

# Directive 011

**Release date: June 26, 2024**

**Effective date: June 26, 2024**

**Replaces previous edition issued March 31, 2015**

## Licensee Liability Rating (LLR) Program: Updated Industry Parameters and Liability Costs

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## 1 Introduction

### 1.1 Purpose of This Directive

As provided for in *Directive 006: Licensee Liability Rating (LLR) Program and Licence Transfer Process*, the Alberta Energy Regulator (AER) reviews, updates, and publishes the industry parameters and the regional abandonment and reclamation costs used in the LLR calculation as required.

## 1.2 What's New in This Edition

This edition contains updated well abandonment closure costs that will be used to estimate liability under the *Liability Management Framework (LMF)*. This update will be the first of a series of changes to improve liability estimates. For more information, please see *Bulletin 2024-16* released June 26, 2024.

## 2 Industry Deemed Asset Parameters

The industry deemed asset parameters used in the LLR program are based on industry information and are as follows:

- The *industry netback* is a rolling three-year provincial industry average netback. The industry netback is \$236.54 per cubic metre oil equivalent ( $m^3$  OE).
- The *shrinkage factor* is a rolling three-year provincial industry average. The shrinkage factor is 14.17% (multiply gas production by 0.8583 to obtain sales gas volumes).
- The  *$m^3$  OE conversion factor* is a rolling three-year provincial industry average. The  $m^3$  OE conversion factor is  $1.5776 \cdot 10^3 m^3$  gas/ $m^3$  oil (divide sales gas volumes by 1.5776 to convert gas volumes into oil volumes).

## 3 Industry Deemed Liability Parameters

For LLR purposes, the closure estimates for well abandonment costs remain the same as previously published and can be found in appendix 1.

The regional well abandonment costs used under the *LMF* are now based on closure spend data reported by industry and the Orphan Well Association. Where a revised well abandonment cost could not be determined by the submitted closure spend data, the previous cost estimates will be carried forward. The facility abandonment cost and reclamation costs for wells and facilities are not changing, and the existing cost estimates will be used for both the LLR formula and the estimated liabilities used under the *LMF*.

As indicated in appendices 8 and 9 of *Directive 006*, the LLR program established separate maps for determining regional abandonment and regional reclamation costs.

## 4 Well Abandonment Cost Parameters

The abandonment liability for a well considers its geographic location based on the regional abandonment cost map, depth, downhole completion scenario, and where applicable, the number of events requiring abandonment and the costs to address groundwater protection, surface casing vent flows, and gas migration. The process for calculating a well's abandonment liability is detailed in appendix 5 of *Directive 006*.

## 5 Regional Well Abandonment Cost Tables

The basic abandonment cost of a well in each geographic area, by depth and downhole completion scenario, is as follows:

### 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

Where applicable, the following parameters are to be applied:

- Groundwater protection cost \$46 288
- Vent flow repair cost \$157 437
- Gas migration cost \$148 373
- Multiple event sequence factor 25%

## 6 Facility Abandonment Cost Parameter

The facility abandonment cost parameter for each well equivalent is \$17 000.

## 7 Well and Facility Regional Reclamation Cost Map

The reclamation liability for a well or facility considers its geographic location based on the regional reclamation cost map and its well equivalent. The process for calculating a well or facility's reclamation liability is detailed in appendix 5 of *Directive 006*.

The cost per well or well equivalent in each of the seven regional reclamation cost areas is as follows:

- Grasslands Area East \$16 500
- 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 is required under Part 1.1 of the *Oil and Gas Conservation Rules* to provide any security deposit amount resulting from the changes contained in this directive in accordance with AER monthly and transfer LLR assessment requirements.

The parameters and costs in this directive are used to calculate deemed assets and liabilities in accordance with formulas contained in *Directive 006*.

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

## Appendix 1 Well Abandonment Costs, 2015 Version

For the purposes of the LLR program and the LMR, the well abandonment costs are not being updated. This is because these programs are being replaced and will ultimately be removed.

### LLR Regional Well Abandonment Cost Tables

The basic abandonment cost of a well in each geographic area, by depth and downhole completion scenario, is as follows:

#### Area 1. Medicine Hat

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$12 800	\$17 975	\$36 384	\$45 993
1200–1999	\$12 800	\$19 060	\$41 790	\$50 227
2000–2499	\$12 800	\$19 273	\$62 606	\$75 506
2500–2999	\$12 800	\$20 757	\$67 950	\$85 003
3000+	\$12 800	\$23 910	\$87 240	\$114 236

#### Area 2. Calgary/Edmonton

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 300	\$18 476	\$41 361	\$50 455
1200–1999	\$13 300	\$19 562	\$47 411	\$56 505
2000–2499	\$13 300	\$19 741	\$65 782	\$78 105
2500–2999	\$13 300	\$21 194	\$71 588	\$88 642
3000+	\$13 300	\$24 646	\$92 451	\$119 446

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

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 500	\$18 776	\$45 513	\$54 608
1200–1999	\$13 500	\$19 862	\$55 568	\$60 658
2000–2499	\$13 500	\$22 041	\$67 020	\$79 343
2500–2999	\$13 500	\$24 244	\$72 836	\$89 880
3000+	\$13 500	\$27 975	\$94 077	\$121 072

#### Area 4. Lloydminster

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$12 800	\$17 975	\$36 037	\$46 455
1200–1999	\$12 800	\$19 060	\$41 790	\$50 227
2000–2499	\$12 800	\$19 273	\$62 606	\$75 506
2500–2999	\$12 800	\$20 757	\$67 950	\$85 003
3000+	\$12 800	\$23 910	\$87 240	\$114 236

#### Area 5. Athabasca/Peace River

Depth (m)	Empty not perforated	Empty perforated	Tubing only	Tubing & rods
0–1199	\$13 500	\$18 807	\$45 051	\$53 426
1200–1999	\$13 500	\$19 776	\$54 991	\$60 081
2000–2499	\$13 500	\$20 641	\$66 719	\$79 043
2500–2999	\$13 500	\$22 194	\$72 526	\$89 579
3000+	\$13 500	\$25 675	\$93 056	\$120 772

**Area 6. High Level**

<b>Depth (m)</b>	<b>Empty not perforated</b>	<b>Empty perforated</b>	<b>Tubing only</b>	<b>Tubing &amp; rods</b>
0–1199	\$17 400	\$26 172	\$58 482	\$65 814
1200–1999	\$17 400	\$26 641	\$65 957	\$72 493
2000–2499	\$17 400	\$27 510	\$75 769	\$89 069
2500–2999	\$17 400	\$28 278	\$82 789	\$102 453
3000+	\$17 400	\$28 744	\$102 708	\$134 177

Where applicable, the following parameters are to be applied:

- Groundwater protection cost                   \$46 288
- Vent flow repair cost                            \$169 309
- Gas migration cost                               \$67 868
- Multiple event sequence factor                25%