Transmission Project team started an open solicitation process for potential project customers to indicate interest in using the project. The allocation of transmission capacity will follow thereafter. Each customer will then engage in bilateral negotiations with the Southline Transmission Project team regarding rates and terms and conditions.

[4] For more information: http://www.westgov.org/rtep/219
[5] For more information: http://solareis.anl.gov/
[6] For more information: http://www.blm.gov/az/st/en/prog/energy/arra_solar.html

19. How Has the Southline Transmission Project Coordinated Its Efforts with Local Utilities?

To ensure that the Southline Transmission Project meets local and regional electric system needs, the project team has actively participated with regional utilities in various transmission planning forums since 2009. The project team formed a Project Coordination Review Group (PCRG), hosted through the WestConnect Southeastern Arizona Transmission Study (SATS) subcommittee, to study the technical interaction of the project with the regional transmission system. The study group finished preliminary study activities in early 2011, with PCRG participants and the Western Electricity Coordinating Council (WECC) approving a comprehensive PCRG study report in spring 2011. The project completed Phase 1 of the WECC Path Rating Process in March 2012, Phase 2B in January 2013, and entered Phase 3 in March 2015, which conferred an accepted path rating for the project. The project team will continue to coordinate ongoing technical studies with local and regional utilities and planning forums.

20. How Does the Southline Transmission Project Differ from Other Proposed Transmission Projects in the Region?

The Southline Transmission Project stands on its own and will help local utilities meet energy demand whether or not other proposed transmission projects are constructed.

The Southline Transmission Project is distinctive in that it will:

- Interconnect with the existing transmission system in up to 14 existing substation locations, enabling local utilities to access the most cost-efficient power sources in a reliable manner;
- Be shorter than other proposed projects and therefore less costly;
- Have a bidirectional WECC Path Rating which will provide for the bidirectional use of power, enabling renewable and other local energy to reach customers and allowing utilities to more efficiently meet energy demands; and
- Incorporate improvements to existing transmission lines in need of upgrades and be sited, to the greatest extent possible, near existing linear features in order to minimize impacts to local cultural, community, and environmental resources.

Project Economics

21. What is the Estimated Cost of the Project?

Current cost estimates for the project are approximately $800 million. These cost estimates are subject to change based on the final project design, regulatory approvals, and routing.

22. Who Will Pay for the Project?

Southline Transmission, L.L.C. will bear the costs of developing and constructing the Southline Transmission Project. Once the project is brought in service, Southline Transmission L.L.C. will recover the development and construction costs from the users of the line.