

Closure – Abandonment, Reclamation, and Remediation:

The Alberta Energy Regulator (AER) provides for the efficient, safe, orderly, and environmentally responsible development of energy and mineral resources in Alberta through our regulatory activities. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans. This fact sheet provides highlights about how the AER regulates the closure of energy resource development.



Why are wells abandoned?

Wells are abandoned for numerous reasons, most commonly because they are no longer needed to support oil and gas development or because an operator's mineral lease has expired.



How are wells abandoned?

Licensees are required to ensure that wells will not pose any risk to the environment or the public once abandoned. If any issues are found, the licensee must make all necessary modifications, according to AER requirements, before abandonment.

The AER's *Directive 020: Well Abandonment* sets strict requirements to maintain the long-term integrity of abandoned wells. To ensure the safe and effective abandonment of oil and gas wells, all operators must complete the following steps:

1. Create an abandonment plan that identifies any wellbore integrity issues, all oil or gas formations, and all groundwater zones.
2. Evaluate the cement present in the well.
3. Repair any identified wellbore issues, plug any completed production zones, and isolate all porous and groundwater zones.
4. Fill the well with nonsaline water, or other noncorrosive fluid, and assess to ensure its long-term integrity.
5. "Cut and cap" the well: this final step in the abandonment process involves cutting the well casing a minimum of one metre below the surface and placing a vented cap on top of the well casing.



What about abandoned wells near surface structures?

The Government of Alberta, through Alberta Municipal Affairs, maintains the *Subdivision and Development Regulation (SDR)*, which requires developers and property owners applying for a subdivision or development permit to identify the location of abandoned wells during planning and to appropriately address them in the proposed development.

The AER's *Directive 079: Surface Development in Proximity to Abandoned Wells* supports the SDR by

- setting out minimum setback requirements from abandoned wells to surface structures;
- presenting important information for municipal officials, planners, development officers, and applicants for subdivision or development approval about abandoned oil and gas wells licensed by the AER;
- providing guidance for municipalities to ensure that abandoned wells are identified and appropriately located within subdivisions and developments;
- setting out the AER's requirements of the oil and gas industry to locate and test abandoned wells;
- providing instructions on obtaining the necessary abandoned well information from the AER; and
- detailing the protocol for locating and testing abandoned wells.



What happens to the land once a well is abandoned?

Alberta's *Environmental Protection and Enhancement Act (EPEA)* requires operators to conserve and reclaim specified land and get a reclamation certificate. These certificates are issued to operators when their sites have been successfully reclaimed. Once a well, pipeline, or facility has been properly abandoned, surface reclamation can begin.

Regulations and guidelines are in place outlining the specific criteria for remediation and reclamation certificates.

To receive a reclamation certificate, the operator must remediate and reclaim the site and provide reports to prove the work was done to the required standards.

The AER audits sites after a reclamation certificate is issued. The audit can either be an on-site surface audit, an on-site subsurface contamination audit, or an off-site desktop audit of the application information. A failed audit can result in the cancellation of reclamation certificates; certificates may also be cancelled following complaints from a landowner or occupant or if the site does not meet remediation or reclamation criteria.



How long are operators responsible?

Operators have a 25-year liability for surface reclamation issues (topography, vegetation, soil texture, drainage, etc.) and a lifetime liability for contamination.



Who pays for it?

Industry is responsible for the closure of oil and gas infrastructure and sites. Licensees and their working interest participants pay for closure of their sites.

The AER works collaboratively with government and industry stakeholders to develop and implement appropriate liability management programs for all energy sectors. For the oil and gas sector, the new liability management framework introduced the Inventory Reduction Program. Closure quotas reduce inactive inventory by providing licensee-specific mandatory closure spend to address abandonment, remediation, and reclamation of their liabilities so that Albertans are not left with the costs of abandoned wells or other infrastructure.

The Orphan Well Association (OWA) manages the abandonment of upstream oil and gas wells, pipelines, facilities, and the remediation and reclamation of their associated sites licensed to defunct operators. The OWA may also provide reasonable care and measures to oil and gas sites when required. As a nonprofit, the association is funded by an annual levy paid by industry based on a calculation of their share of industry liability.

Where can I get more information?

For information on assessed and reclaimed sites throughout Alberta, please reach out to our Customer Contact Centre at inquiries@aer.ca. For more information on abandonment, reclamation, and remediation, visit aer.ca.

 **Inquiries** 1-855-297-8311

 **24-hour emergency** 1-800-222-6514

 inquiries@aer.ca

Find out more at aer.ca

