

SPANISH FORK TO MERCER 345 KV TRANSMISSION PROJECT
JUNE 25, 2024 VIRTUAL OPEN HOUSE
Questions and Answers

Project Specific

1. How do landowners access a higher resolution map showing alternative routes and the proposed route across parcel boundaries?

(28:03) An opportunity to access this type of map will be at an upcoming Rocky Mountain Power-hosted, in-person, open house in Genola. The date is not set; however, please keep an eye on the project website for the date. The Town of Genola will assist us will communicating open house details to the community once information becomes available.

During the Genola open house, participants will have the opportunity sit with our GIS analyst to zoom in on parcels where the route crosses, leave comments for consideration and have questions answered by the project's subject matter experts. Any additional questions or requests can be emailed to the project team at pmopac@PacifiCorp.com and referencing the Spanish Fork to Mercer Project.

Additionally, an interactive webmap will be available on our project website to better allow landowners to zoom in on parcels impacted by the route.

2. Where can I find a photo simulation showing the proposed line in Genola near residential homes?

Photo simulations of existing and proposed conditions were prepared for two locations along the preliminary preferred route. One at Spanish Fork substation, and one looking west toward West Mountain. Additional photo simulations, including in the Genola area, may be completed as the project progresses.

3. How do we join the project email distribution list?

Send us an email request to pmopac@pacificorp.com, reference the Spanish Fork to Mercer Project, to join the email distribution list.

4. How does this project benefit each jurisdiction along the project route? Is there a direct benefit?

(40:45) The project overall creates a [power service] loop between Utah County and Salt Lake County to help mitigate or reduce outage concerns. If any of the lines were to sustain damage and need to be taken out of service for maintenance for an extended period customers would experience outages [the proposed transmission line is an additional path to provide uninterrupted service to customers].

Overall, it helps the entire grid, providing electrical generation to reach commercial, industrial and residential areas. The line also supports the integration of renewable energy by enabling the delivery of power from renewable energy sources to customers.

With the increase in energy use across our service area and the increase in solar-power development in southern Utah, a new transmission line is needed to transport this cost-effective power to population centers across the Rocky Mountain Power service area. Without a new transmission line, if

the existing 345-kilovolt transmission line connecting Utah and Salt Lake counties were to experience an outage, the existing 138-kilovolt system in Utah Valley would not meet reliability standards established by the Federal Energy Regulatory Commission and Western Electricity Coordinating Council.

The proposed transmission line will improve reliability and efficiency by establishing an additional transmission path to enhance the resiliency of the electric system and reduce the risk of outages and congestion. The line will increase capacity and flexibility by allowing more power to be transmitted over longer distances and effectively address the region's growing demand for electricity.

The line also will support the integration of renewable energy by enabling the delivery of power from renewable energy sources to customers and contribute to the reduction of greenhouse gas emissions and decrease dependence on fossil fuels.

5. Is the newly proposed transmission line a backup line or serving another purpose?

The proposed transmission line will improve reliability and efficiency by establishing an additional transmission path to enhance the reliability and resiliency of the electric system and reduce the risk of outages and congestion.

Additionally, the line will increase capacity and flexibility by allowing more power to be transmitted over longer distances and effectively address the region's growing demand for electricity.

Further, the line also will support the integration of renewable energy by enabling the delivery of power from renewable energy sources to customers and contribute to the reduction of greenhouse gas emissions and decrease dependence on fossil fuels.

6. What renewable generation assets does the newly proposed transmission line link together?

While the proposed transmission line does not directly provide a point of interconnect for any one generation facility or project, the capacity added from the line, once completed, may allow for additional projects to connect to the transmission system in the Utah Valley.

Route Locations and Routing Study Process

7. Please describe the location of the preferred route.

The preferred route exits south out of the Spanish Fork substation, crosses Highway six to the west, and traverses the foothills on the northern end of the Loafer Mountain wildlife management area. It then crosses Powerhouse road, heads west through the River Bottoms area, before heading directly west toward West Mountain on 8800S. The route then crosses west mountain on Bureau of Land Management land, on the south end. On the west side of West Mountain, the preferred route crosses through the town of Genola before connecting with the north/south alignment of the existing transmission line corridor. The route then heads directly north to connect to the Mercer substation.

8. Of the four proposed routes, which route runs most closely to the most homes?

Of the four routes, the preliminary preferred impacts the least number of homes (149 within 660 feet). Comparatively, Alternative Route A impacts 806 residences within 660 feet; Alternative Route B

impacts 809 residences within 660 feet and Alternative Route C impacts 674 residences within 660 feet.

9. When will landowners along the alternative and preferred routes be notified of the final proposed route?

(26:27) Of the four route alternatives studied, Rocky Mountain Power is pursuing land use permits for the teal-colored route (preliminary preferred) as the preliminary preferred route. We are still in the line design process and have not started the land acquisition process – our next step in the project will be to work with landowners to microsite the line, which will determine the power line’s centerline alignment (which side of road/highway) and general pole locations.

10. Are you aware the route in Genola will go directly across a geological fault?

(27:32) This isn’t something that came up in our analysis; however, we appreciate the participant pointing this out and we’ll investigate this detail.

11. How was the preferred route determined? Does this mean the alternative routes studies are no longer a viable option for the new transmission line?

(31:10) The preferred route was determined based on our opportunities and constraints analysis. We look for areas of opportunities to route a transmission line such as along roads, railways and different zoning areas. Additionally, we look at environmental and technical constraints, such as areas crossing conservation lands and challenging terrain prohibiting constructability.

The preliminary preferred route (teal-colored) presented itself as the most feasible route due to the number of residents on the northern and southern alternative routes and physical constraints to include the railroad, the highway, existing and planned homes along Highway 6 corridor.

Analyses of the environmental and engineering criteria reveal constraints to and opportunities for routing a transmission line to identify and evaluate preliminary alternative routes. Alternative routes are evaluated in detail and compared to identify a preferred, viable route for the transmission line. A preferred route is generally a starting point from which minor route adjustments may be made (micro-siting) as Rocky Mountain Power collaborates with landowners and customers along this route.

12. What consideration is given to cost as a deciding factor for determining a preferred route?

A combination of factors determines the eventual cost of construction of a new or upgrading an existing transmission line. While a straight-line path for a transmission line may be desirable, factors such as current and planned land use, existing facilities and infrastructure constraints, environmentally sensitive areas, terrain and other factors affect the eventual route. These factors must be evaluated for compatibility with the transmission line or as constraints to the line and either avoided or efforts made to mitigate effects, through engineering design and cooperation with customers. This process, as well as the cost of materials, right-of-way acquisition and construction costs all contribute to the cost of a project.

13. The Civilian Marksman Program is negotiating with the BLM to build a Western Region Shooting Range on property near the alignment in the West Mountain area. Are you aware of this ongoing negotiation and how does this affect or influence a route alignment decision?

Rocky Mountain Power is pursuing a Right-of-Way grant for that portion of the route that crosses West Mountain. The route currently being evaluated by the BLM will be considered vis a vis the shooting range location.

14. Why do the routes go around West Mountain rather than over it?

(37:52) PacifiCorp is responsible for conducting baseline analysis surveys as part of the Bureau of Land Management (BLM) permitting process. The BLM reviews and will approve or deny the permit request based on the survey findings. Our survey of this area identified cultural [resources] sensitivities were present across West Mountain and the BLM expressed they object to building a transmission line route directly over West Mountain and would not sign off on a permit due to the amount of disturbance that would be done to existing cultural resources.

15. What legal options do residents and landowners have in efforts to oppose the preferred route through Genola and advocate for alternative solutions?

The Ombudsman, in the Office of the Property Rights Ombudsman, is an independent, neutral office in the Utah Department of Commerce that safeguards the property rights of the citizens of Utah. The Office assists citizens and government agencies in understanding and complying with property rights laws, resolves disputes, and advocates fairness and balance when private rights conflict with public needs.

Additionally, Land Use hearings are open to the public, and typically provide opportunities for public comment.

16. Were alternative solutions, aside from building a new transmission line, considered as possibilities to support reliability, capacity and renewable needs for this area?

The new 345kV transmission line is necessary to address the need for increased capacity and reliability to the system.

17. Since you have proposed solar farms on the west side of Utah Lake, why not just move power from those plants rather than transmit it across Utah Valley and through residential areas?

The solar farms on the west side of Utah Lake are proposed by independent developers, unrelated to Rocky Mountain Power.

18. In residential development areas, what provisions does Rocky Mountain Power make to allow the best development uses?

Rocky Mountain Power will work with landowners through easement negotiations to best meet the needs of each landowner.

19. Where large gas transmission pipelines and land areas currently exist near the Mercer substation, why can't power, gas and solar generation systems be built closer to this substation?

Each facility has its own resource and land use needs in order to be constructible. The routing considerations for a transmission line include routing along existing linear facilities, where possible.

20. Have impacts to the Spanish Fork airport been studied? If so, how was it studied and what was determined?

The Spanish Fork airport was a consideration. During a line routing study, we gather environmental resources and existing and planned land use data to conduct a detailed analysis of the study area. Each resource is given a sensitivity level of low, moderate, high to exclusion. The lower the sensitivity level the more opportunity for routing a potential power line. Transversely, the higher the sensitivity level the more unlikely the opportunity. This analysis of resource sensitivities allows us to identify areas of opportunity for routing preliminary alternative routes for more in depth evaluation.

Airports and land in immediate proximity surrounding the airport are considered exclusionary areas – meaning the legal status would either prohibit or most likely prohibit the location of a transmission line. Locations of exclusion are considered the maximum constraint and undesirable for the location of the proposed transmission line.

Property Rights and Land Acquisition

21. What is the process for land acquisition? What factors are considered during negotiations and determining fair compensation?

22. (30:10) Once the preferred route has been identified, land agents will reach out to individual landowners to discuss easements, which include a legal description of the line route across the property.

The land agent will discuss and negotiate with property owners the fair market value of the easement area. Factors considered during negotiations to determine fair compensation include:

- Property characteristics
- The length and width of the right-of-way
- The number of and placement of transmission-line structures
- Right-of-way clearing and construction practice
- Access for construction
- Market data and independent appraisals for land and easements

23. What happens if landowners are unwilling sellers? Does Rocky Mountain Power use the eminent domain process? How is the land acquired and is it a forced sale?

(33:37) Rocky Mountain Power takes as much time as possible with the landowner to come to an agreement. We prefer to acquire easements through negotiations with landowners. Although the power of eminent domain exists for public purposes, Rocky Mountain Power only uses that alternative when voluntary negotiations have reached an impasse. Prior to any eminent domain action, the landowner may contact the Office of the Property Rights Ombudsman. The Ombudsman is an independent, neutral office in the Utah Department of Commerce that safeguards the property rights of the citizens of Utah. The Office assists citizens and government agencies in understanding and complying with property rights laws, resolves disputes, and advocates fairness and balance when private rights conflict with public needs.

We work very hard to understand and respect how this affects landowners' properties. During negotiations we work very hard to establish agreements that are good for both parties.

24. Landowners in Utah County must maintain a 5.25 acre minimum to retain greenbelt status. If an easement agreement is established with Rocky Mountain Power for the new transmission line, will this impact our greenbelt status?

(29:17) When Rocky Mountain Power acquires land rights for the project, we purchase a land easement, which is different than purchasing property in fee – there's no change in property ownership. When acquiring a land easement for a utility right-of-way, the property remains with the landowner. The easement, a written agreement between the utility company and the landowner, authorizes the utility company to build and maintain its electrical transmission line. The landowner's greenbelt status should not be affected by an easement.

25. How does the new transmission line affect property value for lands crossed by the line and lands adjacent to the line? Are landowners with a negotiated easement and those who are next door, without an easement, provided compensation for perceived property devaluation?

Rocky Mountain Power will enter into easement negotiations with landowners directly impacted by the transmission line. A market valuation study will be conducted to determine fair market value offers for easements. The landowner granting an easement right of way to Rocky Mountain Power will discuss and negotiate with property owners the fair market value of the easement area.

Electric Utility Rights-of-Way

26. The preferred route seems to miss most of the wetlands listed on the National Wetlands Inventory except for an area south of Lincoln Beach (on 8000 South) and south of Goshen Bay. What mitigation efforts does Rocky Mountain Power take to protect wetlands and sensitive environmental resources?

(39:10) Federal lands, whether Bureau of Land Management (BLM) or Bureau of Reclamation, have reclamation guidelines in sensitive areas in place that Rocky Mountain Power must follow. Environmental protection means and methods are typically agreed upon early during the National Environmental Protections Act (NEPA) process. Once the mitigation and/or protection measure(s) is placed, for the next three to five years we routinely monitor the sensitive plant and/or animal species to demonstrate they are not impacted.

27. What are acceptable and unacceptable land use for rights-of-way?

(45:30) Mainly, restrictions related to property use are around safety. The landowner can continue to use the property; however, restrictions would include things like [erecting a house, shed or flagpole, or fast growing trees within the easement] that would pose a safety concern. You may notice around town that power line cross golf courses, parking lots and agricultural fields.

Our customer's safety is first and foremost at Rocky Mountain Power, which designs, constructs, operates and maintains its transmission lines and substation facilities to meet or exceed the requirements of the National Electric Safety Code (NESC), United States Department of Labor occupational safety and health standards and our own power system safety standards. The company provides a maximum degree of safety and protection for the landowner and landowner's property, the public and our own employees.

Most activities can continue as before, including agriculture and ranching.

The land within the easement can be used for crop production, pasture, parks, trails, streets, lawns, underground utilities, low-level landscaping features and other uses that do not create a hazard. However, buildings, tall trees, and other materials placed directly under the line can interfere with the transmission line causing fires, outages and create other hazards. Providing electrical energy is essential and the restrictions are necessary within the easement area to maintain safe and reliable operation of the line at all times.

28. What are the terms and conditions of a utility right-of-way easement if our property doesn't have a pole location, but lines cross overhead?

Terms and conditions of a right-of-way easement are the same regardless of whether a transmission structure is located on the property. Rocky Mountain Power needs full access of the utility corridor, including areas underneath the power line, to build and maintain safe and reliable operations of the line.

If a transmission [line] structure(s) is not on the property but crosses overhead, it would allow the landowner to use more of the easement area for their purposes while in alignment with the easement guidelines. The guidelines are established for public safety and the safe and reliable operation and maintenance of the power line.

The land within the easement can be used for crop production, pasture, parks, trails, streets, lawns, underground utilities, low-level landscaping features and other uses that do not create a hazard. However, buildings, tall trees, and other materials placed directly under the line can interfere with the power line causing fires, outages and create other hazards.

The North American Electric Reliability Corporation (NERC) requires electric utilities to meet stringent requirements designed to keep our electric system safe and reliable, including standards for maintaining proper clearances. Rocky Mountain Power therefore works to maintain a certain amount of distance around transmission lines that is clear of anything that may make contact or near-contact with a transmission line or potentially cause damage to the structures. This includes buildings and vegetation.

Trees or other vegetation that could grow into or fall across a transmission line may have to be trimmed, topped, or removed. You must call Rocky Mountain Power before planting any trees or shrubs or building any structures in areas near or in transmission-line right-of-way to help avoid problems in the future.

29. How will the transmission line on my property affect drones and planes for agricultural field spraying?

Rocky Mountain Power will work with individual landowners during easement negotiations to best address any potential impacts to agricultural operations.

30. How do you work with agricultural landowners to make sure they are still able to harvest crops within the utility corridor?

(42:14) The only restriction in agricultural land is the location of the [transmission] pole/structure. Within the right-of-way landowners can continue to work the property. During easement negotiations, we walk the property with the landowner to see how we can best mitigate any agricultural impacts. For example, we look at pivot irrigation systems and note where structures can be placed to minimize interference of irrigation operations. If flood irrigation or wheel lines don't interfere with the operation of the power line it can continue to work the property within the right-of-way.

Building Electric Transmission Overhead vs. Underground

Please refer to slide number 21 of our Project Overview boards, which can be found on our project website.

31. Why is Rocky Mountain Power building this transmission line above ground instead of underground?

(35:50) Rocky Mountain Power considers several factors when deciding whether to construct transmission lines above or below ground. Overhead power lines are easier to maintain, reduce environmental disturbance, and are built at a much lower cost than underground power lines.

Overhead, high-voltage transmission lines are a reliable, low-cost, easily maintained and established method to transport bulk electricity. Unlike lower-voltage distribution lines, which deliver electricity to homes and businesses, high-voltage transmission lines are not frequently installed underground because of several factors, including cost. Underground transmission lines require insulated underground cables and concrete duct banks with large manholes along the length of an underground line, increasing building costs 10 times or more. Burying transmission lines results in more impact on the environment than placing them overhead. Benefits and costs of undergrounding are important issues, since the benefit gained from undergrounding the line may be limited while the cost is shared. While underground transmission lines are expected to have fewer weather-related outages, underground lines can still fail. And when outages occur, it takes several days to pinpoint the problem and much longer [weeks] to repair than an overhead line, rather than hours to repair an overhead line. Also, the lifespan of underground lines is estimated to be about half that of overhead lines. With a few notable exceptions, our nation's utilities have found that building cross-country transmission lines underground is cost prohibitive.

32. Would burying the proposed power line underground in residential areas lessen the impact on residential properties?

(44:00) Undergrounding equipment for a transmission line is more sizable than the equipment used for undergrounding a distribution line. Splice vaults, [concrete enclosed rooms installed underground and space about every 1500 to 2000 feet,] are about the size of single car garage creating significant underground disturbance.

Burying transmission lines results in more environmental impacts than placing them overhead. To bury a transmission line requires a continuous trench several feet wide and deep. Considerable clearing, trenching, and grading is required; dust and noise from construction lasts longer than it would for overhead construction. Large concrete splice vaults or access structures are needed periodically along the trench. Permanent access to the vaults is required to make repairs when needed.

33. What is the cost difference between overhead and underground transmission lines? Is cost the only consideration when deciding whether to build overhead or underground? What other factors are considered?

Burying transmission lines can increase cost 10 times or more, or greater.

Cost, reliability, accessibility and the operations and maintenance of the line are all considerations. Additionally, electric utilities consider the following factors when deciding whether to construct transmission facilities above ground or underground.

- **Power Restoration After an Outage.** Damage to underground transmission line is difficult to pinpoint and repairs may take a few weeks to several months to complete. Damage to overhead lines is easier to locate and typically takes several hours or days to repair.
- **Capacity Requirements.** Many cables are often required to match the capacity of the overhead circuit. Additional components increase the underground cost as a duct bank, vaults, splices, and terminations are required that also can reduce overall system reliability.
- **Line-length Challenges.** High-voltage underground lines may require additional equipment to ensure proper electrical performance along the distance of the transmission line. The additional equipment translates to a higher overall cost, limits the length of the underground line installation, and increases the likelihood of failure because of additional components. A system study would be required to determine if this additional equipment would be required.
- **Multiple Cables and Cooling Options.** Overhead lines are air-cooled and widely spaced for safety. Underground cables are installed in concrete-encased duct banks. Heat generated by the underground cables is dissipated into the earth.
- **Construction Impacts.** Burying transmission lines results in more environmental impacts than placing them overhead. An overhead line typically requires erecting structures and placing foundations every 500 to 1,200 feet. Typical structures can be up to 120 feet tall, while the diameter of the foundation ranges from 5.0 to 8.0 feet. Burying transmission lines requires a continuous trench several feet wide and deep. Considerable clearing, trenching, and grading is required; dust and noise from construction lasts longer than it would for overhead construction. Large concrete splice vaults or access structures are needed periodically along the trench. Permanent access to the vaults is required to make repairs when needed.
- **Easement and Land Purchase Requirement.** An overhead line typically has a wider easement footprint than an underground line.
- **Life Expectancy.** Underground high-voltage transmission lines have a life expectancy of 40 or more years, while overhead lines have a life expectancy of more than 80 years.
- **Electric and Magnetic Fields.** Electric and magnetic fields generally are greater directly over an underground installation (the earth does not provide shielding) and directly under an overhead installation. The intensity of a magnetic field from an underground line sometimes can be stronger than those from overhead lines because overhead lines are positioned farther from ground level.
- **Noise and Lighting.** Overhead high-voltage lines can emit hiss or hum noises. Underground lines are silent except in the immediate area near the transition stations, which are often lighted throughout the night for security purposes.
- **Transition Stations.** High-voltage underground transmission lines require transition stations wherever the underground cable connects to overhead transmission. Transition stations require grading, access roads, storm-water management facilities, and fencing.

- **Site Restoration.** Site restoration for underground construction is a much larger endeavor than it is for overhead construction because soil is disturbed along the entire route. Topsoil must be restored and returned to vegetated areas, and all hard surface areas must be re-established to meet local codes. Vegetated areas may require up to two years to return to pre-construction conditions. Trees and large shrubs would not be allowed above the underground line due to potential problems with roots. In farmland or natural areas some herbaceous vegetation and agricultural crops may be allowed to return in the right-of-way.

Electric Transmission

34. Are there impacts on cell phone reception, Wi-Fi and internet connections when living near power lines?

The electric power used in the United States typically is a 60 Hertz (Hz) alternating current, meaning the electric charges move back and forth 60 times per second, creating an “extremely low frequency” field. These are different from the much higher frequency fields associated with radio and TV waves and cell phone signals.

35. What causes some power lines to omit [sic, emit] a humming or static sound? Is this dangerous?

(52:45) An audible humming or hissing sound does occur and happens more so during foul weather conditions such as raining or misting. That due to water particles (rain droplets) attaching to the power line conductor, which causes a partial breakdown of the insulating quality of the air surrounding the line and a tiny amount of energy is released as audible noise, which can be perceived as a hissing, humming or crackling sound.

The audible noise levels associated with operating power lines are typically well below area noise regulations. Similar to the electric and magnetic field levels, noise reduces the farther you move away from the line.

Electric and Magnetic Fields

36. What online resources are available regarding EMF from transmission power lines?

American Cancer Society: Power Lines, Electrical Devices and Extremely Low Frequency Radiation
<https://www.cancer.org/cancer/cancer-causes/radiation-exposure/extremely-low-frequency-radiation.html>

Electric Power Research Institute (EPRI) <http://emf.epri.com>
Environmental Health Criteria 238, Extremely Low Frequency Fields, http://www.who.int/peh-emf/publications/elf_ehc/en/

Health Canada: Electric and Magnetic Fields from Power Lines and Electrical Appliances,
<https://www.canada.ca/en/health-canada/services/home-garden-safety/electric-magneticfields-power-lines-electrical-appliances.html>

National Institute of Environmental Health Sciences – National Institute of Health. Visit www.niehs.nih.gov and type “EMF” in the search tool.

National Research Council. *Possible Health Effects of Exposure to Residential electric and Magnetic Fields.*

U.S. National Cancer Institute: Electromagnetic Fields and Cancer, <https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/electromagneticfields-fact-sheet>

World Health Organization “Electromagnetic fields and public health,” World Health Organization fact sheet, www.who.int/mediacentre/factsheets/fs322/en/index.html