

A person wearing a yellow hard hat and a high-visibility yellow vest over a grey long-sleeved shirt is seen from behind, looking out over a vast, hilly landscape under a cloudy sky. The person has long brown hair tied in a ponytail.

# Pipeline Performance Summary

2025 Annual Report

**BCER**

## Our Role

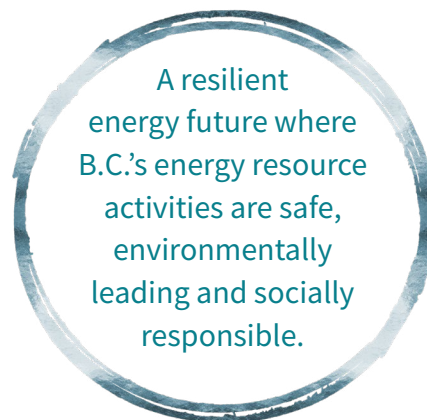
The [British Columbia Energy Regulator](#) (BCER) oversees the full life cycle of energy resource activities in B.C., from site planning to final restoration. Our role includes the regulation of natural gas, oil, hydrogen, ammonia, methanol and renewable energy sources such as geothermal, solar and wind power.

Our authority is established by way of the [Energy Resource Activities Act](#) (ERAA) and additional legislation related to heritage conservation, roads, land and water use, forestry, and other natural resources. We work to ensure industry compliance with provincial legislation to protect public safety and the environment, support reconciliation with Indigenous peoples, conserve energy resources and foster a sound economy and social well-being.

Our employees work out of seven locations to ensure our presence near energy resource activities: Fort Nelson, Fort St. John, Dawson Creek, Terrace, Prince George, Kelowna and Victoria.

[We acknowledge and respect the many First Nations, each with unique cultures, languages, legal traditions and relationships to the land and water, on whose territories the BCER's work spans.](#)

## Vision



## Mission

We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:

- Protects public safety and the environment
- Supports reconciliation with Indigenous peoples and the transition to low-carbon energy
- Conserves energy resources
- Fosters a sound economy and social well-being

## Values

**Respect** is our commitment to listen, accept and value diverse perspectives.

**Integrity** is our commitment to the principles of fairness, trust and accountability.

**Transparency** is our commitment to be open and provide clear information on decisions, operations and actions.

**Innovation** is our commitment to learn, adapt, act and grow.

**Responsiveness** is our commitment to listening and timely and meaningful action.



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# Introduction

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## Purpose of Report

British Columbia's energy resource industry depends on [pipelines](#) for the distribution of products such as natural gas, water and oil. Pipelines are recognized as a safe and efficient mode of transportation and secure operation is essential to protecting public safety and the environment.

This report provides an overview of pipelines regulated by the BCER in the 2025 calendar year. It includes data on types of pipelines, lengths, uses and pipeline incident rates. The multi-stage life cycle of a pipeline is explained and incident response protocols are outlined. It also summarizes the Integrity Management Program, a documented framework outlining the practices by which the BCER ensures permit holders inspect and maintain pipelines to mitigate potential integrity issues.

Previous annual pipeline performance summaries can be found on the BCER's website at [bc-er.ca/data-reports/reports/](https://bc-er.ca/data-reports/reports/).

## Pipeline Regulation

The BC Energy Regulator's jurisdiction extends to the majority of pipelines in British Columbia, as defined in legislation by the [Energy Resource Activities Act \(ERAA\)](#). Activities regulated by the BCER extend throughout the life cycle of a pipeline and include pre-activity consultation and notification, permitting, construction, operation, maintenance and abandonment.

Pipelines outside the BCER's jurisdiction include those crossing provincial and/or national borders and low-pressure pipelines owned by a utility company that are downstream of a city gate. City gates are facilities where high pressure natural gas from transmission lines is metered and reduced to a lower pressure for consumers and distributed through pipelines. Pipelines not under the BCER's jurisdiction are not addressed in this report.

Pipelines are regulated under the [Pipeline Regulation](#), which states they must be operated and maintained in accordance

with [CSA Z662](#) – Oil and Gas Pipeline Systems. CSA Z662 is a national standard developed and maintained by the CSA Group (CSA) and covers the design, construction, operation and maintenance of oil and gas industry pipeline systems.

Permit holders are required to comply with other applicable regulations including the [Environmental Protection and Management Regulation](#), [Requirements for Consultation and Notification Regulation](#), [Pipeline Crossings Regulation](#) and [Emergency Management Regulation](#).

The BC Energy Regulator is also responsible for provincial authorizations involving the Land Act, Water Sustainability Act and the Forest Act for pipeline rights-of-way, roads, land clearing and other minor works.

The [Legislative Framework](#) page of the BCER's website provides a list of acts and regulations governing energy resource activities in the province.

## Pipeline Inventory

### 54,827 Kilometres

Despite an increase in the total pipeline length inventory, there was a decrease in the number of actively operating pipelines as a result of permit holders’ continued efforts to appropriately deactivate and abandon older pipelines.

Pipelines transport refined and unrefined products including natural gas, sour natural gas, liquid hydrocarbons (such as crude oil), water and other gases or liquids. Over 77 per cent of the total active pipeline kilometres regulated by

the BCER transport natural gas, while 11 per cent carry liquid hydrocarbons. The remainder carry water or other gases or liquids. Pipeline definitions and product classifications are available in the Glossary on page 16.

| PIPELINE TYPE       | TOTAL  | ACTIVE | DEACTIVATED | ABANDONED |
|---------------------|--------|--------|-------------|-----------|
| SOUR NATURAL GAS    | 18,486 | 9,333  | 4,205       | 4,948     |
| NATURAL GAS         | 23,947 | 17,771 | 2,242       | 3,934     |
| LIQUID HYDROCARBONS | 6,203  | 3,451  | 1,369       | 1,383     |
| WATER               | 5,210  | 3,817  | 514         | 879       |
| OTHER               | 981    | 557    | 179         | 245       |
| 2025 GRAND TOTAL    | 54,827 | 34,929 | 8,509       | 11,389    |

| PIPELINE TYPE       | TOTAL  | ACTIVE | DEACTIVATED | ABANDONED |
|---------------------|--------|--------|-------------|-----------|
| SOUR NATURAL GAS    | 18,358 | 10,654 | 3,400       | 4,304     |
| NATURAL GAS         | 23,788 | 18,303 | 2,097       | 3,388     |
| LIQUID HYDROCARBONS | 6,129  | 3,528  | 1,431       | 1,170     |
| WATER               | 4,991  | 3,760  | 498         | 733       |
| OTHER               | 1,004  | 593    | 192         | 219       |
| 2024 GRAND TOTAL    | 54,270 | 36,838 | 7,618       | 9,814     |

#### Table 1 comparison of 2025 to 2024:

The total length of pipelines in 2025 was 54,827 km. This is a net addition of 557 km of total registered pipelines over the previous year.

Active pipelines decreased by 1,909 km. This indicates more deactivations and abandonments than permitting, construction and activation of new lines.

Deactivated pipelines increased by 891 km.

Abandoned pipelines increased by 1,575 km. As pipelines reach the end of their service life and are fully decommissioned, the total length of abandoned pipelines will increase over time.

Table 1: Total Lengths (km) of Pipelines by Type and Status, 2025 and 2024.



# Pipeline Life Cycle

## Multi-Stage Planning

From the development of surface maps and creation of a preliminary pipeline plan, through construction and inspections, to deactivation and final site restoration, the steps described here depict the multiple stages of a typical pipeline life cycle.

At the outset, the BC Energy Regulator's staff conduct a comprehensive review of each pipeline application for engineering standards, legal requirements and for environmental and public safety considerations. The BCER ensures proponents have conducted consultations with landowners and other rights holders on pipeline projects that will directly affect them. The BCER is responsible

for undertaking consultation with First Nations, consistent with the Crown's legal duty to consult and avoid, mitigate and accommodate any impacts to First Nations rights. The BCER also requires permit holders to engage affected First Nations on permit applications prior to submitting an application for review.

The BCER is committed to respecting Indigenous knowledge and advancing reconciliation. If a pipeline application is approved, the BCER's staff may set permit conditions, as necessary, to protect Indigenous rights and key environmental assets, such as water, wildlife and forest values.

The BCER verifies pipelines are constructed and operated in accordance with applicable regulations and monitors the project throughout its life cycle. Should any deficiencies be identified at a site, the BCER may order the permit holder to cease activities, as necessary, until appropriate actions are performed to safely resume operations.

As detailed in the BCER's mandate and considering the many stages of a pipeline's life cycle, the protection of public safety and the environment is top priority. Permit holders are required to report to the BCER before, during and upon completion of their energy resource activities.



Pipelines are operated under a framework designed to help prevent spills. The pipeline Integrity Management Program (IMP) is a required part of this framework, described on [page 7](#).

# Integrity Management Program

## Compliance Assurance

To ensure public safety, environmental protection and operational reliability, the [Pipeline Regulation](#) requires all pipeline permit holders in the province to implement an Integrity Management Program (IMP). A pipeline IMP is a preventative and documented framework, specifying the processes and practices used by pipeline permit holders to anticipate hazards and analyze and manage risks throughout the entire life cycle of pipelines. The IMP incorporates a management system approach.

Section 7 of the Pipeline Regulation states every pipeline permit holder planning, designing, constructing, operating, maintaining and abandoning pipeline infrastructure, must have an implemented IMP program. A compliance assurance protocol is available to permit holders, outlining the BCER's Compliance Assurance Integrity Management Program expectations and operating requirements expected of permit holders and provides guidance for developing, implementing and maintaining effective IMPs.

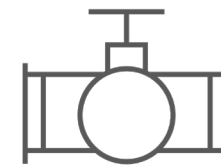
Details of the compliance assurance process and scope of the protocol can be viewed on the BCER's website. The BCER also publishes an annual [Pipelines and Facilities Integrity Management Program Audit Summary](#).

The BC Energy Regulator has been evaluating the compliance of permit holders' IMP programs to regulations and expectations since 2011, through auditing. The auditing process occurs using a standardized IMP compliance assurance process. Compliance Assurance Protocol documentation for both pipelines and facilities is available on the BCER [IMP webpage](#).

Permit holders are selected for audit based on the BCER's criteria, and are notified and requested to submit IMP workbooks and records for the audit. The next phase consists of audits involving systematic review of permit holders' IMP processes, records and documents in order to verify compliance and generate audit findings. The final phase allows for

corrective action plans and follow-ups to address any non-compliance findings identified through the audits.

Where non-compliances are identified, permit holders are required to develop and implement corrective actions to address the deficiencies within a timeframe specified and agreed to by the BCER. Each corrective action is monitored and assessed to ensure all findings of non-compliance are fully resolved through a structured oversight process.



The BCER will continue to undertake IMP audits for all pipeline permit holders to ensure a systematic IMP is applied throughout the entire pipeline life cycle.

# Incident Response and Enforcement Actions

An incident is a situation that might be, or could lead to, a disruption, loss, emergency or crisis.

Permit holders must communicate all reportable incidents to the BC Energy Regulator. Minor incidents must be reported within 24 hours, while incidents with a higher risk assessment must be reported immediately (within one hour). The BCER's [Incident Classification Matrix](#) outlines spill reporting criteria and how incident levels are assessed, determined and reported.

Any person aware spillage is occurring or believes there is the potential for spillage, can provide assistance by calling the operating company listed on the on-site signage and identifying the location of the pipeline or by calling the BCER's 24/7 emergency number at 1-877-500-BCER (2237).

The BCER responds to all incidents, establishing communication with the permit holder, confirming the incident level and assessing the permit holder's response. BCER staff further determine what remedial actions must be taken, whether a pipeline can continue to operate safely and whether compliance or enforcement actions are required.

Subsequent incident investigations allow the BCER to confirm the cause and any contributing factors and whether repairs or solutions should be broadly communicated to all other permit holders to prevent similar incidents from occurring. Inspections may also be triggered by public enquiries and incidents reported to the BCER.

When required, orders, tickets and/or penalties are issued to the permit holder. The BCER posts its enforcement actions in a timely manner on its [Compliance and Enforcement](#) webpage.



**Orders** - issued if a permit holder fails to comply with ERAA, associated regulations, permits or authorizations, a previous order or to deal with issues of public safety or protection of the environment.

**Tickets** - issued under the authority of provincial acts, including the Water Sustainability Act.

**Administrative Penalties** - levied in the event of a contravention of ERAA.

**Charges** - recommended to Crown counsel for prosecution and possible court conviction.



# Pipeline Incidents and Emergency Response Programs

To coordinate and prepare for incidents in advance, permit holders must develop and maintain Emergency Response Programs (ERPs) and emergency response plans, as directed in the [Emergency Management Regulation](#) (EMR) under ERAA.

ERPs guide the creation, management and implementation of a permit holder's emergency response plan, allowing for quick access to critical information, coordination of multiple-responder activities and identification of predetermined equipment and services available for deployment in an emergency.

They equip incident responders with hands-on training and emergency response exercises, ensuring personnel understand their incident command structure, communication methods and responsibilities in an emergency event.

The BCER reviews ERPs to ensure consistent compliance with the EMR and oversees and may participate in permit holder emergency response exercises. Should a permit holder's emergency protocols fail to meet requirements, the BCER may utilize compliance and enforcement actions, which can include

issuing orders, penalties or shutting-in a pipeline system.

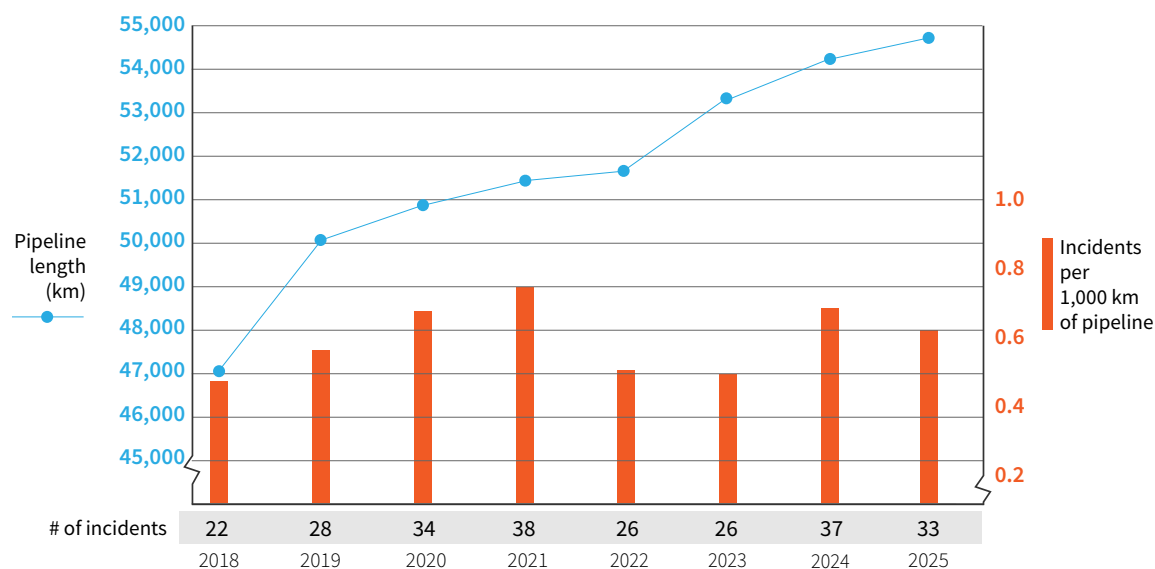
The requirements in the EMR are designed to create a framework for the protection of the public, emergency responders, property and the environment from incidents occurring due to energy resource activities. Although emergency preparation, equipment and protocols help reduce the rate of incidents, the BCER strives to continually improve emergency management measures.

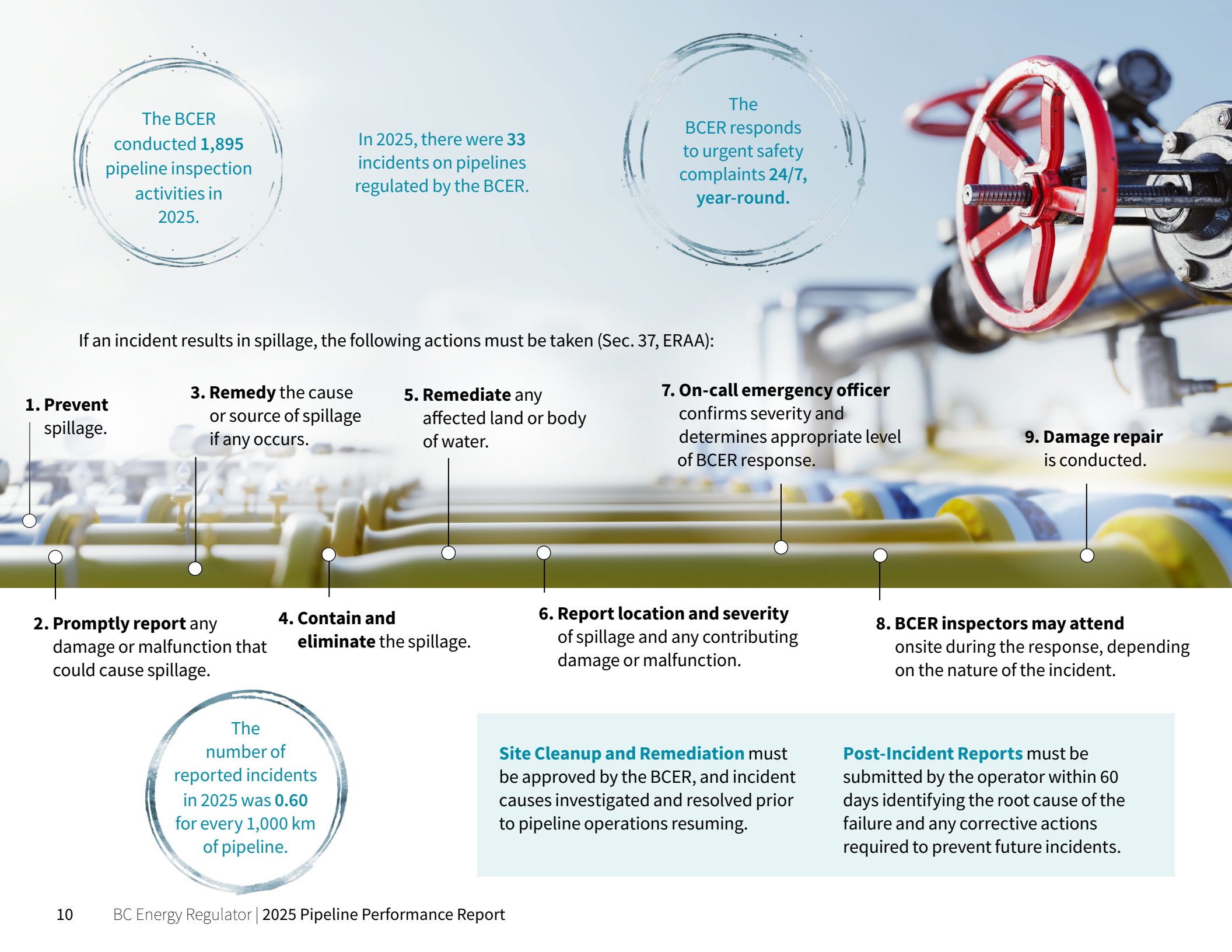
In 2025, there were 33 incidents on pipelines regulated by the BCER; however, not all led to the release of a product. Figure 1 shows an overall incident frequency of 0.60 for every 1,000 km of pipelines, a decrease from 0.68 in 2024.

As stated, not all incidents result in a spill or release of a product. In 2010, the implementation of OGAA (later ERAA) led to broader reporting criteria, meaning all incidents – including those that have the potential to affect the integrity of a pipeline but did not cause spillage – must be reported.

Additional information regarding emergency response and management, including guidelines and forms, is available on the BCER's Emergency Response & Safety [webpage](#).

Figure 1: Year-to-Year Incident Frequency vs. Total Pipeline Inventory





The BCER conducted **1,895** pipeline inspection activities in 2025.

In 2025, there were **33** incidents on pipelines regulated by the BCER.

The BCER responds to urgent safety complaints **24/7, year-round.**

If an incident results in spillage, the following actions must be taken (Sec. 37, ERAA):

- 1. Prevent** spillage.
- 2. Promptly report** any damage or malfunction that could cause spillage.
- 3. Remedy** the cause or source of spillage if any occurs.
- 4. Contain and eliminate** the spillage.
- 5. Remediate** any affected land or body of water.
- 6. Report location and severity** of spillage and any contributing damage or malfunction.
- 7. On-call emergency officer** confirms severity and determines appropriate level of BCER response.
- 8. BCER inspectors may attend** onsite during the response, depending on the nature of the incident.
- 9. Damage repair** is conducted.

The number of reported incidents in 2025 was **0.60** for every 1,000 km of pipeline.

**Site Cleanup and Remediation** must be approved by the BCER, and incident causes investigated and resolved prior to pipeline operations resuming.

**Post-Incident Reports** must be submitted by the operator within 60 days identifying the root cause of the failure and any corrective actions required to prevent future incidents.

# Releases and Spills

## 2025 Statistics

Of the 33 incidents on pipelines in 2025, 26 resulted in a release or spill, one more than in 2024.

For incidents involving a release or spill, Table 2 shows the highest number of releases occurred on pipelines categorized as ‘natural gas’ which had 9 incidents, the majority of which were very small leaks identified by permit holders during leak survey activities.

In the event of a pipeline gas release or liquid spill, the BCER oversees all corrective actions to ensure safe operation is completed before operations resume. The BCER also oversees cleanup activities associated with liquid spills to ensure contaminated sites are adequately remediated.

| PIPELINE TYPE    | # of Incidents with Release | Length of Pipeline (km) | Frequency (per 1,000 km) |
|------------------|-----------------------------|-------------------------|--------------------------|
| SOUR NATURAL GAS | 1                           | 18,486                  | 0.05                     |
| NATURAL GAS      | 9                           | 23,947                  | 0.38                     |
| LIQUID           |                             |                         |                          |
| HYDROCARBONS     | 8                           | 6,203                   | 1.29                     |
| WATER            | 7                           | 5,210                   | 1.34                     |
| OTHER            | 1                           | 981                     | 1.02                     |
| TOTAL            | 26                          | 54,827                  | 0.47                     |

Table 2: Total Number of Incidents with Release per 1,000 km by Type of Pipeline in 2025

## Incident Causes

Table 3 on [page 13](#) summarizes incidents by failure cause. Historically, metal loss (corrosion) has been the leading cause of pipeline incidents, however in 2025 the leading cause was fitting failures contributing to 10 incidents, while metal loss contributed to 8 incidents. Review of the fitting failure data indicates that the failures were not severe, but rather component failures resulting in minor leaks. The BCER continues to monitor incident causes to identify opportunities to further drive reductions in incident frequency and severity. The interactive web-based BCER [Pipeline Incident Map](#) provides the location of pipeline incidents dating back to 2009. It includes data on pipeline spills, releases and damage to active and discontinued pipelines.



## Moving Forward

The BC Energy Regulator's priority is continual improvement in safety standards and reduction of incidents to serve the public and the environment, while fostering responsible development.

As tools are developed and operationalized to elevate pipeline performance, spill preparedness, and emergency response capabilities, learnings will continue to be shared across the BCER and with stakeholders and experts throughout industry to successfully meet the demands of a strong safety culture.



Table 3: Classification of Pipeline Failures

| INCIDENT CAUSE                          | DEFINITION                                                                                                       | 2025      | 2024      | 2023      | 2022      | 2021      |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|
| METAL LOSS                              | WALL THICKNESS REDUCTION DUE TO CORROSION OR OTHER CAUSES                                                        | 9         | 13        | 13        | 8         | 11        |
| <b>PIPELINE/EQUIPMENT FAILURE</b>       |                                                                                                                  |           |           |           |           |           |
| CRACKING IN PIPE                        | MECHANICALLY DRIVEN OR ENVIRONMENTALLY ASSISTED CRACKING                                                         | 1         | 2         | 1         | 2         | 3         |
| PIPE FITTINGS/JOINT FAILURE             | FAILURE IN VALVE, WELD, FLANGE, ETC.                                                                             | 10        | 8         | 5         | 5         | 4         |
| <b>TOTAL PIPELINE/EQUIPMENT FAILURE</b> |                                                                                                                  | <b>11</b> | <b>10</b> | <b>6</b>  | <b>7</b>  | <b>7</b>  |
| <b>EXTERNAL INTERFERENCE</b>            |                                                                                                                  |           |           |           |           |           |
| THIRD PARTY INTERFERENCE                | INTERFERENCE BY SOMEONE OTHER THAN OPERATING COMPANY OR ITS EMPLOYEES/CONTRACTORS                                | 0         | 1         | 1         | 1         | 2         |
| COMPANY                                 | INTERFERENCE BY OPERATING COMPANY OR ITS EMPLOYEES/ CONTRACTORS                                                  | 4         | 2         | 1         | 3         | 4         |
| VANDALISM                               | INTERFERENCE CAUSED WILLFULLY                                                                                    | 0         | 0         | 0         | 0         | 1         |
| <b>TOTAL EXTERNAL INTERFERENCE</b>      |                                                                                                                  | <b>4</b>  | <b>3</b>  | <b>2</b>  | <b>4</b>  | <b>7</b>  |
| <b>OTHER CAUSES</b>                     |                                                                                                                  |           |           |           |           |           |
| MATERIAL MANUFACTURING OR CONSTRUCTION  | DEFECTS IN THE FITTING, CONSTRUCTION, OR COMPONENTS                                                              | 3         | 1         | 2         | 1         | 0         |
| GEOTECHNICAL FAILURE                    | LOSS OF INTEGRITY DUE TO GEOTECHNICAL EFFECT, FOR EXAMPLE, SLOPE MOVEMENT                                        | 2         | 1         | 0         | 1         | 0         |
| EXTERNAL FACTORS                        | EVENTS WITH POTENTIAL TO CAUSE LOSS OF INTEGRITY INCLUDING PIPELINE EXPOSURES, LANDSLIDES, ETC., WITHOUT FAILURE | 3         | 7         | 1         | 2         | 10        |
| IMPROPER OPERATION                      | DECISION ERROR MADE BY OPERATING COMPANY DURING SERVICE                                                          | 1         | 2         | 2         | 2         | 2         |
| OVERPRESSURE                            | FAILURE CAUSED DUE TO OVERPRESSURE OF PIPE                                                                       | 0         | 0         | 0         | 1         | 1         |
| <b>TOTAL OTHER CAUSES</b>               |                                                                                                                  | <b>9</b>  | <b>11</b> | <b>5</b>  | <b>7</b>  | <b>13</b> |
| <b>TOTAL INCIDENTS</b>                  |                                                                                                                  | <b>33</b> | <b>37</b> | <b>26</b> | <b>26</b> | <b>38</b> |
| TOTAL LENGTH OF PIPELINE (KMS)          |                                                                                                                  | 54,827    | 54,270    | 53,377    | 51,628    | 51,454    |
| FREQUENCY (PER 1,000 KMS)               |                                                                                                                  | 0.60      | 0.68      | 0.49      | 0.50      | 0.74      |

# Glossary

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**Pipeline:** pipelines regulated by the BCER are defined in [ERAA](#) (except in Section 9) as piping through which any of the following is conveyed or transported:

- Petroleum or natural gas.
- Water produced in relation to the production of petroleum or natural gas or conveyed to or from a facility for disposal into a pool or storage reservoir.
- Solids.
- Substances prescribed under Section 133 (2)(v) of the [Petroleum and Natural Gas Act](#).
- Other prescribed substances.

The scope of the definition also includes installations and facilities associated with the piping, but does not include:

- Piping used to transmit natural gas at less than 700 kilopascals (kPa) to consumers by a gas utility as defined in the [Gas Utility Act](#).
- A well head.
- Anything else that is prescribed.

**Abandoned Pipeline:** pipelines removed from service and not maintained for a later return to service.

**Active Pipeline:** pipelines actively used for the transport of fluids related to energy resource operations and piping that has been suspended from service for less than 18 months but not formally deactivated.

**Deactivated Pipeline:** pipelines removed from service but maintained for a later return to service.

**Crude Oil and Sour Crude Oil:** Crude oil is the raw, unprocessed oil from a well. Crude oil is sent to refineries to be converted (refined) into petroleum products used as fuel.

**m<sup>3</sup>:** a measure of volume - cubic metres: 1m x 1m x 1m: 1,000 litres.

**Natural Gas:** includes natural gas, sweet gas and fuel gas. Consisting mostly of methane, natural gas is a colourless, odourless, flammable gaseous hydrocarbon. Mercaptans (organic components of hydrocarbons with sulphur) are added to natural gas for consumer use, allowing for detection of natural gas leaks by the ‘rotten egg’ smell.

**Other:** miscellaneous gases and liquids such as oil emulsion and effluent.

**Pipeline Permit:** a permit that includes permission to construct, maintain and operate a pipeline.

**Reportable Incident:** for the purpose of this report, a present, imminent, or emerging event or circumstance resulting from an

energy resource activity that is outside of the scope of normal operations and may result in, or lead to, a disruption, loss, emergency or crisis.

**Shut-In:** the isolation or closure of a well zone, a pipeline or a facility. For example, the temporary shut-in of a well allows for the analysis of such factors as a well’s productive capacity, pressure and permeability.

**Sour Natural Gas:** natural gas with a hydrogen sulphide (H<sub>2</sub>S) partial pressure greater than 0.3 kilopascals.

**Spill:** as defined in ERAA; petroleum, natural gas, oil, solids or other substances escaping, leaking or spilling from a pipeline, well, shot hole, flow line or facility (or any source apparently associated with any of those substances).

**Water:** fresh water, produced water and sour water. Produced water is water that comes out of an oil and gas well during the production process. Produced water is often re-injected underground for safe disposal or treated for reuse or discharge.





BRITISH COLUMBIA **ENERGY** REGULATOR

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