A guide to **agricultural use** of American Transmission Co. rights-of-way

The following information answers some commonly asked questions related to land use around transmission facilities. This information is not exhaustive, and does not cover every scenario. ATC staff have a wealth of experience related to agricultural use of transmission line rights-of-way and the issues that arise, so please contact ATC if you have questions about this material or a related topic.

Fences

As a rule, ATC discourages locating fences within the right-of-way as they can interfere with access to the line and may pose safety hazards. However, the use of fences will not be unreasonably denied. If you need to build a fence in the right-of-way, whether it is wooden, wire or electric, contact ATC prior to designing and constructing the fence. Our staff will help identify an appropriate type of fence for the location and ensure that the design complies with the terms of the easement and ATC policies. The following are a few general guidelines:

- If a fence exists within the easement area prior to a new line being constructed, all or part of it may be removed to allow crews full access to the right-of-way. After construction, fences will be replaced with a fence of equivalent or greater quality.
- Fences in ATC rights-of-way may have height restrictions.
- Fences must be erected a proper distance away from any transmission structure.
- Grounding requirements will be established on a case-by-case basis, but grounding is usually recommended for metal fences without metal posts that are located in or near the right-of-way.
- During maintenance activities, fences that make it difficult or impossible to access ATC facilities for maintenance purposes may be removed to allow access to the transmission line.
- Fences that are planned to span the total easement or right-of-way width must have a gate at least 14 feet wide to allow for linear access to the easement area. A method that allows both property owners and ATC contractors to open the gate without disturbing the other's lock, such as double-locking gate, is recommended. ATC will supply a lock for use in conjunction with the owner's lock at no cost.
- Electric fences located within the right-of-way may require installation of special grounding and/or filtering equipment to counteract potential induced voltages. ATC will install and maintain grounding or filter units for existing electric fences (in place

prior to the transmission line) within the right-of-way. Property owners are responsible for costs associated with the installation and maintenance of the grounds or filter units for new (did not previously exist) electric fences built within ATC rights-of-way. Contact ATC's real estate department if you plan to build an electric fence within the right-of-way, or have concerns about induced voltages related to an existing electric fence.

Irrigation systems and wells

Many types of irrigation systems can be operated safely near ATC transmission lines, including central-pivot and other systems. However, it is important to maintain proper clearances from the transmission wires when installing irrigation systems near ATC facilities.

Water conducts electricity, so it is essential that irrigation systems do not spray a continuous solid stream on transmission wires. Electricity has been known to flow from the wire through the stream of water to the ground, causing outages and endangering people and property nearby. The risk of an electric fault is reduced or eliminated when the solid water stream breaks up and becomes a spray.

Improper irrigation installation may cause shocks. Before installing an irrigation system near an ATC transmission facility, contact ATC to have your plans reviewed. ATC staff will provide valuable information on storing, handling, installing and operating irrigation systems near ATC transmission facilities. Also keep in mind that wells are not permitted in the right-of-way.

Clearances

The Occupational Safety and Health Administration requires various minimum safe working clearances based on transmission line voltage. If you plan to work or operate machinery under ATC transmission lines, contact ATC to verify the voltage of the line and ensure you know the required OSHA clearance. While working near ATC transmission lines, verify that the required clearances are maintained at all times.

The height of the wires above the ground may vary depending on the type of structure and span length of the line on your property. In addition, wires sag with temperature and electric load changes so sufficient clearance may exist one day but may be much less the next. The following are some additional points to consider when working near or under transmission lines:

- When operating machinery that extends vertically, such as sprayers, augers, hay elevators and fertilizer applicators, remember that additional clearance is needed beyond the truck height. Maintain proper clearance from the highest point on your equipment to the transmission line above.
- Use a spotter to keep an eye on how far tall equipment is from the wires.
- Historically, transmission lines were built assuming 14-foot vehicle heights, a standard that complies with electric codes. Grades under transmission lines may change over the years, so to ensure safety please contact ATC to verify clearances.
- Do not store or pile material or equipment within the easement area without prior approval.

Conservation Reserve Program land

Transmission structures can impact the amount of right-of-way acreage eligible for Conservation Reserve Program payments. Landowners whose right-of-way land is part of the program are responsible for contacting the Farm Service Agency to find out if and how ATC's easement may impact their CRP contract. ATC will work with landowners on this topic.

Crops

As a general rule after construction, agricultural crops excluding trees may be grown within transmission line rights-of-way, but must not hinder access to transmission facilities. Tree farms and orchards are prohibited within ATC rights-of-way. Any crops within the right-of-way are at risk of being damaged when crews need to access the line for maintenance or emergency repair purposes. ATC will follow up with landowners to pay for any crop and/or property damage caused by our work.

Electric fields

Electric fields from transmission lines can cause induced voltage and current on insufficiently grounded equipment that is near 345-kilovolt transmission lines. This is more common when larger vehicles and equipment are parked on nonconductive surfaces such as asphalt or dry rock. Induced voltage and current can cause discomfort to people who touch the equipment while standing on the ground, but can be minimized by installing a grounding strap or chain on the equipment, or simply by parking farther away from the line. Also, please avoid refueling vehicles within the easement area.

Fires and field burning

Fire and smoke can be harmful to wires and insulators, and also can cause damage by igniting wood structures or damaging steel structures. Smoke and hot gasses from a fire near a transmission line can create a conductive path for electricity. Burning under the wires has been known to cause an arc from the wire through the smoke to the ground, causing outages and endangering people and property nearby. The smoke and airborne particles can also cause a coating to form on the wires. Under law, the person causing damages to facilities could be held liable for those damages. If you plan to burn near an ATC right-of-way, contact ATC to learn proper burning methods and to inform ATC of when the burn will take place.

GPS and communication equipment

With GPS increasingly being used in the farming industry, there has been speculation about the impact transmission lines may have on effective operation of GPS equipment. Major manufacturers of GPS navigation systems have not found any degradation of the GPS signal as a direct result of transmission lines. In addition, a 2002 study by the Institute of Electronics and Electrical Engineers found that transmission lines are unlikely to degrade GPS signals. GPS receivers rely on a dispersed constellation of at least four satellites, and the study found no loss of satellite signals as a GPS receiver was moved across a transmission line easement.

The Electric Power Research Institute AC Transmission Line Book –200kV and Above, Third Edition states that under some conditions, high-voltage lines may interfere with the Nationwide Differential GPS System, a system which consists of a network of broadcast stations operated by the United States and other governments between 283.5-325 kilohertz.

Transmission lines may interfere with AM receivers, TV receivers, amateur radio receivers, aircraft communications receivers and specialized devices such as radio astronomy antennas. If you experience any interference that you suspect is caused by ATC transmission facilities, please contact ATC.

Livestock

If construction or maintenance activities will interfere with pasturing or livestock areas, ATC will work with livestock owners to temporarily fence livestock out of the right-of-way during construction. Livestock owners are asked not to spread manure in the right-of-way during construction to minimize the potential spread of disease.

In general, ATC discourages the penning of animals beneath our transmission lines. ATC performs multiple flyovers with low-flying helicopters each year to inspect lines for damage and rights-of-way for obstructions. If areas near the transmission lines are fenced for animal confinement purposes, it is possible for animals to be startled and/or injured during helicopter inspections.

Manure pits

Due to the various access, clearance and other issues associated with manure pits, they typically are not permitted within ATC rights-of-way.

Organic farming

ATC applies herbicides with the property owner's written permission to minimize re-growth of trees and woody species within the transmission line right-of-way. Organic farmers or landowners concerned with the use of herbicides may request that herbicidal sprays not be used and vegetation be managed by mechanical methods. Contact ATC to coordinate proper identification of your property as a non-herbicide area or as an organic farm.

Property or crop damage

In most situations, barring emergencies, we notify landowners in advance and provide a description of our work plans, the reason for the work and the time frame. If ATC maintenance or construction activities damage your property, including drain tile, rutting, compaction and crops, ATC will pay you a reasonable amount for damages caused by ATC when the project is complete. The *USDA Custom Rate Guide* is used as a guideline for crop damage payments.

Soil compaction and excavation

During construction, heavy truck traffic may cause soil compaction depending upon soil moisture and axle load. ATC crews frequently use construction mats to minimize soil compaction and limit land damage. As part of restoration, landowners may be reimbursed for subsoiling the right-of-way, if needed, to mitigate soil compaction.

ATC may use concrete footings for the transmission structures, and excavated subsoil is temporarily piled off to the side of the excavation. Excess soils from excavation in upland areas are hauled to an off-site disposal location, unless the landowner requests that the soils remain on the property.

Stray voltage

On-farm stray voltage investigations are performed by the local distribution company. The local utilities and ATC work together on individual investigations to better understand the interactions between both systems where the local transmission line configuration is parallel to the distribution neutral system. If you think stray voltage may be an issue on your property, contact your local electric utility.

Trees and landscaping

Prior to beginning construction or maintenance activities, the easement area is typically cleared of trees and brush to allow access for construction and maintenance equipment. ATC has tree trimming and clearing rights within the easement area, and the right to remove trees outside the easement area that might fall or grow into the transmission lines. Any plantings in the right-of-way that hinder access to the line or do not meet ATC specifications for height and density will be trimmed or removed. ATC retains the right to remove vegetation as needed, and is not obligated to restore or replace it.

Encroachment review request form

Landowners who wish to inquire about safe permitted use of right-of-way easements are asked to contact ATC real estate for information about submitting an Encroachment Request Form. Call 866-899-3204

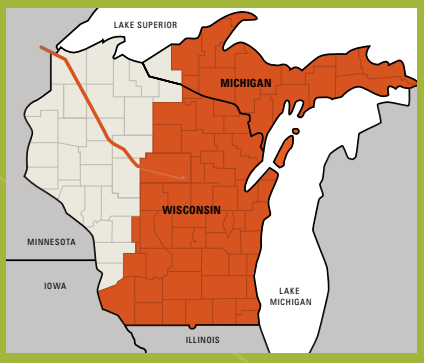
Who we are

ATC owns and operates the electric transmission system that moves electricity at high voltages over long distances in the region. The transmission system is made up of wires, insulators and structures that support the wires. Our system consists of lattice towers, large steel poles, two-pole wood structures, single wood poles, substation facilities and in some areas, underground transmission lines.

Questions?

Contact ATC's real estate department at 866-899-3204.

ATC service area



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Helping to **keep the lights on,** businesses running and communities strong®

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