

Vantage to Pomona Heights Transmission Project

Frequently asked questions

These are some frequently asked questions regarding the proposed Vantage to Pomona Heights transmission line project.

General

What is the Vantage to Pomona Heights transmission line?

- Pacific Power is investing in a new electric transmission line from the Bonneville Power Administration's Vantage substation south of Vantage to Pacific Power's Pomona Heights substation located just east of Selah, Wash.
- The 230-kilovolt line will be approximately 60 miles long, and as currently envisioned, has alternative route options that follow the eastern, then southern boundaries of the U.S. Army Yakima Training Center.
- The final preferred route has not been set and public input will help determine that outcome.
- As currently planned, construction of the line would begin in 2012, with the line completed and in operation in 2013.

What are the benefits of the new transmission line?

- The new line will ensure continued reliability of local electrical service and strengthen the regional transmission system.
- It will benefit the area by creating additional paths to ease current congestion on the transmission system. A strong and integrated transmission grid improves reliability and is better able to serve customers' needs.
- The line will improve overall security and operating flexibility of the electrical system serving the local area. It will increase options for routing power in the event of a line outage due to any number of factors.
- Local economic development is supported by improved access to regional electricity sources to help meet future energy demand growth.

Why is the Vantage to Pomona Heights transmission line needed? Why now?

- The line is needed primarily for electric system reliability. It will strengthen the regional transmission system and enable Pacific Power to more reliably serve its local customers.
- A new line is long overdue. The last transmission line built by Pacific Power to serve electrical loads in the Yakima Valley was the Pomona to Wanapum 230-kilovolt transmission line, built in the early 1970s. Power consumption in the area has increased considerably since then.
- In addition to providing assurance of service and reliability and adding system strength and redundancy, the line also will help address future growth.

What is the timeline for this project?

- The project is still in early planning stages – no final preferred route has been set.
- As currently projected, preliminary engineering and selection of a proposed route will continue into 2011, followed by environmental studies and securing needed permits and rights of way.
- Construction will not begin until all necessary permits and approvals have been received and rights of way acquired. Securing rights of way for the final preferred route will begin later in 2011, and construction will likely begin in 2012.
- In service date is projected for 2013.

What is the anticipated cost of the project and who pays for it?

- Costs to build a line such as this would typically be \$35 to \$40 million, or about \$550,000 to \$600,000 per mile. Many variables can significantly affect the final cost.



Let's turn the answers on.



- Costs to Pacific Power’s Washington customers are allocated according to Washington’s relative energy and demand usage in the three Pacific Power states, which is approximately 22 percent.

What are the local tax and other economic benefits to the area?

- This new line represents millions of dollars of new infrastructure investment and increased tax benefits for the communities it crosses.
- As in any construction project, there are also the local economic benefits to motels, restaurants and other businesses during construction.

Will the public have an opportunity to help determine the final route?

- Absolutely. Public input will play a key role in determining the preferred final route for the line and we encourage participation, whether through public meetings or by contacting the project management team in a number of convenient ways (*see next question*).
- In addition to public meetings and open houses, Pacific Power will continue to consult with landowners, elected officials, community leaders, local and state agencies and tribes, and other parties to discuss project activities, answer questions and help resolve landowner concerns.
- Based on feedback to date and system requirements, changes have been made, and will continue to be made. Comments, questions and ideas are encouraged throughout this process. That is the best way to ensure the final outcome is as satisfactory to all parties as possible.
- While we can’t promise to adopt every suggestion or recommendation, as you can understand, we will look for acceptable options that address landowner concerns and preferences and minimize environmental and land use impacts.

How do I get more information?

- We will have current information at all public meetings. Also, we will distribute a periodic project newsletter.
- You can access the project website at any time – **pacificpower.net/transmission**, then look for Vantage to Pomona Heights.

- Questions and comments – or requests to be added to future mailing lists – can be sent to ConstructionProjects@pacificcorp.com or toll-free 1-877-620-7678. Please specify “Vantage to Pomona Heights” in your inquiry.

What changes to the project have occurred since the last round of public meetings?

- The focus on alternative routes has changed since previous public meetings.
- For the past two years, Pacific Power has worked with the U.S. Bureau of Land Management and the U.S. Army’s Yakima Training Center on our proposed transmission project. BLM and the YTC served as the joint federal lead agencies on the required National Environmental Policy Act preliminary project studies and evaluation of proposed routes.
- The initial focus – and preference – was on a route that would primarily cross federal lands. Those options, and in particular a northern route that crossed the YTC, were the focus of initial meetings in late 2008, and during the January to March 2010 NEPA public scoping period, where public meetings were held and comments were solicited on various route options.
- For a variety of reasons, however, the conditions established for going across YTC make those options unfeasible. Pacific Power must now consider southern route alternatives that primarily cross private lands in Yakima, Grant and Kittitas counties, and primarily cross federal land in Benton County.
 - Two additional alternative routes were recently added for consideration (*see map*).
- Pacific Power is seeking public and stakeholder help in identifying an acceptable route for the new transmission line, balancing current use of the land with the need to build the new transmission line.

Why are some of the options that cross the YTC no longer feasible?

- While several factors were involved, the main reason is that changes that would need to be made to accommodate the line while still preserving safe operations at YTC present cost and constructability issues that make these route options unworkable.

- The Army determined that overhead transmission lines within the YTC could create significant aviation safety and other impacts to the YTC's training mission.
- To address that, not only would significant portions of the new line need to be built underground, but Pacific Power would also be required to rebuild the existing line underground.
- Other concerns with these route options were the impact on important sage grouse habitats – high-density populations of sage grouse with active leks both on and off YTC land.
- And, the proposed northern route crossed the BLM's Yakima River Canyon property, a designated area of critical environmental concern.
- These conditions and safety concerns have eliminated YTC route options under the federal NEPA process, and Pacific Power must now consider southern route alternatives.

Why can't the lines be placed underground?

- While constructing the lines underground may be technically feasible, undergrounding extra-high voltage transmission projects is very expensive compared to building comparable overhead lines.
- Pacific Power has determined that it is impractical to consider undergrounding portions of the new transmission line and the existing transmission line on YTC. It is not feasible in this terrain because of engineering and constructability challenges, cost and reliability concerns.
- Underground construction in rugged terrain can be 10 to 20 times more expensive than overhead line construction.
- Placing a line of this length underground can come with significant operational risks regarding reliability; if there was ever a problem with the line, locating and repairing the fault could take days, if not weeks.

Where will the line be located?

- While several new route options are under consideration, **no final preferred route has been selected.** Public input is encouraged to help determine the best options going forward.
- Through a process of balancing interests and identifying publicly acceptable constructible routing options, we will determine a final preferred route that, to the greatest extent possible, addresses

landowner concerns and preferences, minimizes environmental and land use impacts, and meets the requirements of permitting and approval agencies.

What criteria were used in selecting the new alternative routes?

- Alternative routes were selected – and continue to be refined – based on criteria such as:
 - Avoiding residences and highly developed areas
 - Paralleling existing transmission lines if possible and less impactful
 - Avoiding slopes steeper than 20 percent
 - Using access routes when crossing agricultural areas, and avoiding placement that could conflict with irrigation systems where possible
 - Avoiding known, recorded cultural resource sites
 - Crossing the Columbia River near existing line crossings

Why can't you build in the same corridor as an existing line to minimize the impact?

- In many instances the transmission lines in the general area of the project were put in place before irrigation systems. As such, paralleling an existing line can actually be more impactful.
- In certain instances it is necessary to maintain separation between lines. This is primarily due to federal standards aimed at the security and reliability of transmission lines. This particular regulatory situation is called "line separation."
- The Western Electricity Coordinating Council, which governs certain aspects of the western region electrical system, has standards that must be met for new line construction. Line separation requirements are established to increase reliability. These WECC guidelines have been in place just three to five years so there may be older lines that don't meet the criteria.
 - In order to be considered as two separate lines, a set of lines that is part of the same electrical circuit must be separated by at least 500 feet or the longest span length (distance between two support structures), whichever is greater.
 - If they aren't separated by this distance, they are considered as one line for system planning purposes because of the increased risk of simultaneous outages due to fires or other events.

- To achieve the necessary reliability requirement for the new line, Pacific Power must build it in a manner that allows it to be considered as separate.
- Ironically, if a third line is between the two lines that are subject to the separation criteria and the third line does not serve the same load, only minimum separation distances are required (within 150 feet). With this project, that scenario happens at least a couple of times along the southern alternative routes:
 - We can build right next to the Midway to Moxee route on the south if it is in between the new line and the Union Gap to Midway line.
 - However, if we build adjacent to the Union Gap to Midway line and the Midway to Moxee line is in between, we need to meet WECC separation guidelines (see map).

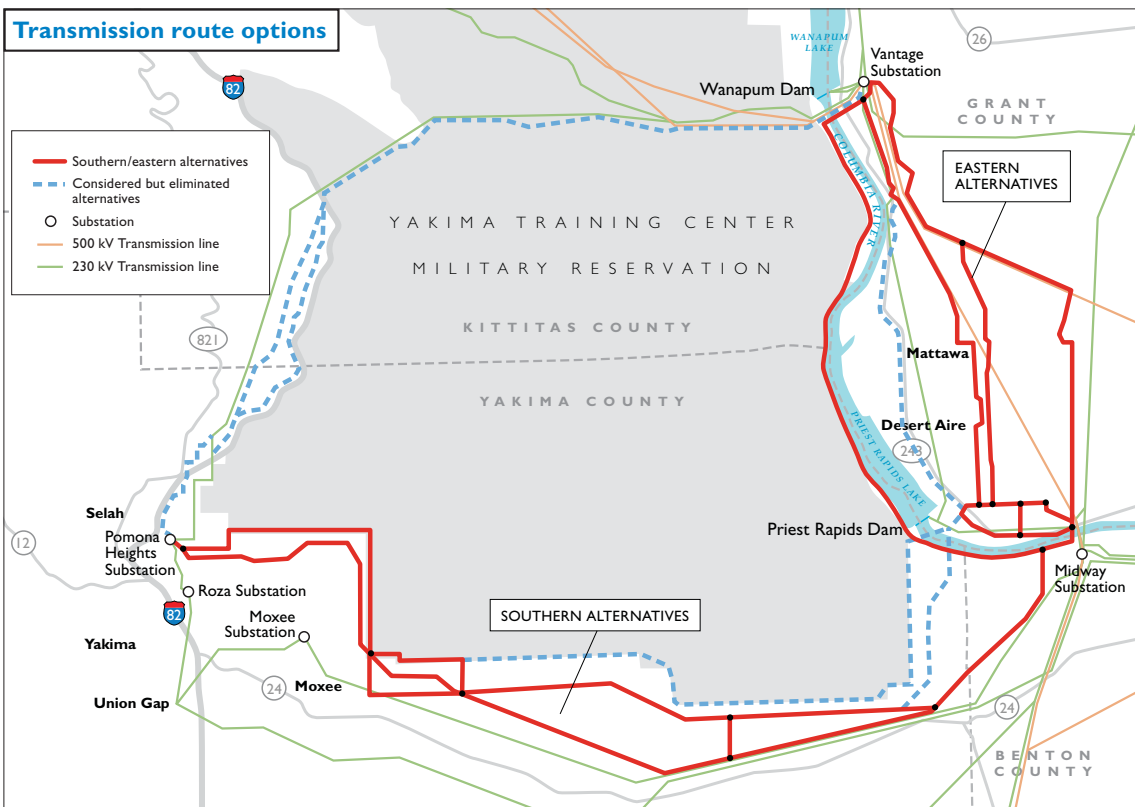
Instead of building a new line, could existing lines be modified to carry more power?

- Sometimes lines can be modified to carry more power. In this situation however, even without considering the costs, upgrading a line to 500 kilovolts would not solve the problem that the new Vantage to Pomona Heights line will address, where reliability needs require a separate, additional line.

- Also, the lines that currently deliver power into Yakima either are generally not capable of being upgraded, or were designed to carry only a single circuit. As such, the towers that support these existing lines are not capable of carrying larger wire and would have to be replaced to carry two circuits, effectively a rebuild of the line without providing the necessary reliability through separation.

What will the new line look like?

- As currently planned, most of the support structures along the approximately 60-mile line will be H-frame wood poles (two poles typically joined by a crossarm), approximately 65 to 90 feet high and 750 to 1,000 feet apart, depending on terrain and routing needs.
- Poles near the Pomona Heights substation may be single poles and placed closer together, again depending on routing and terrain requirements. Those single poles could be approximately 80 to 110 feet tall.
- The right of way corridor width will be between 125 and 150 feet for H-frame poles, and between 75 and 100 feet for single poles.



While Pacific Power's preference was to primarily cross federal lands, the federal agencies overseeing the process determined those options are not feasible. However, *no final preferred route has been selected*, and two additional alternative routes were recently added for consideration:

- A route along the abandoned railroad right of way on the west side of the Columbia River
- A route on the Yakima Training Center along the southwest edge of YTC in Yakima County near Kittitas Canyon and the Pomona Heights Substation

- For the 3,000-foot wide crossing of the Columbia River near Vantage, tall steel lattice structures are planned.

What permits and other approval processes are needed?

- We will address all applicable federal and state permit requirements, which will involve environmental, cultural, land use and engineering studies.
- The review process includes preparation of an Environmental Impact Statement that will consider local animal and plant species, cultural aspects of the land impacted by the route, as well as general land use around the route.
- Based on results of these studies, Pacific Power will make all necessary adjustments to minimize any effects from transmission line construction and maintenance.
- No construction begins until all necessary permits, approvals and rights of way are in hand.

How will property owners be compensated?

- Pacific Power is committed to reaching mutually beneficial compensation agreements that create a positive, long-term relationship between the company and project-area landowners.
- We will work on a case-by-case basis with property owners affected by the line to ensure fair compensation based on the appraised value of the right of way needed for final siting of the line. A brochure outlining the process will be given to impacted landowners.
 - Once the final preferred route is identified, a company agent will contact the property owner. A center line survey will be required, and depending on the location, a geological or environmental study may be needed.
 - The agent will cover easement width and any access road requirements with the landowner.
 - Easement rights – needed to build, operate and maintain the line – will be purchased through negotiation with the landowners. The landowner will retain title to the land and can continue to use the land in ways compatible with the line.
 - Compensation is based on the appraised value of the property, developed by an independent appraiser using standard appraisal practices. Appraisal is

followed by a written offer and easement.

- Easements are based on a percentage of the estimated land value. The percentage is calculated by the appraiser based on the encumbrance.
- Crop loss and other impacts will be considered in the appraisal.
- In these steps, our priority will be respectful, good faith negotiations with landowners to arrive at a fair, mutually satisfactory outcome.

What kind of access to affected properties is needed?

- During construction of the line, access will be needed at various times along the entire length of the line route.
- Construction crews will use available roads as often as possible to avoid unnecessary impact to property. Where there aren't existing roads, new temporary access roads may need to be built.
- Workers will be restricted to areas within the acquired transmission line easements, access roads and staging areas.

Will the new line be safe?

- Yes. Building and operating the line safely is our commitment and top priority. The line will be built to National Electrical Safety Standard requirements, using a voltage that is standard in the utility industry, and the company's emphasis on safety will be ensured at every step.
- Pacific Power has many years of experience with transmission systems. We already own and operate one of the largest transmission systems in the West – some 15,900 miles of transmission line.
- The company has a scheduled maintenance program as well as ongoing line patrols. Any concerns or potential hazards are recorded and addressed.
- Pacific Power also administers a vegetation management program to keep trees, brush and other plant growth clear of power poles.
- Additionally, the company will consider the use of steel poles in high fire risk areas.

For additional information, please visit pacificpower.net/transmission.