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Introduction

The Farmers' Advocate Office (FAO) was established in 1973 by the Minister of Agriculture as a resource for rural Albertans. Today the FAO remains within the Ministry of Agriculture and Forestry, and works to ensure that the rights and interests of rural Albertans are recognized, understood and protected.

The mission of the Farmers' Advocate Office (FAO) is to create value for rural Albertans and stakeholders by:

- empowering rural Albertans through awareness on key issues;
- providing objective, unbiased ideas and advice for resolving disputes;
- representing the rural Alberta perspective on matters of concern;
- and facilitating interaction on strategic matters among key stakeholders.

Pipelines in Alberta: What Farmers Need to Know was first published by the FAO in 1992. This version, substantially revised and updated from the previous version, reflects legislation, regulation and policy as it exists in 2018. It is primarily designed with new negotiations in mind, but much of the content could also be helpful to those hoping to gain a better understanding of their rights in relation to an existing pipeline on their land.

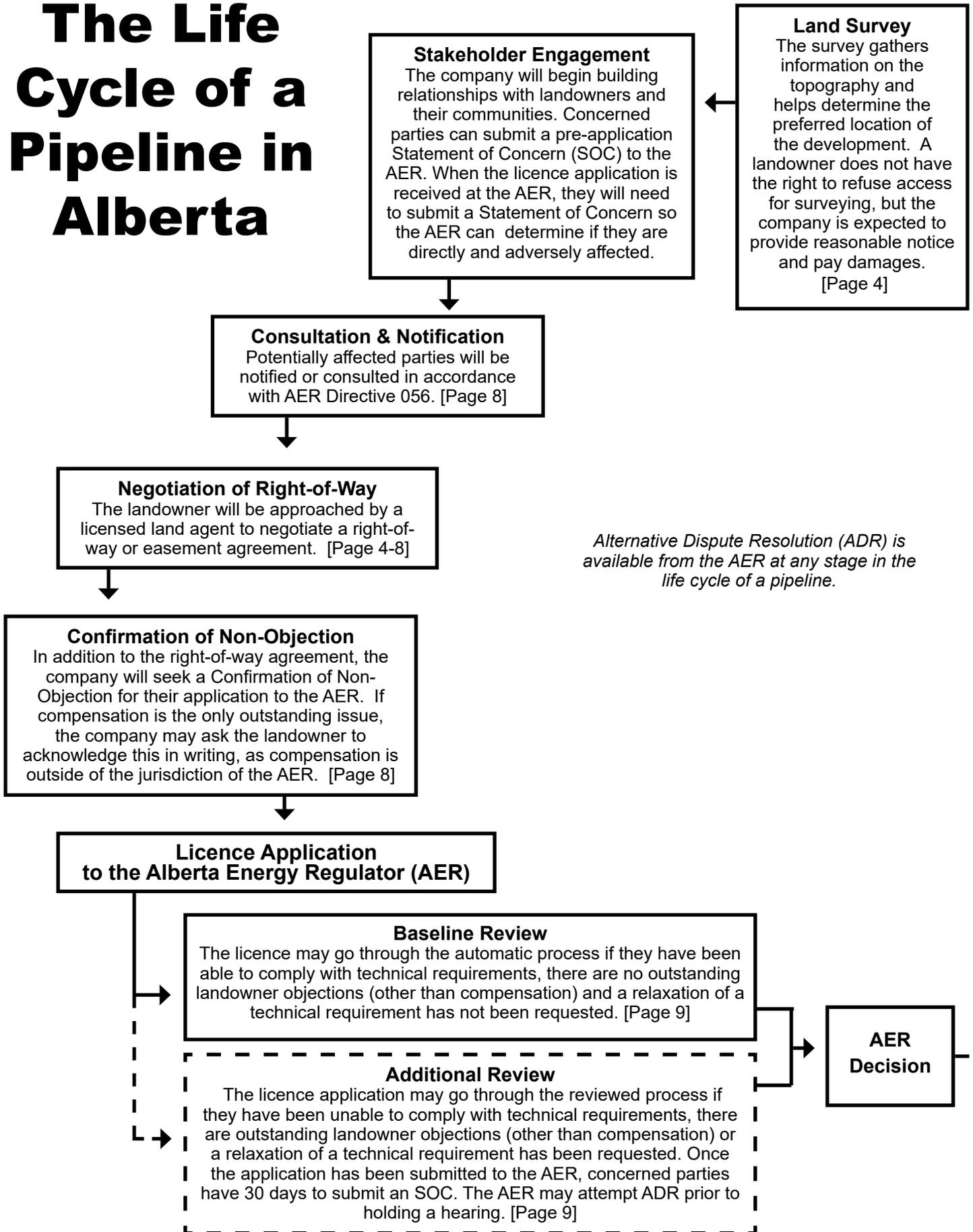
Explaining landowner rights in relation to pipelines can be a complex task. There are many different types of pipelines a landowner might encounter in Alberta. This publication focuses on oil and gas pipelines that connect Alberta's "upstream" sector (production) with the "downstream" sector (refining, marketing and distribution). Pipelines can be built for use above or below ground, and for temporary (well testing) or permanent use.

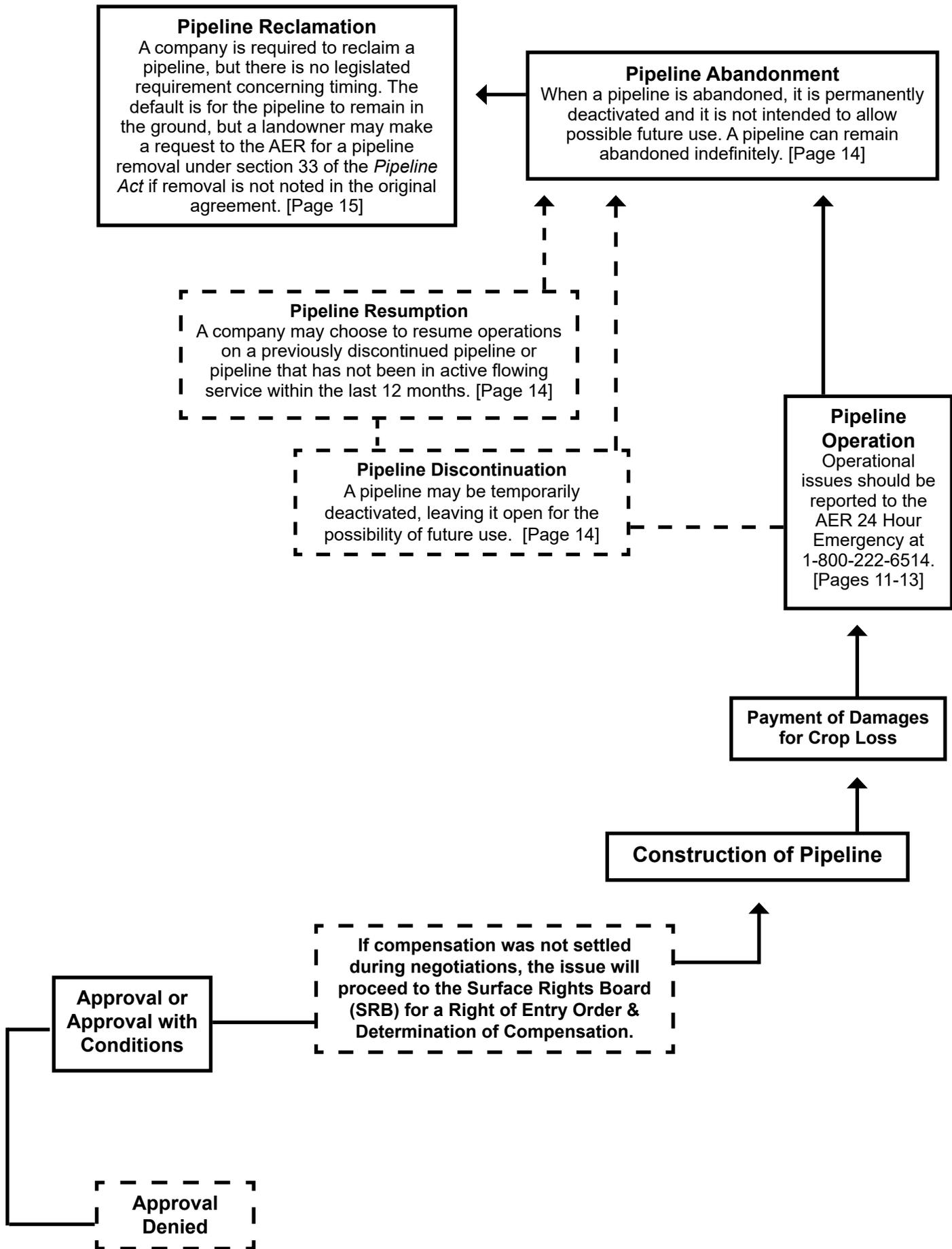
Oil and gas high pressure pipelines (greater than 700 kPa) that operate solely within Alberta's borders are regulated by the Alberta Energy Regulator (AER) under the *Pipeline Act* and *Pipeline Rules*. The AER regulates more than 422,000 km of oil and gas pipelines throughout Alberta. The majority of pipelines in Alberta carry natural gas or oil effluent (production from oil wells).

This document is primarily concerned with provincial high-pressure oil and natural gas pipelines that are owned or operated by energy companies. Appendices A-C provide more information on pipelines that are not regulated by the AER: gas utility pipelines, rural gas distribution pipelines, urban gas distribution pipelines, and oil and gas pipelines that cross provincial borders. Utility pipelines operated by investor-owned utilities are regulated by the Alberta Utilities Commission (AUC), rural gas distribution lines are regulated by the Rural Utilities Section of Alberta Agriculture and Forestry, and oil and gas pipelines that cross provincial or international borders are regulated federally by the National Energy Board (NEB).

Type of Pipeline	Approvals	Enforcement
Oil & gas pipelines within the borders of Alberta	Alberta Energy Regulator (AER)	AER
Oil & gas pipelines that cross provincial or international borders	National Energy Board (NEB)	NEB
Gas utility lines operated by investor-owned utilities > 700 kPa	Alberta Utilities Commission (AUC)	AER inspection and initial enforcement through memorandum of understanding with AUC. Enforcement by AUC.
Rural gas distribution lines (gas co-ops, rural municipal utilities, First Nations, investor-owned utilities, etc.) < 700 kPa	Rural Utilities Section Alberta Agriculture and Forestry	Rural Utilities Section or AUC has responsibilities for dispute resolution under <i>Gas Distribution Act</i> .

The Life Cycle of a Pipeline in Alberta





Surveying

If a company is interested in constructing and operating a pipeline on your land, one of the first things you may encounter is a survey company providing notice to access the land or an energy company contacting you to discuss their intentions to conduct a survey. The purpose of the survey is to identify the boundaries and the preferred location of the development, and gather information on the topography of the land so that wetlands, watercourses, existing disturbances, and wildlife features can be avoided.

Alberta Land Surveyors and their assistants have the right to access your land without permission under section 14 of the *Surface Rights Act* and section 16 of the *Surveys Act*. They are required to make a reasonable attempt to notify you prior to the survey taking place as a courtesy. They are not required to pay compensation for entry onto your land for surveying, but they are liable to cover any damages that occur as a result of surveying.

If you have questions or complaints about land surveying or land surveyors, please contact the Registrar at the Alberta Land Surveyors' Association (ALSA) by phone at 1-800-665-2572 (toll free) or by email at info@alsa.ab.ca.

Right-of-Way Agreements

Once a route plan has been determined from the survey information, the company will send a licensed land agent to begin negotiations for an easement or right-of-way. In the right-of-way agreement, the landowner is considered the "grantor" and, as such, remains the owner and retains all rights that were not yielded to the "grantee" (company).

The easement or right-of-way agreement will be registered as a caveat against the landowner's Certificate of Title. The company may use the standard right-of-way agreement from the Canadian Association of Petroleum Landmen (CAPL) in Appendix D, but they are not required to do so. They may use their own document or modify the CAPL agreement to suit their interests. Similarly, landowners also have the right to propose revisions to the agreement to suit their needs and interests. The FAO strongly urges landowners to capture all commitments in writing in the right-of-way agreement, as it can be difficult to hold a company accountable to verbal commitments. Capturing commitments in a construction report is not sufficient; any commitments need to be reflected in the right-of-way agreement.

Landowners are encouraged to thoroughly review a proposed right-of-way agreement to ensure each clause is understood. Most agreements will be designed by the company with their needs in mind. A landowner may wish to secure legal counsel to review the document to ensure their needs are being met. The landowner can request that the cost for legal review be covered by the company. The landowner must be given a minimum of 48 hours undisturbed to review a proposed agreement, though they can choose to waive this right in writing as described in the *Land Agents Licensing Act*.

A landowner who negotiates an agreement after November 2013 can submit a copy of their easement or right-of-way to the AER's Private Surface Agreements Registry (PSAR). This option is not available to orders granted by the Surface Rights Board (SRB) or commitments made to adjacent landowners or in a construction report. When an agreement is registered in the PSAR, the landowner can make a request to the AER under section 64 of the *Responsible Energy Development Act* if they feel a condition is not being adhered to. In this process, the AER can make a determination on whether or not the company has complied with the terms and conditions of the agreement. If it is determined that a term or condition is not being followed, the AER can issue an Order to Comply in response to the section 64 request. If it is determined that the company has complied with the agreement, the AER will not issue an order. The AER

encourages landowners to contact the company first to try and resolve issues directly prior to using the section 64 process. If you have questions about the PSAR, please contact the AER at 1-855-297-8311.¹

For utility pipeline right-of-way agreements, a landowner can contact the Alberta Utilities Commission (AUC) if they believe the company has failed to comply with a term or condition of the agreement. The AUC's Consumer Relations Team can be contacted by phone at 780-427-4903 (for toll free access dial 310-0000 first) or by email at consumer-relations@auc.ab.ca. From there, the inquiry may be sent the Market Oversight and Enforcement Division for investigation.

Land Agents

In Alberta, a company negotiating with a landowner for a pipeline right-of-way is required to use a licensed land agent. When negotiating for or acquiring an interest in land, a licensed land agent is accountable to the Code of Conduct established by the Land Agents Registrar under the *Land Agents Licensing Regulation*.

Standards of Conduct

1. A land agent must uphold the standards and reputation of the profession.
2. A land agent must be professional and courteous at all times and treat all parties with dignity and respect.
3. A land agent shall undertake only work that that person is competent to perform by virtue of their training and experience as a land agent.
4. A land agent must carry out all duties with honesty and integrity.
5. A land agent must act in good faith.
6. A land agent must act in the client's best interests, subject to any limitations imposed by law or professional ethics.
7. A land agent must follow all applicable Statutes and Regulations.
8. A land agent must not enter into a situation where a conflict of interest may exist or arise.
9. Unless required by law or authorized by the client, a land agent must keep confidential all information acquired in the course of the professional relationship.

Recourse is available through the Land Agents Registrar at Alberta Labour for landowners who feel they have been treated unethically by a licensed land agent. If the Registrar receives a complaint concerning any matter relating to the *Land Agents Licensing Act* or *Land Agents Licensing Regulation*, they may initiate an investigation. They may also initiate an investigation if they have reason to believe a contravention has taken place. For more information on the *Land Agents Licensing Act*, please contact Alberta Labour by phone at 780-415-4600 (toll free 310-0000) or by email Land.Agents@gov.ab.ca.

Considerations for Negotiation

The type of pipelines most frequently experienced by Alberta landowners are flow lines, which move raw product from wells to processing facilities or larger transmission pipelines. The product is moved through the lines by underground reservoir pressure or pressure created by the well, compressor, and pump stations. A landowner may encounter other surface infrastructure such as pipeline risers, headers (aboveground portions of a pipeline), valve stations, pigging equipment, separators, metering shacks, line heaters, tanks, secondary

¹EnerFAQs: About the AER. <https://www.aer.ca/about-aer/enerfaqs/enerfaqs-psa>.

containment, or processing plants. The landowner will be compensated in a separate lease agreement for any aboveground surface equipment.

The width of a right-of-way depends on the size, number, and routing of a pipeline. The terms of the easement will stipulate the maximum right-of-way width limit. A landowner can expect that the right-of-way for a typical flow line will be about 15 metres wide. Other oil and gas pipeline right-of-ways may be as much as 25 metres in width. Generally, no permanent structures may be placed on the right-of-way, but temporary structures such as storage or cattle sheds are usually permissible with prior written consent.

Landowners should also consider the following in their negotiations:

- Temporary Work Space (TWS)

The company may require land adjacent to the right-of-way for Temporary Work Space (TWS) during the construction phase. This is sometimes referred to as the “staging area.” TWS may also be required when conducting repairs, responding to incidents, or doing integrity digs.

TWS is typically negotiated separately from the right-of-way agreement. Do not rely on verbal agreements for TWS. It is recommended that landowners clearly negotiate their needs regarding TWS with a comprehensive addendum. The addendum should provide a clear sense of how long the TWS may be used. It should also outline the expectations relating to access, construction, and reclamation timelines. Compensation for TWS is negotiable between the landowner and the company. The FAO does not provide advice on compensation amounts.

Landowners should be aware that TWS can have long-term ramifications. The company is required to include the TWS when eventually obtaining a Reclamation Certificate for the pipeline, but in most cases this is not required until the pipeline easement itself is being reclaimed. There is no legislated timeline for the reclamation of a pipeline. Since the pipeline can remain abandoned indefinitely, a significant period of time may lapse between the use of TWS and the pursuit of a Reclamation Certificate. Therefore, a landowner should negotiate clear expectations for the post-construction cleanup of TWS on their land.

The company’s responsibility for TWS does not terminate until the Reclamation Certificate is issued. The operator also remains responsible for any issues that arise on the TWS for 25 years after the Reclamation Certificate is issued.

The operator may approach the landowner with a damage waiver shortly after the pipeline construction is complete. Pre-assigning costs for damages is not recommended. The FAO suggests reviewing damages annually until the land reaches equivalent land capability.

- Aboveground Structures

Under the *Surface Rights Act*, aboveground structures or “appurtenances” such as risers, pigging stations, metering shacks, space heaters, etc., on AER-regulated oil and gas pipelines will require a surface lease. This agreement will be separate from the right-of-way agreement and subject to annual compensation under the *Surface Rights Act*. The requirements relating to aboveground structures are different for gas co-ops, gas

utility pipelines <700 kPa and rural utilities, where blanket easements are used. This is explained further in appendices A and B.

- Additional Pipelines

The FAO recommends that the wording in the agreement be specific to the pipeline that is currently being proposed. The wording of the agreement should limit the company to the construction and operation of one pipeline within the right-of-way. Some right-of-way agreements give the company permission to construct multiple pipelines presently or in future years. This could enable the company to access the lands to install a secondary pipeline later on, paying damages but not establishing a new right-of-way agreement. People who are interested in purchasing land may wish to review the existing pipeline right-of-way agreements to see if the language allows for one pipeline or multiple pipelines.

If an additional pipeline is proposed by the company but the right-of-way agreement only allows for one pipeline, the landowner would have the opportunity to negotiate an additional right-of-way agreement with new compensation, construction requirements, and timelines.

- Preparing the Right-of-Way

When preparing a right-of-way, the company will face time restrictions as a result of sensitive wildlife zones, timing conditions in the project approval, and other requirements that limit operations during certain periods of the year.

Trees along the right-of-way may be removed to prepare the area for construction. A landowner should discuss timber salvage and brush disposal with the company, and capture any commitments in the written agreement.

Using proper soil management techniques when preparing the right-of-way can help ensure the long-term success of reclamation. At the outset of construction, the company should develop a soil conservation strategy that encourages nutrient retention, minimizes soil sterilization, and promotes vegetation regrowth. Requesting pre-construction soil testing can help create a baseline for future reclamation. A landowner may wish to ask the company about their soil conservation strategy. How many lifts are anticipated? Where and how will they be stored? Will there be any impact to drainage?

The AER's *Guide for Pipelines Pursuant to the Environmental Protection and Enhancement Act and Regulations* outlines government's expectations concerning the removal and replacement of topsoil. The standard right-of-way agreement specifies that topsoil should be stripped from the ditch prior to construction and replaced "as near as possible to its original condition," but the exact mechanics of this will depend on the method of installation and construction and the season during which construction and reclamation take place. In general, soil is stripped in "lifts" depending on the layer, and then stored separately to prevent admixing. The company is required to ensure that the stockpiles do not interfere with water drainage. Weed control on stockpiles should be negotiated with the operator and captured in writing in the agreement.

- Weeds

Many vehicles and pieces of equipment will be entering and leaving the property during construction and maintenance, so the spread of weeds can be a concern to some

landowners. The landowner may wish to discuss the timing and notification process for weed control efforts, and what products will be used.

Landowners and occupants (including oil and gas lessees) have an obligation to prevent prohibited weeds and seeds and destroy prohibited noxious weeds and seeds under the *Weed Control Act*. More information on what weeds are considered “prohibited” or “prohibited noxious” is available on the Alberta Agriculture and Forestry website.²

- Biosecurity

Clubroot is a serious soil-borne disease that affects crops in the cruciferous family. The visible signs of clubroot are galls or clubs that form on the roots, which can impede nutrient and water uptake. Depending on the stage of infection, visible aboveground symptoms may include stunted growth and wilted plants. Clubroot can cause devastating yield losses. In Alberta, it was first identified in canola crops in 2003.

Clubroot can be very difficult to control. The spores can remain dormant for many years before affecting a crop. It can be spread through the movement of contaminated soil, or wind or water erosion. Studies have shown that most clubroot infestations in Alberta begin at field access points, which suggests that contaminated equipment and machinery is the most common way the disease is spread.

In 2007, clubroot was added as a “pest” under the *Alberta Agricultural Pests Act*. All landowners have an obligation to take active measures to prevent clubroot, control and destroy existing clubroot infestations, and control any matter that contributes to the spread of clubroot. This obligation also extends to occupants which, for many landowners, includes oil, gas, and utilities lessees. The *Agricultural Pests Act* is enforced at the municipal level.

The Best Management Practices from Alberta Agriculture and Forestry are designed to help minimize the spread of clubroot.³ Some strategies for clubroot prevention include using resistant seed varieties, rotating crops, controlling volunteer canola and other hosts, and cleaning equipment that enters a field. The basic standard for cleaning equipment and machinery is to remove large clumps of dirt, pressure or steam wash, and disinfect with 1-2% bleach water mixture. Disinfecting is an important step as it works to exterminate spores, thereby limiting reproductive ability. A similar best practices guideline is produced by the Canadian Association of Petroleum Producers (CAPP).⁴ The local municipality may have additional policies surrounding clubroot enforcement that provide a further level of protection.

Landowners who are negotiating a pipeline right-of-way should be aware that clubroot prevention is not enforceable by the Alberta Energy Regulator (AER) or the Alberta Utilities Commission (AUC) unless it is stipulated in the conditions listed on the licence or approval. To have clubroot prevention conditions listed in the licence or approval, the matter would need to be brought forward in a hearing. In a hearing, the landowner would need to utilize experts to design a clubroot prevention strategy. Getting clubroot

² Alberta Agriculture and Forestry, Weed Information
[https://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/prm14555](https://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/prm14555)

³ Alberta Agriculture and Forestry, Alberta Clubroot Management Plan
[https://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex11519](https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex11519)

⁴ Canadian Association of Petroleum Producers, *Clubroot Disease Management – Best Management Practices*
<https://www.capp.ca/publications-and-statistics/publications/139848>

conditioned into the licence or approval works for new pipelines, but cannot retroactively be requested for existing pipelines.

A landowner who negotiates clubroot strategies into their right-of-way agreement for an AER-regulated pipeline may submit a copy of their agreement to the AER's Public Surface Agreements Registry (PSAR). This option is not available to agreements negotiated prior to November 2013 or orders granted by the Surface Rights Board (SRB). If a landowner feels a condition is not being adhered to, they can make a request to the AER under section 64 of the *Responsible Energy Development Act* to determine whether or not the company has complied with the terms and conditions of the agreement. If it is determined that a term or condition is not being followed, the AER can issue an order to comply. If it is determined the company has complied with the agreement, the AER will not issue an order. The AER encourages landowners to contact the company first to try and resolve the issue directly prior to using the section 64 process.

A landowner who negotiates clubroot strategies into their utility pipeline right-of-way agreement may contact the Alberta Utilities Commission (AUC) if they believe the company has failed to comply with a term or condition in the agreement. The AUC's Consumer Relations Team can be contacted by phone at 780-427-4903 (for toll free access dial 310-0000 first) or by email at consumer-relations@auc.ab.ca. From there, the inquiry will be sent to the Market Oversight and Enforcement Division for investigation.

Licence Application to the Alberta Energy Regulator (AER)

In order to construct and operate a provincial oil and gas pipeline in Alberta, a company must obtain a licence from the Alberta Energy Regulator (AER). The first part of the licence application process is stakeholder engagement with all parties who have a direct interest in the land. This can include the landowners, adjacent landowners identified as parties of interest, landowners within the notification radius, interested residents, occupants, industry, local authorities, municipalities, and other parties who have a right to conduct an activity on the land, such as disposition holders.

Depending on their location and relationship to the land, potentially affected parties will either receive notification or consultation from the company. Notification requires written communication to inform parties of the proposed application, whereas consultation requires that a discussion take place either in-person or by phone.

AER Directive 056: Table 6.1 outlines the consultation and notification radiuses based on the pipeline category type. The category type for a pipeline is determined based on pipe diameter and hydrogen sulfide (H₂S) content (if any) of the transported product. All landowners and occupants along the right-of-way will receive personal consultation and notification. Local and urban authorities will also be notified.

Notified parties have 14 days to review the written communication from the company. If they have concerns, they should first try to bring them forward to the company. If they have outstanding concerns that have not been addressed in this conversation, they may send a Statement of Concern (SOC) to the company and the AER.

As part of their application to the AER, the company will be seeking to provide a Confirmation of Non-Objection from consulted parties. This allows the company to receive its application approval without an additional waiting period or further review. If the only outstanding issue is

compensation, the company may request that the landowner put this in writing, as compensation is not within the jurisdiction of the AER. A licence application with outstanding issues solely related to compensation may be processed by the AER without an additional waiting period or further review, as the compensation issue will be addressed separately by the Surface Rights Board (SRB).

Depending on the complexity of the application, a licence application submitted to the AER will be considered in one of two ways:

- **Baseline Review**
The baseline review approval process (previously known as the “routine application process”) will be used where there is a Confirmation of Non-Objection (no outstanding concerns or objections), the company is able to comply with all regulatory requirements, and no relaxation of regulatory requirements has been requested. The application will be reviewed, a licence may be issued and the application will be posted publicly on the Public Notice of Application section of the AER website.⁵
- **Additional Review**
Where the company is requesting the relaxation of a technical requirement, or there are outstanding landowner objections, the application will undergo additional review. In the past, these applications were referred to as “non-routine applications.” The AER will review the application and post it publicly in the same manner as a baseline review application. Outstanding landowner concerns (excluding compensation) may be sent to Alternative Dispute Resolution (ADR) at the AER. Once the 30 day period has lapsed, a decision-maker will determine whether or not the concerns have been rectified or if further ADR or a hearing are required.

The AER can assist with dispute resolution through the ADR program at any stage in the lifecycle of the pipeline, even before an application is filed. The goal of ADR is to provide an opportunity for the parties to better understand each other’s interests and develop mutually acceptable solutions through respectful dialogue. To utilize these services, a landowner may call Stakeholder Engagement at the AER at 1-855-297-8311.

A licence issued by the AER provides the company with one year to begin construction on a pipeline, though extensions may be considered by the AER on a case-by-case basis. Large projects may be granted a 2 year construction permit. Most right-of-way agreements indicate that the company must pay full fees within a year of signing or the contract expires.

Compensation

Compensation is outside of the jurisdiction of the AER. If the landowner and the company are unsuccessful in negotiating compensation, the company may obtain a Right of Entry Order through the Surface Rights Board (SRB) under the *Surface Rights Act* once an AER licence has been approved.

A Right of Entry Order settles the outstanding compensation issue and provides the company with the legal right to access the land to install and operate the pipeline. The SRB attempts mediation prior to requesting a panel decision.

⁵ Alberta Energy Regulator, Public Notice of Application [http://search.aer.ca/pnoa-en/search/theme/pnoa?sort=recent&fq\[\]=feed_str:all](http://search.aer.ca/pnoa-en/search/theme/pnoa?sort=recent&fq[]=feed_str:all)

Compensation for provincially regulated oil and gas pipelines in Alberta is determined under the *Surface Rights Act*. The FAO can explain the compensation structure, but does not provide recommendations on compensation amounts. The landowner will receive a lump sum for the pipeline reflecting all categories outlined below:

- Entry Fee

The company is obligated to pay \$500 for each acre within the right-of-way, with a minimum of \$250 up to a maximum of \$5,000. The entry fee is in addition to any other compensation paid. This amount is non-negotiable, as it is set under the *Surface Rights Act*.

For a Right of Entry Order, the entry fee must be paid before the rights are exercised. If the pipeline is not constructed within 365 days of the date of the agreement, the landowner is entitled to keep the entry fee. Companies typically include a provision in the agreement to extend this for a second 1 year term.

- Value of Land Rights Taken

This amount is determined by the current fair market value of lands permanently impacted by a pipeline. It is based on what land with similar use and attributes is selling for in the area. This component is designed to transfer the right to the use and quiet enjoyment of the land from the landowner to the company.

- General Disturbance

General disturbance covers the nuisance and inconvenience suffered by the landowner during the first year of operation. This would include the time spent negotiating and meeting with the company, inconvenience during construction, and loss of use or enjoyment of the land during construction.

- Damages

For pipelines, the legislated payment for damages includes compensation for the nuisance, adverse effect, and inconvenience to the landowner. This is usually paid one year after the pipeline is constructed. The amount will reflect the fact that the farmer could not use the land during the construction period and while vegetation was being re-established. This amount will not be calculated until a crop has grown on the land so that the full extent of the damage can be assessed.

Crop damages may be negotiated for a period exceeding one year, making assumptions about regrowth for future years. For example, a company might pay 100% the first year, 75% the second year, 50% the third year, and the fourth year on review. Damages may also be reviewed and paid on an annual basis without pre-determined amounts or percentages until equivalent land capability is achieved – this is the approach recommended by the FAO. Options for how damages can be paid should be discussed between the landowner and the company.

The company remains responsible for surface damages on or off the right-of-way for the life of the agreement. Disputes regarding damages that occur off the right-of-way may be brought to the SRB within 2 years of when they occurred. The maximum amount for an off right-of-way damage claim is \$25,000. Damages above this amount must be resolved through the courts. The SRB can be reached at 780-427-2444 (enter 310-0000 before the number to make it toll free) or srb.lcb@gov.ab.ca.

The SRB will not review disputes for damages on the right-of-way. Normally the agreement will stipulate that these types of disagreements will be dealt with by hiring an arbitrator, which produces a binding decision.

If the land is rented, the landowner is entitled to receive the entry fee and compensation for the value of the land. The amount payable to the tenant will be negotiated between the landowner and tenant. If the pipeline goes through the Right of Entry process with the SRB, the SRB will determine the amount paid to the tenant.

Unlike surface leases, landowners typically do not receive an annual rental payment for a pipeline. This is because the annual rental under the *Surface Rights Act* is based on ongoing Loss of Use and Adverse Effect. Loss of Use refers to the inability to use the land, while Adverse Effect refers to the nuisance and inconvenience of having to farm and live around the development. The theory is that once the pipeline is installed there should be no Loss of Use or Adverse Effect to the landowner and therefore no annual rental payment.

Pipeline Safety

Alberta is home to a complex network of pipelines that move oil and gas to markets within our province and beyond our borders. The AER is responsible for ensuring pipeline safety through all of the lifecycle stages of a pipeline, starting with the initial application and continuing through operations until reclamation. The AER regularly inspects pipelines to confirm that operators are monitoring and managing the hazards associated with the particular pipeline. Pipelines with greater risk (such as those that transport sour gas, are near water bodies, or belong to a licensee with a poor compliance record) will undergo a higher level of scrutiny. More information on industry performance is available from the AER.⁶

- **Setbacks**

A “setback” is the minimum distance that infrastructure must be from a pipeline. For provincially regulated oil and gas pipelines, setbacks are determined based on the amount of H₂S, if any, in the proposed pipeline. In general, the setback distance for a sweet gas or oil pipeline is the width of the pipeline right-of-way.

For sour gas or oil, there can be a setback distance to permanent dwellings, unrestricted county developments, urban centres, or public facilities. The size of the setback depends on the volume of H₂S that could be released in the event of an incident. (If the valves determine that there has been a drop in pressure along the pipeline, they can close immediately to stop the flow of gas. The amount of gas between the two valves closest to the rupture is the release volume.) More information on setback distances is available from the AER in the *EnerFAQs: Setbacks*.⁷

- **Emergency Response Planning (ERP)**

The AER requires the company to create a corporate level Emergency Response Plan (ERP) to establish pre-planned procedures that will aid in an effective response to emergencies. The company is expected to determine the level of detail required to address each item in a corporate-level ERP based on the hazards and potential consequences of the emergency scenarios that its operations pose. The company is expected to keep plan current on an ongoing basis.

⁶ Alberta Energy Regulator, *Pipeline Performance* <https://www.aer.ca/data-and-publications/pipeline-performance>

⁷ Alberta Energy Regulator, *EnerFAQs: Setbacks* <https://www.aer.ca/about-aer/enerfaqs/enerfaqs-setbacks>

Each company has a corporate ERP applicable to sweet pipelines. A sour gas or oil pipeline requires a site-specific ERP for the Emergency Planning Zone (EPZ). The EPZ is the radius from a pipeline where people and the environment could be negatively affected in event of a worst-case scenario incident. This size of an EPZ for a pipeline is based on the calculated release volume of H₂S from the pipeline.

The company must ensure that the actual size and shape of the final EPZ reflect:

- site-specific features of the area;
- information gathered during the public involvement program; and
- factors such as population density, topography, and access/egress routes which could affect timely implementation of emergency response procedures within the EPZ.

To create a site-specific EPZ, the company must attempt to obtain information from the residences, businesses, and facilities within the EPZ. They will be looking for information on key contacts, the number of occupants and their ages, and any additional information that may be relevant to establishing an emergency response procedure. Members of the public have the right to refuse to provide personal information, but they should be aware that ultimately the goal of this process is to ensure that the safety plan is well-suited to the specific area and is prepared to manage any specific personal or access challenges of the residents.

- Incidents

All pipeline licensees must comply with the *Pipeline Act*, *Pipeline Rules*, AER directives, and Canadian Standards Association (CSA) Z662 to help ensure safety. The AER requires that licensees have an operations and maintenance manual to guide their day-to-day management of the pipeline and an Integrity Management Program to prevent pipeline failure.

In Alberta, all pipeline incidents, including those in which a pipeline is hit but does not break, must be reported to the AER. Pipeline incidents can be caused by pipeline failures due to corrosion; poor maintenance or construction practices; equipment failures or material defects; environmental incidents (such as ground movement or flooding); or human interference (such as the pipeline behind hit by heavy equipment). Both a leak and a break mean that a substance has escaped from the pipeline, but a leak does not immediately impair the operation of a pipeline. The AER will conduct an incident review in the event that a leak, break, or contact damage occurs during a ground disturbance.

To ensure a pipeline incident receives the proper response, the AER rates incidents as high, medium or low consequence incidents. The findings from AER investigations are open to the public on the Compliance Dashboard.⁸ The AER also conducts regular random inspections of pipelines in Alberta, and they do not require the landowner's consent to access the right-of-way.

If a landowner suspects possible safety problems with the pipeline on their land, they should first attempt to contact the company directly. Regardless of the operating status of the pipeline, there should be readily visible warning and identification signs located where the pipeline crosses roads or water bodies. If no response can be obtained from

⁸ Alberta Energy Regulator, *Compliance Dashboard* <http://www1.aer.ca/compliancedashboard/index.html>

the company, the landowner should contact the AER's 24-Hour Emergency Hotline at 1-800-222-6514.

- Corrosion Mitigation

The AER requires licensees to have procedures in place for internal and external corrosion protection for pipelines made of steel. After construction, the pipeline must be cathodically protected within 1 year. All pipelines have a protective coating applied to the exterior. Internal corrosion is controlled as necessary, usually by the addition of chemical treatment and cleaning, or the installation of a corrosion-resistant barrier coating. The effectiveness of corrosion mitigation measures must be monitored on an ongoing basis.

Pipelines are often cleaned with a device called a "pig," which contains scraper plates and sometimes wire brushes that scour the interior of the pipeline. Electronic measuring devices or "smart pigs" can also be used. These not only clean the pipeline but also collect data about the pipeline's condition, watching for corrosion or any other anomaly that could affect the integrity of the pipeline. Whether or not a smart pig can be used will depend on the age, construction, size, and operation of the pipeline.

- Depth of Cover

The *Pipeline Rules* and Canadian Standards Association (CSA) Z662 specify how much ground cover must be on top of a pipeline. Adequate cover helps ensure the pipeline operates safely and minimizes the risk to public safety. Pipelines constructed today must have a minimum of 0.8 metres of coverage in any space, except within right-of-ways for roads or highways (where depth of cover must be 1.1 metres and 1.4 metres respectively).⁹ Water crossings must have a minimum cover of 1.2 metres.

Depending on the specific situation, the pipeline might need to be buried at a greater depth than the minimum standards in order to be safe. Older pipelines may be buried at a lesser cover than today's standard due to previous requirements at the time of construction or erosion to cover over time. If a landowner feels that the cover associated with a pipeline on their land is diminishing or insufficient, they should bring the concern to the attention of the pipeline company to see if it is at risk.

Always be aware of the location of the pipeline on your land and how your activities may impact it. A landowner should check with Alberta One Call at www.albertaonecall.com or 1-800-242-3447 prior to conducting any ground disturbance.

- Ground Disturbance

Ground disturbance is defined in the *Pipeline Rules* as "*any work, operation or activity that results in the disturbance of the earth, including, without limitation, excavating, digging, trenching, plowing, drilling, tunnelling, augering, backfilling, blasting, topsoil stripping, land levelling, peat removing, quarrying, clearing and grading, but does not include... a disturbance of the earth to a depth of less than 30 centimetres that does not result in a reduction of the earth cover over the pipeline to a depth that is less than the cover provided when the pipeline was installed, [and] cultivation to a depth of less than 45 centimeters below the surface of the ground.*"

Every provincially regulated pipeline has a "controlled area" around it which extends 30 metres on either side of the pipeline. Before a person conducts a ground disturbance in

⁹ Pipeline Rules, Part 2, 20(1)

Alberta, they must first assess whether or not a pipeline exists within 30 metres in any direction of the dig area. To do so, a landowner might look for signage or aboveground equipment, check AER maps, or review the Certificate of Title.¹⁰ An easy way to find out if there are pipelines in the area is to contact Alberta One Call through their website at www.albertaonecall.com or at 1-800-242-3447. Some older pipelines that were installed before the creation of Alberta One Call may not be listed in the system.

If a pipeline is present and ground disturbance is required within the 30 metre controlled area, the excavating party must contact the pipeline licensee so the line can be located and marked for safety. The person wishing to conduct ground disturbance must contact the company at least 2 business days prior to beginning work to provide time for the line to be located and marked. During busy seasons, it may take longer for the locator to come out and mark the lines. This service must be provided at no cost to the landowner.

The ground disturbance requirements are in place to ensure the safety of parties conducting excavation work and to prevent damage to the pipeline. They are minor inconveniences in contrast to the potential harm that might result if they are disregarded. Any party wishing to conduct ground disturbance within the right-of-way must have written permission from the pipeline licensee in addition to the locating and marking. Farmers should note that cultivation to a depth of less than 45 cm is not considered ground disturbance and providing notification is not required.

If a pipeline is exposed during a ground disturbance, the landowner must contact the company 24 hours before backfilling the line. The company should come to inspect the line to ensure that no damage has occurred. In the event that a pipeline is accidentally hit, the landowner should stop their activities immediately and report the incident to the AER and the pipeline company. Even if damage is not immediately visible, striking a pipeline could cause hidden material damage that could result in a leak in the future.

A landowner wishing to cross over the right-of-way with anything larger than the usual agricultural equipment should discuss this with the company first and obtain permission to do so with a crossing agreement. Once the pipeline company has verified that it is safe, no further notice should be necessary. A crossing agreement is not necessary for continued crossing with regular farming equipment, but may be needed if there is a change in the use of the land necessitating larger equipment (i.e. gravel crushing equipment). When in doubt, a landowner should err on the side of caution and check with the company to ensure the safety of the pipeline.

Substance Changes

A company may wish to change the substance flowing within a pipeline. An AER licence is substance specific, so a change in substance requires an amendment to the licence from the AER. In order to get a substance change amendment, the company would need to review the condition of the pipeline. Any differences in setback requirements would require proper notification and consultation with affected landowners.

Pipeline Discontinuation and Abandonment

If a pipeline has not seen active flowing service for 12 months, the company must either abandon or discontinue the pipeline, or return it to service.

¹⁰ Alberta Energy Regulator, *OneStop Public Map Viewer*, <https://extmapviewer.aer.ca/Onestop/Public/index.html>

- *Pipeline discontinuation* is the temporary deactivation of a pipeline or part of a pipeline in a manner that leaves it safe for possible future use. Typically discontinuation involves cleaning out the line and applying a corrosion inhibitor to preserve its integrity for the future. There is no requirement to provide landowner notice for pipeline discontinuation.
- *Pipeline abandonment* is the permanent deactivation of a pipeline in a manner that leaves it safe. When a pipeline is abandoned, it is not intended to be used again in the future. The company must notify certain landowners and occupants when a pipeline is abandoned. In rare and exceptional circumstances, a licence may be granted to resume operations on an abandoned pipeline if the applicant has supported the request with a comprehensive engineering assessment that confirms the pipeline is in satisfactory condition.

The AER can order a company to abandon a pipeline where they feel it is necessary to protect the public or the environment. Whoever carries out the abandonment must notify both the landowner and occupant.

Landowners should be aware that the ground disturbance requirements still apply to abandoned and discontinued pipelines. To maintain safety, one should always treat a pipeline as if it is operating.

When a pipeline is discontinued or abandoned, it will remain in the ground, but it must be disconnected from any operating facility and plugged or capped at any open ends. The line must be cleaned, purged, and left in a safe condition. For abandoned pipelines, any surface equipment that is no longer in use (pig traps, risers, block valves, line heaters, etc.) must be removed unless there is still other operating facilities at the surface location. Warning and identification signage are required for discontinued and abandoned pipelines.

The company must notify the AER for a licence amendment within 90 days of discontinuing or abandoning a pipeline.

Pipeline Resumption

A company may choose to resume operations on a previously discontinued pipeline or pipeline that has not been in active flowing service within the last 12 months. Upon resumption, it must meet the original parameters included in its licence. Abandoned pipelines are not normally candidates for resumption, but can be if AER requirements are met. To resume an abandoned pipeline, the company must obtain Confirmation of Non-Objection from landowners and occupants along the right-of-way and approval from the AER.

Pipeline Removal

Full pipeline removal is defined as the removal of the entire pipeline, including road, railway, and watercourse crossings. If crossings are not being removed, it is considered a partial removal. In either case, the company must notify landowners and submit a baseline review application to the AER. A pipeline must be properly abandoned before it is removed.

The majority of Alberta's oil and gas pipelines remain in the ground after they are done being used unless the right-of-way agreement specifies otherwise. The *Pipeline Act* defaults to leaving pipelines in the ground to lessen the impacts and risks associated with disturbing land.

If a landowner request for pipeline removal is made after negotiations have already been completed, the company is under no obligation to accommodate the request. This is a

particularly important consideration for landowners who have inherited pipeline agreements that they did not sign.

If there is a bona fide conflict between surface usage and an existing pipeline, a landowner may make an application to the AER under section 33 of the *Pipeline Act* for the removal, alteration or relocation of a pipeline. If the AER determines that it is in the public interest to do so, the AER may direct a company to remove, alter or relocate any part of a pipeline. They can also specify who is responsible for the costs. The AER generally does not recommend line removal because it can cause an unnecessary and significant disturbance to soils and the environment.

Pipeline Reclamation

Alberta's *Environmental Protection and Enhancement Act* requires an operator to conserve and reclaim specified land and obtain a Reclamation Certificate. "Specified land" includes land that is used for the construction and operation of a pipeline, including Temporary Work Space (TWS). It is important to understand that the legislated requirement to obtain a Reclamation Certificate applies to the end of the life of a pipeline, not immediately following construction. The company has no legislated obligation to reclaim the pipeline within any particular timeframe. A pipeline may remain abandoned indefinitely prior to reclamation, which is significant in relation to TWS.

The *2010 Reclamation Criteria for Wellsites and Associated Facilities for Cultivated Lands* provides a roadmap for bringing disrupted lands back to "equivalent land capability," which is the ability of the land to support various land uses after conservation and reclamation similar to what existed prior to an activity being conducted on the land.¹¹ The company has no obligation to remove the line.

Upon obtaining a pipeline licence, the company will be required to post a security deposit for reclamation with the AER, which will be returned when the right-of-way is reclaimed. If the company is no longer viable and the pipeline has not been properly abandoned or reclaimed, it will be forwarded to a Working Interest Participant (WIP) – another company with a percentage share in the licence – or the Orphan Well Association (OWA) for abandonment and reclamation. The OWA is funded through levies paid by industry.

Companies have a requirement to maintain the right-of-way regardless of the status of the pipeline (operating, discontinued, abandoned, etc.). Operational complaints at any stage in the lifecycle can be brought to the AER 24/7 Emergency Hotline at 1-800-222-6514.

¹¹ Alberta Energy Regulator, *2010 Reclamation Criteria for Wellsites and Associated Facilities for Cultivated Lands* <http://aep.alberta.ca/land/programs-and-services/reclamation-and-remediation/upstream-oil-and-gas-reclamation-and-remediation-program/documents/2010-ReclamationCriteria-SummaryChanges.pdf>