

Transmission Line FAQs

How does electricity arrive at my home?

Electrical lines and facilities are a necessary part of the infrastructure within any community, just like roads, water and sewer facilities. Much like our highway system, Idaho Power and Rocky Mountain Power's power line grids are made up of high capacity transmission and low capacity distribution lines.

The high capacity transmission lines operate somewhat like interstate highways and freeways that move a large volume of vehicle traffic. Electricity flows on this electric "freeway" to a substation, where it is reduced to a lower voltage and sent out again on distribution lines. The lower capacity distribution lines operate like streets and avenues that crisscross communities and neighborhoods. Many are needed to get from one destination to another.

What is a substation and why is it necessary?

A substation is used to transform one voltage to another and for protecting and controlling transmission and distribution lines.

For efficiency, each company tries to minimize electrical losses (inefficiencies) on the transmission system. The higher the electrical current, the higher the losses. Therefore, it is in the power company's best interest to transmit power at the lowest current possible.

To do this, the voltage must be as high as possible. Substations are used to raise voltages for long distance transmission and to lower transmission voltages for distribution to end users. Without substations, generation would have to be located very close to the customer load.

Will the substation/transmission line attract lightning?

Substation structures and transmission lines may attract lightning; however, the shield wire (found along the top of the structures) provides protection to the system. Lightning that could hit the area will strike the line rather than a house or tree.

Will the lines make noise?

Audible noise (often referred to as "corona") may be described as a sputtering sound or a low frequency humming sound. Irregularities on the surface of the conductor such as nicks, scratches, contamination, insects and water droplets can increase audible noise. Consequently, during periods of rain and foul weather, line noise may be more audible (although this may be masked by the sound of rain). Under most circumstances, line noise will typically be inaudible past the edge of the right of way during fair weather.

For More Information

www.gatewaywestproject.com

Idaho Power customers

- Email: gatewaywest@idahopower.com
- Call 888-757-6957

Rocky Mountain Power customers

- Email: ConstructionProjects@pacificorp.com
- Call 801-220-4221

To submit official public comment on the Gateway West Project, please contact the BLM directly at Bureau of Land Management, Gateway West Project, P.O. Box 20879, Cheyenne, WY 82003 or email at Gateway_West_WYMail@blm.gov or visit www.wy.blm.gov/nepa/cfodocs/gateway_west.

To minimize noise levels, substation and transmission line materials are designed according to industry standards and the best possible construction techniques will be used to insure that hardware is tight and that the conductor surface is not scratched or nicked during construction.

Will the lines cause radio, television or cell phone interference?

Electromagnetic fields (EMF) generally do not cause interference to FM radio, TV or cell phones; however, within 150 feet, they can cause interference with AM radio. Modern line design takes into consideration possible interference to minimize the effect. While it does happen occasionally, it is typically on older lines or where a piece of equipment is not operating correctly. When a problem does occur, the companies have the equipment and trained personnel to address the issue as required by the Federal Communications Commission (FCC).

For more information about EMF visit the safety page at www.gatewaywestproject.com/safety.aspx.

What does research say about health effects of electromagnetic fields?

Since the early 1970s, extensive research has been performed to determine if EMF pose health risks. Some studies have suggested a statistical association between EMF and certain diseases, while other studies have failed to show this relationship.

Idaho Power and Rocky Mountain Power agree with the 30 years of scientific research that shows there is no conclusive evidence that EMF is harmful to public health. Both Idaho Power and Rocky Mountain Power continue to stay up to date about EMF studies and are dedicated to addressing EMF concerns among its customers. We encourage you to learn more about EMF by visiting:

National Institute of Health's EMF page at www.nlm.nih.gov/medlineplus/electromagneticfields.html.

"EMFs – Electric and Magnetic Fields Associated with the Use of Electric Power: Questions and Answers" by the National Institute for Environmental Health Safety and the National Institutes of Health, June 2002. www.niehs.nih.gov/health/assets/docs_p_z/emf02.pdf.

World Health Organization's EMF page at www.who.int/peh-emf/en/.



General Project FAQs

What is the Gateway West Transmission Line Project?

The Gateway West Transmission Line Project is jointly proposed by Idaho Power and Rocky Mountain Power to build and operate approximately 1,100 miles of new high-voltage transmission lines between the Windstar Substation near Glenrock, Wyoming and the Hemingway Substation near Melba, Idaho. The project would include approximately 300 miles of 230 kilovolt (kV) lines in Wyoming and approximately 800 miles of 500 kV lines in Wyoming and Idaho. Learn more about the project at www.gatewaywestproject.com/project_info.aspx.

Why is this project needed?

The new Gateway West transmission line will provide electricity for the growing needs of Idaho Power and Rocky Mountain Power customers and increase the reliability of the region's electrical system.

As regulated energy providers, both companies have an obligation to plan and construct transmission facilities to ensure reliable electric service to our customers. In order to access existing and new energy resources to serve increasing customer needs, additional transmission infrastructure is needed to transport power in Wyoming, southern Idaho and Utah.

It takes years to develop, site and construct new transmission facilities. It is critical Rocky Mountain Power and Idaho Power plan ahead and act to address forecasted need in order to ensure a reliable system for the public.

Have Idaho Power and Rocky Mountain Power partnered like this before? What are the benefits?

Yes, Idaho Power and Rocky Mountain Power have a long-standing relationship as joint owners of the Jim Bridger power plant in Wyoming. Both companies are pleased to continue working together to develop regional-scale projects that will serve growing customer needs. This project is an important part of the critical need to shape and strengthen the transmission system in the West, ensure reliable, efficient, coordinated electrical service and integrate existing and new energy sources, including renewable energy sources.

What are Idaho Power and/or Rocky Mountain Power doing to conserve energy instead of just providing additional energy?

Idaho Power and Rocky Mountain Power are actively pursuing all cost-effective energy efficiency and demand response programs to help customers manage their energy use and demand. These programs benefit residential, agricultural and commercial/industrial customers.

Idaho Power's programs include: A/C Cool Credit, Ductless Heat Pump Pilot, Energy Efficient Lighting, Energy House Calls, Heating and Cooling Efficiency Program, Home Improvement Program, Home Products Program, Kill a Watt Meters, Northwest ENERGY STAR Homes, Rebate Advantage, Residential Education Initiative, "See ya later, refrigerator" recycling, Residential Weatherization Programs, Irrigation Efficiency Rewards, Irrigation Peak Rewards, Building Efficiency, Commercial Education Initiative, Custom Efficiency, Easy Upgrades, FlexPeak Management, Green Power Program and Net Metering. For more information, please visit www.idahopower.com/energyefficiency/programs/.

Rocky Mountain Power's programs vary by state. Residential, commercial and industrial customers can participate in a variety of programs that include: Home Energy Analysis, Home Energy Savings, Cool Cash Incentive, Online Energy Analysis, Mail-in Energy Analysis, ENERGY STAR New Homes, Cool Keeper air conditioning, "See ya later, refrigerator" recycling and Low Income Weatherization, Energy FinAnswer, FinAnswer Express, Recommissioning, Self-Direction Credit and irrigation programs. For a full list of programs and details about each, please visit www.rockymountainpower.net/env/epi.



Who oversees reliability of electric service?

Idaho Power and Rocky Mountain Power comply with industry standards and are members of the Western Electricity Coordinating Council (WECC) which has the responsibility for regulating reliability in the Western U.S. Both companies report regularly to WECC and the North American Electric Reliability Corporation (NERC) to verify operating standards of reliability. In addition, each company reports to state public utilities commissions that monitor and enforce regulations governing electric service pricing and reliability.

How will this project impact rates?

Typically the cost of new infrastructure, such as this transmission project, is included in customer prices when used to provide service to customers. The new transmission line will be fully reviewed by regulatory commissions prior to including it in customer rates. For this reason, investment is made at levels that benefit existing and future retail customers.

Where is the power supply coming from?

The electricity that will be transported over the new transmission lines will come from a variety of existing and future sources including coal, hydroelectric, geothermal, natural gas and wind resources.

The new transmission line will move electricity throughout the region to meet customer needs, allowing customers to benefit from low-cost generation resources.

Will new transmission lines result in additional energy generation facilities?

The proposed transmission line would increase regional transmission transport capacity. This project does not propose to build any new energy generation facilities. It is focused on transmitting electricity between generating sources and delivery points to maintain service reliability throughout the region. The Gateway West transmission line will increase the electricity that can be transmitted between generating sources and customers. It will increase regional transmission transport capacity to help maintain service reliability and relieve transmission congestion throughout the area.

Review Process FAQs

What is the Bureau of Land Management’s (BLM) role in the project?

For Gateway West, BLM is the lead agency responsible for complying with the National Environmental Policy Act (NEPA). The BLM has prepared an environmental impact statement (EIS) that analyzes and discloses the effects of the project and its alternatives. The draft EIS was announced by BLM on July 29, 2011. This is followed by a series of public open house meetings to discuss the EIS and a 90-day public comment period that ends October 28, 2011.

Idaho Power and Rocky Mountain Power began the permitting process for this project by initiating the NEPA process in 2008. The companies applied to the BLM and U.S. Forest Service (USFS) for authorization to build, operate and maintain the proposed transmission lines on federal property. The public is invited to participate in the NEPA scoping process and comment on the draft EIS. To learn more about the environmental review process, please visit the project website at www.gatewaywestproject.com/environmental_review.aspx.

Who analyzes the effects of the proposed and alternate routes on the private landowners?

The EIS evaluates possible effects of the proposed Gateway West project and alternatives on federal, state, and private lands. However, this does not mean that the BLM or USFS can authorize actions on lands that are not administered by them.

What does the NEPA process look at in considering alternative routes?

The White House Council on Environmental Quality (CEQ) regulations direct that an EIS “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives that were eliminated from detailed study, briefly discuss the reasons for their having been eliminated” (40CFR 1502.14(a)). “Reasonable alternatives include those that are practicable or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant” (Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, March 23, 1981).

The EIS looks at a variety of resources. Some examples include land, visual/aesthetic, cultural and historic resources, paleontology, biological resources, socioeconomics, noise, air quality, recreation, and soils.

Routing FAQs

How was the proposed power line route chosen?

Idaho Power and Rocky Mountain Power identified the study area that included the end points the transmission line needs to connect in order to serve customers. They then collected information on a wide array of natural resources, land use, land ownership and other attributes to characterize the areas within the study corridor. They also considered environmental and engineering constraints and opportunities when developing and evaluating potential corridors, with a commitment to minimize impacts to the environment and communities.

During the research and design stage the companies met with officials in the cities, counties and states in the project study areas to gather information, look at master plans and identify ordinances affecting the siting of the project. This information helped develop the initial proposed and alternative corridors which were presented at the Bureau of Land Management’s (BLM) public scoping meetings in June 2008.

The public scoping meetings helped identify additional siting constraints, opportunities and alternative routes not previously considered. Using scoping information and additional route analysis, which included Idaho Power and Rocky Mountain Power’s meetings with landowners between December 2008 and January 2010, the BLM has determined which alternatives to carry forward into a detailed analysis and released this information January 4, 2010.

More information can be found by visiting the company and BLM websites at: www.gatewaywestproject.com and www.wy.blm.gov/nepa/cfodocs/gateway_west/.

The analysis has been presented for public comment in the draft environmental impact statement (EIS), which also contains rationale for alternative routes not analyzed in detail.

Easement FAQs

Do landowners receive compensation for rights of way if their property is taken through eminent domain proceedings?

Landowners are compensated for rights of way based on fair market value of the property. The companies work closely with landowners in the evaluation process and on a case by case basis. The value of the right of way is determined using several different sources including the county assessor records, an appraiser’s corridor study and local comparable sales.

Acquiring rights of way by eminent domain proceedings is the option of last resort. If this option is used and it proceeds through the court, the court determines compensation.

For more information about the rights of way acquisition process, visit www.gatewaywestproject.com/landowners.aspx.

How does the utility company determine the amount to pay for a right of way?

The utility company’s right of way agents calculate the payment to the landowners based on a percentage of current land value and appraisals of similar properties in the area.

What kind of access for maintenance will be required once the lines and substations are complete?

Safety inspections will be performed by an inspector on foot, in a four-wheel drive vehicle or from the air using a helicopter. Predetermined access routes are used to access the facilities for inspections.

Maintenance requires access to any portion of the line with specialized equipment to allow safe and efficient repair of the facility. Emergency maintenance may require access on an as-needed basis to promptly repair or replace any damaged or missing equipment.

What is the benefit to counties or cities for having the lines placed in their jurisdictions?

Property taxes are paid to each county by Idaho Power and Rocky Mountain Power and are based on the county’s share of each company’s total assessed market value.

Design and Construction FAQs

Why don’t Idaho Power and/or Rocky Mountain Power place power lines underground?

By law, it is the responsibility of Idaho Power and Rocky Mountain Power to provide power to customers by the least-cost alternative. The most affordable industry standard is overhead power lines. It is not uncommon today for smaller distribution lines in a new residential subdivision, for example, to be installed underground at the expense of the developer. The cost to install underground facilities can be many times that of overhead lines. State public utility commissions have typically directed that these additional costs be borne by those that benefit or cause them to be incurred. Therefore, the cost of placing the lines underground becomes the responsibility of the developer or the homeowner. In the case of smaller distribution lines, the extra cost may be manageable for those who request it. The cost to install underground facilities is about 10 times that of overhead lines.

Other constraints in using underground lines include:

- Higher voltage lines like those planned for this project are significantly more expensive and stretch for hundreds of miles; construction and material costs would significantly increase electrical rates for consumers.
- A great deal more ground disturbance is required to construct underground rather than overhead facilities. Underground construction requires an approximate 80 foot wide area be cleared of all vegetation and graded for the length of the route. A concrete-encased duct bank system is required for a 500 kilovolt underground line, consisting of three trenches of four conduits each in a 2 foot x 2 foot configuration with 20 feet of separation between trenches. The trenches would be centered within the 80 foot wide impact area. An ongoing impact area includes the 14-foot wide access road along the entire length of the route and the area around vault manholes. Vegetation on access roads, above trenches, and around vault manholes will be cleared annually in order to maintain clear access.
- While reliability for underground lines and overhead lines is similar, repairing underground cables is more expensive and much more time consuming. An underground conductor may last only 20 years, whereas an overhead line can last as long as 100 years.

Are there ways to make the towers less reflective, i.e. less visible?

Galvanized steel lattice towers are the preferred structure type for the project. The tower configuration is open and airy and allows the eye to look through and beyond the structure to objects in the background. Typically, the dull finish of the galvanized steel is muted against a variety of backdrops, whether against a hillside, forested land, or even the sky. Painted structures appear even more unnatural and often draw attention more than galvanized structures.

Some locations, however, do require the use of other structure types to minimize visual and resource impacts. H-Frame structures, which consist of two tubular steel poles and a cross arm, may be used in some areas where shorter spans can be utilized or are necessary. H-Frame structures will have a weathering steel finish, which mimics the visual characteristics of a standard wood pole.

Learn more about the project’s design and construction at www.gatewaywestproject.com/design_construction.aspx.

Would local companies be able to bid on various aspects of project construction?

Yes.

Idaho Power service territory: Included in Idaho Power’s Requests for Bids are specific criteria and qualifications that must be met in order for a bid to be valid. These qualifications include being able to demonstrate experience related to constructing projects of similar scope.

Currently, Idaho Power’s transmission system consists predominantly of 69 kilovolt (kV) to 230 kV facilities. Idaho Power’s planned 500 kV projects, Gateway West and Boardman to Hemingway, are the first 500 kV facilities proposed by the company. Since there have not been projects of this magnitude built in Idaho for over 30 years, most local contractors do not have the experience or equipment necessary to construct 500 kV facilities.

Rocky Mountain Power service territory: Please visit www.rockymountainpower.net/about/cf/sam.html.