

# Directive 011

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## Estimated Liability

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## 1 Introduction

### 1.1 Purpose of This Directive

The Alberta Energy Regulator (AER) reviews, updates, and publishes estimated liability as required. This directive

- explains the purpose of estimating liability,
- outlines how estimated liability is used by the AER,
- details the requirements for estimating liability,
- provides clarity on how liability is estimated when costs are determined by the AER, and
- describes the orphan fund levy and licences included in the levy.

### 1.2 AER Requirements

Requirements are mandatory. The term “must” indicates a requirement, and terms such as “should,” “recommends,” and “expects” indicate a recommended practice. For ease of reference, requirements are numbered. Information on compliance and enforcement can be found on the AER website.

Because oilfield waste management facilities are included in the scope of this directive, but are approved rather than licensed, the terms “licence” and “licensee” are to be read as also including oilfield waste management approvals and oilfield waste management approval holders. The term “facility” includes oilfield waste management facilities.

### 1.3 What's New in This Edition

This edition

- enables exceptions for when no additional well event sequence costs will be applied,
- clarifies that the groundwater protection liability assessment includes evaluating primary cementing information and the data source for the base of groundwater protection depths, and
- indicates use of current estimated liability values when making decisions unless otherwise stated.

## 2 What Is Liability

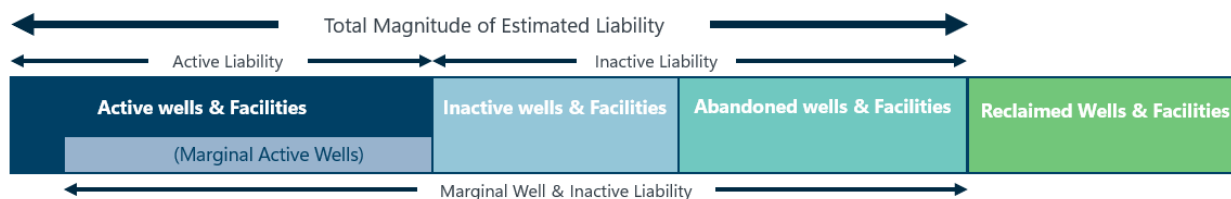
The AER uses the term “liability” in its regulatory instruments to refer to both the legal responsibility to safely close and clean up energy development sites as well as the estimated cost to do so. The legal responsibility to safely close and clean up energy development sites is inherent in those sites from the moment land disturbance for resource extraction begins. The actual cost to complete this work, however, will not be known until this work is completed. Accordingly, liability assigned by the regulator before this work is completed is based on the estimated cost to suspend, abandon, remediate, and reclaim a site, as well as provide reasonable care and measures from shutdown of operations through to site reclamation. Where possible in this directive, we have tried to make this distinction clear by referring to “estimated liability” to describe the estimated costs of closure work.

## 3 What Is Estimated Liability

Estimated liability is the estimated cost to safely close an energy development site at the end of its life cycle. This includes the costs of completing each closure stage: abandonment (including decommissioning), remediation (if applicable), and reclamation. A licensee’s magnitude of estimated liability includes the total estimated liability of all of its infrastructure.

Estimated liability is assigned when a licence is issued. It is important to consider liability before and throughout the energy development life cycle. A licensee’s liability changes through the energy development life cycle and can increase as more disturbances occur, more infrastructure is added, when contamination occurs, or liability is transferred to the licensee. Liability can decrease during the closure stages and once a reclamation certificate or equivalent is issued. Estimated liability is

assessed daily with new information received, generally impacting estimates the following day. The various types of liability are shown in figure 1.



**Figure 1. Types of liability**

Inactive liability is the estimated liability associated with inactive wells and facilities as well as abandoned/decommissioned wells and facilities.

- An inactive well is defined in [Directive 013: Suspension Requirements for Wells](#), and an inactive facility is defined as facilities with no activity for 12 months. The inactive wells and facilities have estimated liability associated with the cost of abandonment, remediation (if applicable), and reclamation.
- An abandoned well or facility is when the licence status is “abandoned.” They still have estimated liability associated with the cost of remediation (if applicable) and reclamation.

Active liability is the estimated liability for wells and facilities that are not included in inactive liability. This includes newly issued licences. Active wells and facilities have estimated liability associated with the cost of abandonment, remediation (if applicable), and reclamation.

Marginal liability is the estimated liability for marginal wells and is a subset of active liability. A marginal well is defined as a well producing 1.59 cubic metres (m<sup>3</sup>) of oil equivalent per day (ten barrels of oil equivalent per day) or less. This estimated liability includes the cost of abandonment, remediation (if applicable), and reclamation.

#### 4 Methods for Determining Estimated Liability

The AER uses two methods for determining estimated liability:

- Regional costs are an average cost or reasonable representation of costs for a specific group of licences (see section 5).
- Costs determined by a site-specific liability assessment (SSLA), which is prepared by the licensee (see section 6).

Appendix 1 lists the estimation methods used for different licence types.

## 5 Regional Costs

Regional costs use a single value to represent a group of similar licences; some licences will inevitably have costs that are different than the estimate. The regional values published in this directive are the values that will be used by the AER for estimating liability.

In instances where licensees can abandon or reclaim at a cost that is different than the estimates being used, it is important that licensees submit closure spending to the AER as required in [Directive 088: Licensee Life-Cycle Management](#) when that work is completed so that they can be used to update estimates in the future. Licensee- or licence-specific costs will not be used to change the regional costs for estimated liabilities upon request. For site-specific estimated liability, refer to section 6.

The regional estimated liability of a well or facility is the sum of its abandonment and reclamation liability. Although the estimated liability is broken into these two components, it represents all stages of closure (suspension, abandonment, remediation, and reclamation). A reclamation-certified or reclamation-exempt well or facility will have no estimated liability assigned.

Well abandonment costs in section 5.1.1 are based on closure spending data reported by industry and the Orphan Well Association (OWA) and were updated June 26, 2024. Regional cost estimates are outlined in sections 5.1 and 5.2 of this directive and will only be changed with updates to this directive or through the adjustments to estimated liability outlined in sections 5.1.1.1, 5.1.1.2, and 7.2. All other costs are based on older methods of determining costs such as consultants and voluntary cost surveys conducted by the AER.

Separate maps are used for determining regional abandonment costs (appendix 2) and regional reclamation costs (appendix 3).

### 5.1 Regional Well Estimated Liability

#### 5.1.1 Well Abandonment Cost Parameters

The base estimated liability for well abandonment considers the well's geographic location, depth, and downhole completion scenario. The costs are outlined in table 1.

- Geographic location is based on the regional abandonment cost map in appendix 2.
- Depth considers a well's total depth, vertical depth, and plug back depth. If the well has a plug back depth, that will be used; if not, the vertical depth will be used; if there is no vertical depth, then the total depth is used.
- Downhole completion scenario considers various pieces of information such as fluid type and status type (e.g., a crude oil pumping well is assessed in the tubing and rods scenario, while a

gas flowing well is assessed in the tubing-only scenario). In the case of a suspended well, the last reported operational status issued will be used.

A well that is abandoned, with licence status of “abandoned,” will not have an abandonment component included in its estimated liability calculation.

**Table 1. Regional well abandonment cost**

**Area 1. Medicine Hat**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
All	\$11 252	\$15 801	\$24 588	\$37 073

**Area 2. Calgary/Edmonton**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 300	\$15 956	\$30 665	\$43 314
1200–1999	\$13 300	\$32 925	\$45 966	\$59 798
2000–2499	\$13 300	\$50 492	\$70 707	\$84 610
2500+	\$13 300	\$66 164	\$108 817	\$130 881

**Area 3. Drayton Valley/Grand Prairie**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 500	\$23 692	\$44 235	\$50 294
1200–1999	\$13 500	\$57 997	\$82 457	\$84 113
2000–2499	\$13 500	\$69 125	\$94 560	\$109 050
2500–2999	\$13 500	\$78 995	\$124 206	\$129 626
3000+	\$13 500	\$139 342	\$157 690	\$267 915

**Area 4. Lloydminster**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
All	\$12 800	\$36 134	\$41 932	\$42 104

**Area 5. Athabasca/Peace River**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 500	\$34 542	\$57 380	\$88 727
1200–1999	\$13 500	\$45 399	\$81 964	\$89 551
2000–2499	\$13 500	\$61 282	\$95 885	\$99 982
2500+	\$13 500	\$94 667	\$155 633	\$172 333

**Area 6. High Level**

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$17 400	\$43 494	\$50 931	\$239 197
1200+	\$17 400	\$126 133	\$134 839	\$263 471

After determining the base well abandonment cost, the AER will apply the following estimated liability costs for well abandonment in addition to the base cost, when applicable:

- Additional event sequences (see [Directive 059: Well Drilling and Completion Data Filing Requirements](#)): A well with a single event sequence has no additional event cost. Each additional unabandoned event sequence will be assessed at 25% the base well abandonment cost, except for



- Grasslands Area West \$25 250
- Parklands Area \$27 250
- Foothills Area \$29 250
- Alpine Area \$42 125
- Western Boreal Area \$34 000
- Boreal Area \$23 875

A licensee may establish a multiwell pad for those sites on which it has more than one well on a single surface lease. Wells can be added or removed from the multiwell pad once established. Both the well licences and the surface lease must be held by the same licensee.

The estimated liability for reclamation for wells located on a multiwell pad is 100% of the reclamation cost specified for a well in the regional reclamation cost map area in which the pad is located for the first well plus 10% of that value for each additional well on the same pad.

- 3) To reduce the estimated liability for reclamation, a licensee must submit a multiwell pad notification electronically through the AER’s Digital Data Submission (DDS) system through the Multi Licence Pad (MLP) subsystem.

## 5.2 Regional Facility Estimated Liability

Facility licences identified as using regional costs for estimated liability (appendix 1) use a well equivalency approach to calculate estimated liability for abandonment and reclamation. Table 2 provides the well equivalent for each facility type based on the facility category, fluid type, and licensed design capacity. Well equivalency does not indicate how many wells are connected to the facility.

There is no option to change the estimated liability for a facility when using regional costs. Changes to the estimated liability for a facility can only occur if an SSLA is required (section 6).

**Table 2. Facility well equivalent**

<b>Category/fluid type</b>	<b>Directive 056 category</b>	<b>Licensed design capacity†</b>	<b>Well equivalent</b>
Oil/bitumen or injection/disposal facility	030, 031, 080, 321, 331, 421, 431, 090, 091	0–50 m <sup>3</sup> /day	5
		>50 m <sup>3</sup> , ≤500 m <sup>3</sup> /day	10
		>500 m <sup>3</sup> , ≤3000 m <sup>3</sup> /day	20
		>3000 m <sup>3</sup> /day	40

Category/fluid type	Directive 056 category	Licensed design capacity <sup>†</sup>	Well equivalent
Oil/bitumen satellite	070, 071, 350, 351, 450, 451	Any throughput level	2
Multiwell gas battery	020, 311, 411	0–900 10 <sup>3</sup> m <sup>3</sup> gas inlet/day	10
		>900 10 <sup>3</sup> m <sup>3</sup> /day, ≤2500 10 <sup>3</sup> m <sup>3</sup> /day	20
		>2500 10 <sup>3</sup> m <sup>3</sup> /day	40
Compressor	040, 340, 440	Any throughput level	5

† Design capacity and the related well equivalent is based on the highest historical licensed design capacity associated with the facility.

### 5.2.1 Facility Abandonment Costs

The estimated liability for a facility abandonment is the abandonment cost for each well equivalent multiplied by the well equivalent in table 2. The abandonment cost for each well equivalent is \$17 000. For example, a gas processing facility with a licensed design capacity of 3000 10<sup>3</sup> m<sup>3</sup>/day (40 well equivalent) has an estimated liability for abandonment of \$680 000 (40 well equivalent × \$17 000).

### 5.2.2 Facility Reclamation Costs

The estimated liability for the reclamation of a facility that uses regional cost estimates considers its geographic location based on the regional reclamation cost map (appendix 3) and its well equivalent. The regional reclamation cost for a facility is calculated by multiplying the well equivalent of the facility (table 2) by the well regional reclamation cost in section 5.1.2 for the region that the facility is in.

For example, a gas processing facility with a licensed design capacity of 3000 10<sup>3</sup> m<sup>3</sup>/day (40 well equivalent) in the Parklands area (\$27 250) has an estimated liability for reclamation of \$1 090 000 (40 well equivalent × \$27 250).

### 5.3 Pipeline Estimates

While a pipeline licence does have liability associated with it, the AER does not currently assign an estimated liability unless it requires an SSLA as per section 6. The AER is assessing whether, in the future, regional estimated liability for pipelines will be assigned similar to wells and facilities.

## 6 Site-Specific Liability Assessment

When an SSLA is required, the requirements in this section apply. [Directive 001: Requirements for Site-Specific Liability Assessments](#) provides the requirements for completing and submitting an SSLA.

## 6.1 General Requirements

- 4) When required by section 6 of this directive, appendix 1, or when otherwise directed by the AER, a licensee must conduct and submit an SSLA in accordance with *Directive 001*.
- 5) A licensee must conduct and submit an SSLA for the infrastructure in appendix 1 where an SSLA is identified as the method for determining the estimated liability for its licence type.
  - a) A licence type that requires an SSLA, including a licence amended to a type that requires an SSLA, is always required to complete and submit an SSLA as per the requirements of section 6. Regional estimated liability will no longer be applicable.
  - b) If a licence has regional estimated liability and the licensee is applying to amend it to a licence type that requires an SSLA, an SSLA must be submitted to the AER before submitting the amendment application.
- 6) An SSLA must be submitted to the AER before submitting an application for a new or amended licence type that requires an SSLA (see appendix 1).
- 7) Once an SSLA is required, licensees must submit an updated SSLA every five years from the assessment date of the last SSLA unless otherwise authorized by the AER.
- 8) When a licensee becomes aware or ought to have become aware that there is a cumulative increase of either \$2 million or 20% of the current estimated liability values in the SSLA, the licensee must conduct and submit an updated SSLA within 90 days.

The AER may require more frequent updates of the SSLA in situations such as the following:

- at the time of a licence transfer
- upon audit of a licence
- if site conditions warrant an update
- if an AER requirement specifies an earlier submission deadline
- if the AER determines that circumstances warrant an update

A licensee may provide the AER with an updated SSLA to reflect a change in estimated liability at any time. Some factors to consider in the evaluation of cost changes include completion of closure work, changes in site conditions, unit rates used in estimating costs, and regulatory requirements.

## 6.2 SSLA for Sites with Regional Estimated Liability

In certain situations, the estimated liability type for licence types identified in appendix 1 will change from regional to SSLA. The SSLA requirement could be for estimated liability for either abandonment or reclamation or both. (For the purpose of this section, situations involving pipelines are included even though they do not have a regional estimated liability.)

- 9) When a licensee is aware or ought to be aware of site conditions that indicate that estimated liability is significantly higher than the regional estimated liability, the licensee must notify the AER within 30 days by email at [ssla@aer.ca](mailto:ssla@aer.ca), providing the licence number. Situations that indicate significantly increased estimated liability include the following:
- a) Remedial measures are anticipated to continue for ten years or more.
  - b) A formal risk-management plan (as per the [Alberta Risk Management Plan Guide](#)) is required or already in place.
  - c) Nonaqueous phase liquid (NAPL) has been identified or is likely.
  - d) Any off-lease contamination has occurred.
  - e) A volume of soil has been affected, resulting in concentrations exceeding [Alberta Tier 1 Soil and Groundwater Remediation Guidelines](#) and that would result in significant remedial costs. If environmental site assessment work has been completed and submitted to the AER as per *Directive 001*, then liability may be estimated using the [Alberta Tier 2 Soil and Groundwater Remediation Guidelines](#) to determine volumes of contaminated soil that require remediation.
  - f) Any pipeline release has occurred that requires a remedial action plan under section 2.2(2) of the *Remediation Regulation*.
- 10) Where one of the situations listed in requirement 9 exists, the licensee must conduct and submit an SSLA within 90 days of notifying the AER, unless otherwise authorized by the AER.
- 11) If the AER becomes aware of situations (such as those identified in requirement 9 or otherwise) that indicate that estimated liability is significantly higher than the regional estimated liability and directs the licensee that an SSLA is required, the licensee must conduct and submit an SSLA within 90 days.
- 12) If the licensee wants to return to regional estimated liability, the licensee must submit a request to the AER ([SSLA@aer.ca](mailto:SSLA@aer.ca)) with an SSLA (submitted as per *Directive 001*) that demonstrates that the liability is now aligned with the regional values in section 5. (This does not apply to licences that are required to provide an SSLA per appendix 1 based on the current or a historic licence type [see section 6.1].)

The AER will review the submission and determine whether the SSLA requirement can be removed.

### 6.3 Transfer Applications

When a licence transfer occurs, there can be a large shift in liability between the transferor and transferee, which requires that SSLAs be as up to date as possible.

- 13) If a transfer application will include a licence that requires an SSLA, the transfer application must include the SSLA. The SSLA submitted by the licensee must be accepted by the AER and be within
- a) one year from the assessment date of the last SSLA for large facilities and oilfield landfills, and
  - b) three years from the assessment date of the last SSLA for all other licences that require an SSLA and be accompanied by an evaluation of cost changes that have occurred since the SSLA was completed.
- 14) If an SSLA requires updating as per requirement 8, an updated SSLA must be submitted at the time of transfer application.

#### 6.4 Audits

The AER may audit or verify an SSLA at any time.

- 15) A licensee must submit all SSLA-related information requested by the AER within the time set by the AER.
- 16) If deficiencies are noted, the licensee must revise the SSLA by the date specified by the AER.

## 7 Changes to Estimated Liability

A new licence for a well or facility will have its estimated liability applied from the date the licence is issued, based on what the AER approved to be constructed. Liability associated with a licence may increase as the infrastructure is constructed and during operations and usually decreases during closure activities. If the licensee does not proceed with the construction or operations, refer to [Directive 056: Energy Development Applications and Schedules](#) for cancellation procedures to remove estimated liability.

A licence amendment will not necessarily result in a reduction in estimated liability. Estimated liability is determined based on both current and historic use.

Estimated liability will be reduced upon completion and notification of abandonment, through the Conditional Adjustment of Reclamation Liability Program and once a reclamation certificate is issued.

### 7.1 Abandonment Notifications

- 17) Licensees must report a facility abandonment within 30 days of completing the operation through the designated information submission system.

Well abandonment reporting requirements are in *Directive 020*, and pipeline abandonment reporting requirements are in the [Pipeline Rules](#).

## 7.2 Conditional Adjustment of Reclamation Liability Program

The AER's Conditional Adjustment of Reclamation Liability (CARL) Program allows licensees to request a temporary conditional adjustment of estimated reclamation liability before a reclamation certificate is issued under the [Environmental Protection and Enhancement Act \(EPEA\)](#).

Licensees with wells and facilities licensed under *Directive 056*, excluding those with an *EPEA* approval or sites with a site-specific liability assessment, may request a temporary conditional adjustment of estimated liability for reclamation on a per-licence basis.

18) The licensee must meet the following conditions:

- c) All required abandonment, remediation, and reclamation work for wells and facilities according to *Directive 020* and *EPEA* and associated regulations ([Release Reporting Regulation](#), [Remediation Regulation](#), and [Conservation and Reclamation Regulation](#)) is completed.
- d) Re-establishing vegetative cover is the only remaining closure activity to obtain a reclamation certificate.

If these conditions are met and a request has been submitted through OneStop, the associated estimated liability for reclamation for the licence will be adjusted to the following amount for a period of five years or until a reclamation certificate is obtained, whichever occurs first:

- \$5000 for cultivated land
- \$9000 for all other land types

The AER may audit information provided in the licensee's CARL requests.

19) The licensee must provide information to the AER as requested to verify that they have met the conditions to receive the temporary conditional adjustment of estimated liability for reclamation.

If the licensee fails to provide satisfactory information, the AER will reinstate the estimated liability for reclamation to its full amount and may take other regulatory actions as appropriate.

20) If a licensee's estimated liability for reclamation is adjusted, the licensee must obtain a reclamation certificate under *EPEA* for the licence at issue within five years from the date of the adjustment.

21) If it is not possible to meet the five-year timeframe and the licensee requires an extension, a request for a single extension of two years must be submitted prior to the end of the five-year timeframe, and a detailed site assessment must be provided.

If the licensee fails to obtain a reclamation certificate under *EPEA* for the requested licence within the required timeframe (five years or as extended by the AER), the AER will reinstate the estimated liability for reclamation to its full amount, and the licence will be ineligible for any future CARL adjustment.

## 8 Use of Estimated Liability

As the estimated liabilities referred to in this directive are the estimated costs to safely close an energy development, the AER uses the estimated liability to understand the magnitude of liability in Alberta and make certain regulatory decisions.

Estimated liability is assessed daily with new information received, generally impacting estimates the following day. Licensees are encouraged to ensure timely reporting of the information that impacts estimated liabilities.

Liability estimates can change over time (i.e., an increase or decrease). The AER will use the current value of the estimated liability when making decisions unless otherwise stated in requirements.

Estimated liability is used by the AER to assess licensees and make certain decisions, like the following:

- To complete a holistic licensee assessment, including determining the magnitude of liability for each licensee (e.g., transfer application decisions; [Directive 088](#))
- To calculate closure quotas as part of the inventory reduction program ([Directive 088](#))
- To calculate security deposits ([Directive 068: Security Deposits](#))
- To calculate the orphan fund levy or large facility levy (see section 9)
- To publicly report overall industry and licensee-specific performance in the annual liability management performance report

### 8.1 Administration

#### 8.1.1 Licensee

The AER attributes to the licensee 100% of the estimated liability of a well, facility, pipeline, or waste management approval for which the licensee is named.

#### 8.1.2 Working Interest Participants

A working interest participant (WIP) is responsible for its proportionate share of the cost to suspend, abandon, remediate, and reclaim an energy development (see section 30 of the [Oil and Gas Conservation Act](#)). WIP information can be updated through OneStop by the licensee.

### 8.1.3 Maintaining Information

Licence information, including licence status, are used to estimate liability. Requirements around reporting of well abandonments are in *Directive 020*. Requirements around reporting of pipeline abandonments are in the *Pipeline Rules*.

22) Licensees must maintain accurate well, facility, and pipeline licence status records with the AER.

## 9 Orphan Fund

The orphan fund is fully funded by licensees through a levy administered annually by the AER to pay for the costs of providing reasonable care and measures and costs to suspend, abandon, remediate, and reclaim a well, facility, or pipeline if a licensee or WIP becomes insolvent or defunct. Wells, facilities and pipelines have their estimated liability included in the calculation of the annual orphan fund levy unless otherwise indicated in appendix 1. Estimated liability associated with newly licensed wells and facilities will be excluded from the calculation of the annual orphan fund levy until drilling/construction has completed or is assumed to be completed based on Petrinex reporting, or 12 calendar months from licence issue date.

A well, facility, or pipeline may be designated an orphan when the licensee becomes insolvent, defunct, or cannot meet its obligations to close its sites safely and responsibly. Well, facility, and pipeline licence types that are eligible to be closed through the orphan fund are outlined in appendix 1. If the well, facility, or pipeline meets these criteria, the AER may designate it as an orphan as authorized in section 70(2) of the *Oil and Gas Conservation Act*. If a well or facility is designated as an orphan, this does not relieve the defunct licensee or WIPs from their regulatory obligation to address their share of closure costs.

A licensee is responsible for its proportionate share of any orphan fund levy or orphan fund levy for large facilities. The levy is calculated as the sum of the licensee's estimated liability of its licences to the total industry estimated liability of all eligible licences as of the date the levy is calculated, in accordance with the formulas in Part 16.5 of the [Oil and Gas Conservation Rules](#).

The orphan fund levy for large facilities is only issued (through the *Oil and Gas Conservation Rules*) when needed to fund or reimburse the costs to close a large facility when there is a defaulting licensee. WIPs are responsible for their proportionate share of the orphan fund levy for large facilities in which they hold working interest, payable to the licensee of the large facility. Estimated liability associated with newly licensed large facilities will be excluded from the calculation of the orphan fund levy for large facilities until construction has completed or is assumed to be completed based on Petrinex reporting, or 60 calendar months from licence issue date.

Situations may exist where the licence type is identified in appendix 1 as eligible for OWA orphaning, but the specific licensee is not directly related to the upstream oil and gas sector and does not contribute to the orphan fund levy. These licences, held by these specific licensees, are not eligible for closure through the orphan fund and are not assessed for levy purposes.

The orphan fund is managed by the Alberta Oil and Gas Abandonment and Reclamation Association, known as the Orphan Well Association (OWA), a nonprofit society.

## 10 Availability of Information

Licensees are to use the OneStop liability assessment report to understand their own liabilities.

The AER will make available through liability management reporting the magnitude of estimated liability for industry and licensees. This includes the following:

- Industry total magnitude of estimated liability, including a sum of multiple site-specific liability assessments or components of the total magnitude of estimated liability based on active, inactive, and marginal liability.
- Industry total magnitude of estimated liability based on different levels of financial distress or components of the total magnitude of estimated liability based on active, inactive, and marginal liability.
- Licensee-specific total magnitude of estimated liability including site-specific liability or components of total magnitude of estimated liability based on active, inactive, and marginal liability.
- Licensee-specific total magnitude of estimated liability including site-specific liability or components of total magnitude of estimated liability based on infrastructure type of wells, facilities, and pipelines.

Additional reporting on estimated liability will continue to be developed as the AER implements the liability management framework.

The AER will hold as confidential the information submitted to or acquired by the AER from the licensee for the purpose of determining site-specific liability assessments, as per section 12.153 of *Oil and Gas Conservation Rules*.

The AER will maintain estimated liability resulting from a site-specific liability assessment as confidential except in the following circumstances:

- The AER may provide to a transferee the estimated liability of the licences that are part of a transfer application.

- The AER may provide to the OWA the estimated liability of a licence that becomes part of an insolvency proceeding and is being transitioned to the OWA for closure. The AER may share the information previously submitted to or acquired by it with the OWA for the purposes of understanding the closure work required and for preparing the OWA's own site-specific cost estimates.

Inquiries regarding the requirements of this directive or any aspect of liability management should be directed by email to [LiabilityManagement@aer.ca](mailto:LiabilityManagement@aer.ca).



## Appendix 1 Estimated Liability Method and Orphan Fund Applicability by Licence Type

This appendix sets out licence types that are eligible for OWA orphaning and therefore included in the calculation of the orphan fund levy or large facility orphan fund levy.

If there are any conflicts between this appendix and table 2, this appendix prevails.

If there are circumstances not identified in the tables below, they will be assessed by the AER on a case-by-case basis to determine orphan fund applicability.

Note that the orphan fund levy or large facility orphan fund levy invoice will not include licence types that are in receipt of a reclamation certificate or its equivalent from the appropriate regulatory authority or include licence types that have a status of “reclamation exempt,” as these are not assigned an estimated liability.

### Wells

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for OWA orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Production wells (oil, gas, and bitumen)	Wells that are or were used to produce oil, gas, or bitumen.	regional	yes	orphan fund levy
Injection wells	Wells that are or were used for injection and relate to the production of hydrocarbons.	regional	yes	orphan fund levy
Gas storage wells	Wells that are or were used for the purpose of storing gas.	regional	yes	orphan fund levy
Observation wells	Wells used for observation related to the production of hydrocarbons.	regional	yes	orphan fund levy
Liquefied petroleum gas (LPG) wells	Wells that are or were used for the production of liquified petroleum gas.	regional	yes	orphan fund levy
Oilfield source water wells	Wells that are or were used for sourcing water for oil and gas purposes.	regional	yes	orphan fund levy
Water wells not related to upstream oil and gas activities	Water wells not related to upstream oil and gas activities, including municipal water wells, domestic and farm water wells, and water wells less than 150 meters in depth licensed in error.	regional	no	N/A
Class 1a and 1b disposal wells (related to oil and gas)	Class 1a and 1b waste disposal wells associated with the upstream oil and gas sector.	regional	yes	orphan fund levy

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for OWA orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Class 1a and 1b disposal wells (unrelated to oil and gas)	Class 1a and 1b waste disposal wells not associated with the upstream oil and gas sector.	regional	no	N/A
Disposal wells (class II, III, & IV)	Class II, III, and IV as defined in <i>Directive 051: Injection and Disposal Wells</i> .	regional	yes	orphan fund levy
Farm gas wells drilled by industry (pre-1996)	Oil and gas wells drilled by industry and transferred as a farm gas well prior to 1996. The gas is not being sold.	regional	yes	N/A
Farm gas wells drilled by industry (after 1996)	Oil and gas wells drilled by industry and transferred as a farm gas well after 1996. Regardless of use, any such farm use oil and gas wells are subject to all regulatory requirements. The gas is not being sold.	regional	yes	orphan fund levy
Farm and domestic gas wells <i>not</i> drilled by industry	Farm and domestic gas wells <i>not</i> drilled by industry as an oil or gas well. The gas is not being sold.	regional	no	N/A
Test holes (exploration wells)	Test holes licensed under section 2.030 of the <i>OGCR</i> (exploration wells). Test wells that are drilled for cores and logs only and are not completed.	regional	no	N/A
Oil sands evaluation wells	Oil sands evaluation wells, licensed under section 2.030 of the <i>OGCR</i> . Oilsands exploration wells that are drilled for cores and logs only and not completed.	regional	no	N/A

## Facilities

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for OWA orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Satellites	Single or multiwell, oil and bitumen. <i>Directive 056</i> category types: 070, 071, 350, 351, 450, 451	regional	yes	orphan fund levy
Compressor stations	Excludes compressors that are part of an oil or gas transmission pipeline. <i>Directive 056</i> category types: 040, 340, 440	regional	yes	orphan fund levy
Injection/disposal facilities	<i>Directive 056</i> category types: 090, 091 (excluding geothermal facilities)	regional	yes	orphan fund levy

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for OWA orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Custom treating facilities	<i>Directive 056</i> category type: 080	regional	yes	orphan fund levy
Single-well facility or battery – single well (gas, oil, or bitumen)	<i>Directive 056</i> category types: 001, 310, 320, 330, 410, 420, 430 (excluding brine-hosted mineral facilities)	N/A	yes	orphan fund levy
Battery – multiwell (gas, oil, or bitumen)	<i>Directive 056</i> category types: 020, 030, 031, 311, 321, 331, 411, 421, 431 Bitumen multiwell batteries (331 & 431) with a licensed design capacity less than 5000 m <sup>3</sup> /day only. Excludes brine-hosted mineral facilities.	regional	yes	orphan fund levy
Bitumen battery – multiwell (5000 m <sup>3</sup> /day or greater)	<i>Directive 056</i> category type: 331 or 431 (current or historic), with a licensed design capacity of 5000 m <sup>3</sup> /day or greater.	SSLA	yes	orphan fund levy for large facility
Gas processing & fractionating plants	<i>Directive 056</i> category types: 010, 011, 300, 301, 400, 401 (current or historic)	SSLA	yes	orphan fund levy
Sulphur recovery gas plants	<i>Directive 056</i> category type: 600 (current or historic)	SSLA	yes	orphan fund levy for large facility
Straddle plants	<i>Directive 056</i> category types: 200, 302 (current or historic)	SSLA	yes	orphan fund levy for large facility
Oilfield waste management facility approvals (excluding landfills)	Oilfield waste management facilities with a waste management approval.	SSLA	yes	orphan fund levy
Oilfield waste management facility approvals – landfills	Oilfield waste landfills related to upstream oil and gas, held by waste management approval holders.	SSLA	yes	N/A (full security held)
Surface waste management facilities	These facilities are not licensed by the AER. These are approved by Alberta Environment and Protected Areas and associated with <i>Directive 051</i> class 1a disposal wells.	N/A	no	N/A

## Pipelines

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Pipelines (excluding transmission pipelines)	Pipelines within Alberta boundaries for activities regulated under the <i>Oil and Gas Conservation Act (OGCA)</i> / <i>Oil and Gas Conservation Rules (OGCR)</i> and <i>Pipeline Act</i> and <i>Pipeline Rules</i> .	N/A (unless SSLA required)	yes	orphan fund levy
Transmission pipelines	Pipelines that cross provincial boundaries are not regulated by the AER.	N/A	no	N/A

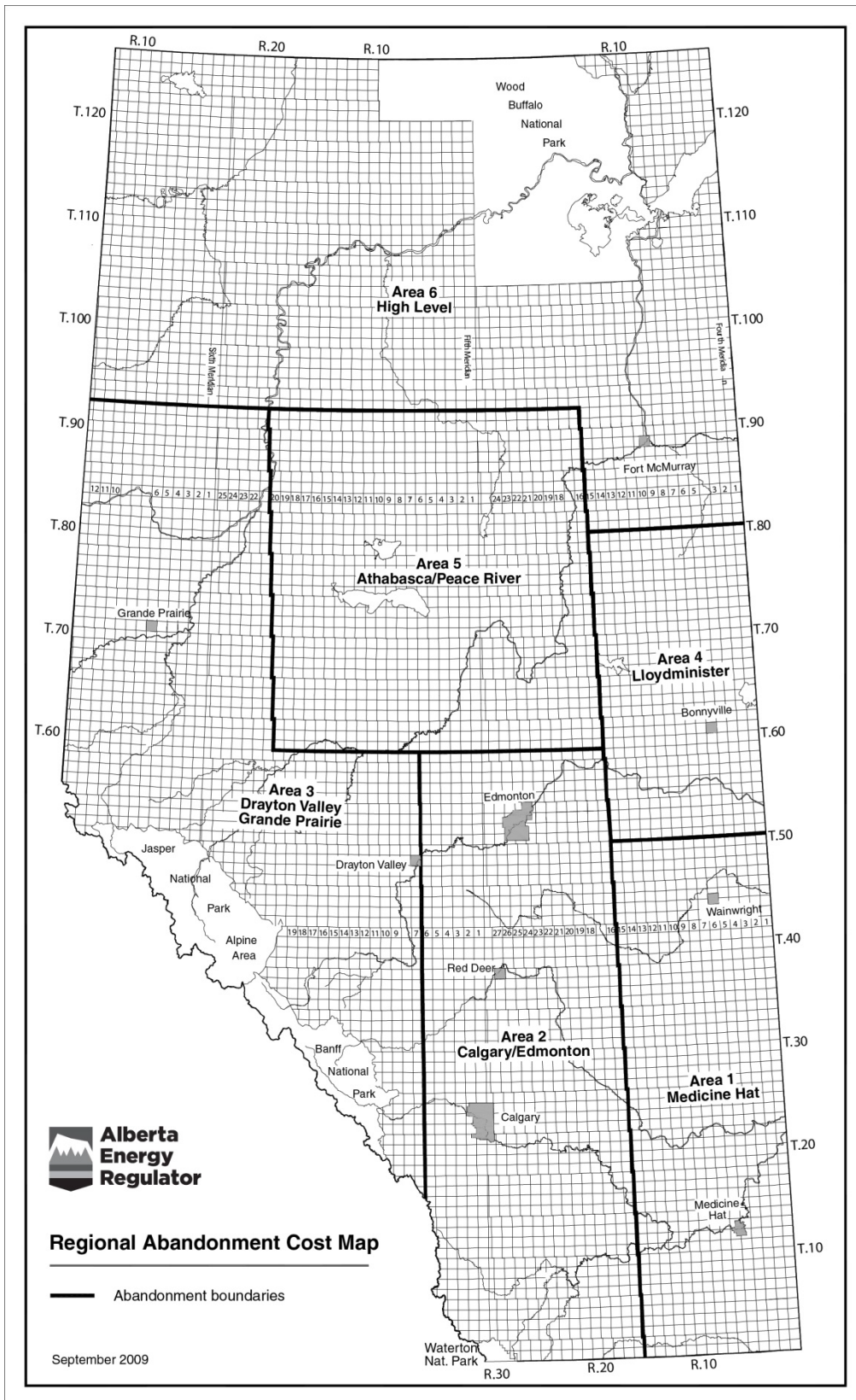
## Other

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Helium infrastructure	Helium production wells, facilities and associated approvals licensed under the <i>OGCA</i> .	regional	yes	orphan fund levy
Brine infrastructure licensed under the <i>OGCA</i>	Brine wells, facilities, pipelines, and associated approvals licensed under the <i>OGCA</i> .	regional/SSLA	yes	orphan fund levy
Brine-hosted mineral infrastructure	Brine-hosted mineral production wells, facilities, pipelines, and any associated approvals licensed under the <i>Mineral Resource Development Act</i> . These include brine-hosted licences that were previously licensed under the <i>OGCA</i> .	see <i>Directive 090</i>	no	N/A
Carbon sequestration infrastructure	Carbon Sequestration wells, facilities, pipelines, and associated approvals subject to the <i>Mines and Minerals Act</i> . Licensed under an agreement pursuant to section 9(a)(iii) of the <i>Mines and Minerals Act</i> .	N/A	no	N/A
Geothermal infrastructure (excluding coproduction of hydrocarbons)	Geothermal wells, facilities, pipelines, and associated approvals for sole purpose of geothermal production, licensed under <i>Geothermal Resource Development Act</i> .	see <i>Directive 089</i>	no	N/A
Geothermal infrastructure, with coproduction of hydrocarbons	Geothermal wells, facilities, pipelines, and associated approvals, with coproduction of hydrocarbons and licensed under the <i>OGCA</i> .	regional/SSLA	yes	orphan fund levy

Licence type	Licence description	Estimated liability type (regional/SSLA)	Eligible for orphaning? (yes/no)	Invoiced in what levy? (See section 9 for exceptions)
Sites designated as contaminated under section 125 of the <i>Environmental Protection and Enhancement Act</i> (EPEA)	Wells, facilities, and pipeline sites designated as contaminated under section 125 of <i>EPEA</i> are not supported by orphan funds, pursuant to section 68 in Part 11 of the <i>OGCA</i> .	SSLA	no	N/A
Refineries	Refineries as defined in the <i>Pipeline Act</i> . These are not regulated by the AER.	N/A	no	N/A
Oil sands mine site or processing plant	Oil sands mine site or processing plant as defined in the <i>Oil Sands Conservation Act</i> .	N/A	no	N/A
Coal mine site or processing plant	Coal mine site or processing plant as defined in the <i>Coal Conservation Act</i> .	N/A	no	N/A
Rock-hosted mineral mine site or processing plant	Rock-hosted mineral mine site or processing plant licensed under the <i>Mineral Resource Development Act</i> .	N/A	no	N/A
Dams in relation to upstream oil and gas use	Dams licensed by the AER in relation to upstream oil and gas use under the <i>Water Act</i> .	N/A	no	N/A
Waste management components	Waste infrastructure not in receipt of a separate WM approval and instead associated with well and facility licences licensed under <i>OGCA</i> (see <i>Directive 058</i> ).	N/A	Yes	N/A



## Appendix 2 Regional Abandonment Cost Map





### Appendix 3 Regional Reclamation Cost Map

