



Acknowledgement of Victoria’s Traditional Owners

The Victorian Government proudly acknowledges Victorian Traditional Owners as Victoria’s first peoples and pays its respects to their Elders past and present.

We recognise the intrinsic connection of the first peoples to their Country for countless generations and their inherent obligation to maintain and strengthen their distinct cultural rights and responsibilities to care for their Country.

We value Traditional Owners’ role in the management of land, water and biodiversity and acknowledge the ongoing contribution this makes to our earth resources.

We have distinct legislative obligations to Traditional Owner groups that are paramount in our responsibilities in managing Victoria’s resources.

We support the need for genuine and lasting partnerships with Aboriginal people and communities to understand culture and connections to Country in the way we plan for and regulate our earth resources.

Disclaimer

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<http://earthresources.vic.gov.au/earth-resources-regulation/about-us/regulator-and-industry-reporting/earth-resources-regulation-annual-statistical-report/>

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# Introduction

The Earth Resources Regulation Branch in the Department of Jobs, Precincts and Regions (DJPR) is responsible for the regulation of minerals, extractives, petroleum, pipelines, geothermal and carbon storage activities in Victoria and offshore (Victorian) waters. The Earth Resources Regulation administers a consistent and transparent regulatory regime and conducts monitoring and compliance operations to ensure that authority holders comply with their statutory obligations.

Earth Resources Regulation administers the following Acts.

* *Mineral Resources (Sustainable Development) Act 1990* (MRSDA) (mineral exploration, mining and quarrying);
* *Offshore Petroleum and Greenhouse Gas Storage Act 2010* (OPGGSA) (petroleum exploration and development, greenhouse gas storage and pipelines in the Victorian offshore waters);
* *Petroleum Act 1998* (petroleum exploration and development onshore);
* *Geothermal Energy Resources Act 2005* (geothermal energy exploration and development); and
* *Greenhouse Gas Geological Sequestration Act 2008* (greenhouse gas storage onshore).

The 2017-18 Statistical Report presents a compilation of data as reported by Victoria’s earth resources authority holders to Earth Resources Regulation. The report includes data on exploration, production, expenditure, revenues and regulatory actions.

All production and expenditure figures are certified by authority holders and submitted to Earth Resources Regulation. As at 17th December 2018, 85 per cent of active MRSDA authority holders have submitted an annual Production & Royalty / Expenditure & Activity. For Petroleum producing licences, there were two that had production. The other licences did not produce during the year.

The annual statistical report may be revised in the future as more Production / Expenditure and Activity reports are received from the industry following compliance actions by Earth Resources Regulation.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Licence Types | Active Tenements as at 30th Jun 2018 | Report Received | Yet To Submit Report | Submission Rate |
| Mining licences | **156** | 136 | 20 | **87%** |
| Exploration Licences | **200** | 181 | 39 | **91%** |
| Retention Licences | **20** | 17 | 4 | **85%** |
| Prospecting Licences | **59** | 45 | 15 | **76%** |
| Work Authority | **881** | 741 | 149 | **84%** |
|  | 1316 | 1120 | 227 | 85% |

**Table 1.1 MRSDA Production & Royalty / Expenditure & Activity report submission rate**

**Key observations and statistics for 2017-18 include:**

**Mineral**

* There were 435 active mineral licences as at 30 June 2018, a 5.8% increase compared to 411 in 2016-17.
* The number of new mineral licences granted and renewed increased from 68 to140 in 2017-18.
* The amount spent on exploration increased 51% from $44.3 million to $67.0 million.
* The production of gold remained high with a further increase of 16.7% from 312,229 to 364,225 ounces
* The production of coal decreased by 19.7% from 56 to 45 million tonnes.

**Extractive**

* 491 quarries produced a total of 57.9 million tonnes of rock at a reported sales value of $947.8 million dollars, an increase of 11.6% ($98.5million) year on year.

**Revenue**

* State revenue payable (rent, royalty and administrative fees) derived from the earth resources sector totalled $103.1 million, an increase of 19% ($16.5 million).

**Rehabilitation Bonds**

* Total value of rehabilitation bonds held increased 71.2% from $474.5 million to $812.2 million.

**Petroleum**

* The gas production totals 13,118 million standard cubic feet, which equate approximately to 13.91 petajoules of energy.

# Minerals

## Mineral tenements

**Table 2.1 Licences current as at 30 June 2018**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Tenement Type | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Exploration Licences | 326 | 311 | 271 | 247 | 211 | 180 | 200 |
| Mining Licences | 208 | 212 | 191 | 171 | 170 | 162 | 156 |
| Prospecting Licences | 1 | 13 | 31 | 41 | 51 | 54 | 59 |
| Retention Licences | 0 | 1 | 1 | 8 | 11 | 15 | 20 |
| Totals | **535** | **537** | **494** | **467** | **443** | **411** | **435** |
| % Change year-on-year | +2.9% | +0.4% | -8.0% | -5.5% | -6.0% | -6.4% | +5.8% |

Source: DJPR

**Graph 2.1 Licences current as at 30 June 2018**

Source: DJPR

**Table 2.2 Licence finalised in 2017-18**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Received | Granted | Withdrawn | Refused |
| Exploration Licence Applications | 72 | 63 | 8 | 1 |
| Mining Licence Applications | 2 | 3 | 1 | 0 |
| Prospecting Licence Applications | 17 | 12 | 0 | 0 |
| Retention Licence Applications | 6 | 7 | 0 | 0 |
| Total | 97 | 85 | 9 | 1 |

**Table 2.3 Licence renewed in 2017-18**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Received | Renewed | Withdrawn | Refused |
| Exploration Licence Renewals | 15 | 29 | 6 | 1 |
| Mining Licence Renewals | 11 | 26 | 2 | 1 |
| Total | 26 | 55 | 8 | 2 |

**Table 2.4 Licence Applications granted by financial year**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Exploration Licence Applications | 62 | 41 | 37 | 37 | 17 | 21 | 63 |
| Mining Licence Applications | 12 | 11 | 9 | 3 | 2 | 0 | 3 |
| Prospecting Licence Applications | 1 | 12 | 18 | 13 | 12 | 11 | 12 |
| Retention Licence Applications | 0 | 0 | 1 | 7 | 3 | 4 | 7 |
| Total | 75 | 64 | 65 | 60 | 34 | 36 | 85 |

**Table 2.5 Licences renewed by financial year**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Exploration Licence Renewals | 74 | 52 | 57 | 19 | 13 | 17 | 29 |
| Mining Licence Renewals | 21 | 14 | 28 | 14 | 10 | 15 | 26 |
| Retention Licence Renewals | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 95 | 66 | 85 | 33 | 23 | 32 | 55 |

Source: DJPR

**Graph 2.2 Exploration licences granted and renewed by financial year**

**Graph 2.3 Mining licences granted and renewed by financial year**

**Graph 2.4 Prospecting licences granted by financial year**

**Graph 2.5 Retention licences granted by financial year**

**Table 2.6 Total area covered by exploration licences (current and in application as at 30 June 2018)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Total area (km2) | 83,900 | 77,366 | 67,833\* | 54,698\* | 48,569 | 51,984 | 49,353 |

Source: DJPR

**Graph 2.5 Total area of Victoria covered by mineral exploration licences**

Source: DJPR

Source: DJPR

## Mineral exploration and mining expenditure

Australian Bureau of Statistics (ABS) data shows an increase of 81.1% ($40.7 M to $73.7M) in Victorian exploration expenditure in 2017-18 compared to 2016-17. Data reported to Earth Resources Regulation on mineral exploration shows that the amount spent on exploration increased 51.2%($44.3 to $67.0M). Expenditure on mining has decreased 12.6% from $748.8 million to $654.1 million.

**Table 2.7 Expenditure on mineral exploration and mining development ($A million)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18^ |
| Mineral Exploration (ABS)1 | $58.5 | $38.6 | $32.6 | $22.9 | $28.9 | $40.7 | $73.7 |
| MRSDA Exploration2 | $37.8 | $39.7 | $30.5 | $47.5 | $38.5 | $44.3\* | $67.0 |
| MRSDA Mining3 | $813.8 | $701.2 | $650.3 | $607.8 | $685.8 | $748.8\* | $654.1 |

Source: Figures collated from activity reports forwarded to DJPR required under the MRSDA, and ABS, Actual and Expected Private Mineral Exploration ([Catalogue No. 8412.0](http://www.abs.gov.au/ausstats/abs@.nsf/mf/8412.0) http://www.abs.gov.au/ausstats/abs@.nsf/mf/8412.0)

^Data as at 17/12/2018 from Expenditure & Activity Reports on all Mineral licences received from the industry (87%).

\*Updated the 2016-17 figures

**Graph 2.6 Expenditure on mineral exploration and mining**

Source: DJPR

*1 The ABS reports quarterly on private mineral exploration expenditure for all Australian states and the Northern Territory (NT). Victorian mineral exploration and mining expenditure is also reported in accordance with the requirement of the MRSDA. The ABS exploration expenditure statistics can vary significantly from expenditure reported under the MRSDA. The difference between these two exploration expenditure data sets is mainly due to the difference in methodologies for data collection, and the inclusion of the exploration expenditure on mining licences in the MRSDA figure. The ABS statistics are a valid basis for comparison of Victorian expenditure with that of other states/NT. However, the MRSDA figures provide greater detail.*

*2 Change of metric - expenditure on Exploration and Retention Licences with an Expenditure Reporting Period that ends within the Financial Year.*

*3The MRSDA mining expenditure figure covers all expenditure on mining and prospecting licences (including capital and operating expenses), less any specified exploration expenditure on mining and prospecting licences.*

**Table 2.8 Expenditure on mineral exploration and mining by commodity ($A million).**

Exploration and Mining expenditures are allocated to commodity according to the primary nominated mineral commodity on the licence in line with the MRSDA expenditure on the previous table 2.5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Minerals | Exploration Expenditure | % of total | Mining Expenditure | % of total |
| Coal | $0.5 | 0.7% | $359.1 | 54.7% |
| Gold | $43.8 | 65.4% | $237.7 | 36.5% |
| Mineral Sands | $6.9 | 10.3% | $12.6 | 1.9% |
| Other\*\* | $15.8 | 23.6% | $44.7 | 6.8% |
| Total | $67.0 | 100.0% | $654.1 | 100.0% |

\*\* “Other” includes cases where there is more than one primary mineral.

^Data as at 17/12/2018 from Expenditure & Activity Reports on all Mineral licences received from the industry (87%).

**Table 2.9 Mineral exploration expenditure by commodity and year ($A million)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Coal | Gold | Mineral Sands | Other \* | Total |
| 2015-16 | $0.37 | $16.4 | $6.5 | $15.3 | $38.5 |
| 2016-17 | $0.46 | $25.9 | $5.1 | $12.7 | $44.2 |
| 2017-18 | $0.47 | $43.8 | $6.9 | $15.8 | $67.0 |

**Graph 2.7 Mineral exploration expenditure**

**Table 2.10 Mining expenditure by commodity and year ($A million)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Coal | Gold | Mineral Sands | Other \* | Total |
| 2015-16 | $339.4 | $280.2 | $21.8 | $44.4 | $685.8 |
| 2016-17 | $431.2 | $259.9 | $15.2 | $42.5 | $748.8 |
| 2017-18 | $359.1 | $237.7 | $12.6 | $44.7 | $654.1 |

**Graph 2.8 Mining expenditure**

## Mineral production

In 2017-18^ 61 Mining and Prospecting licences reported production with a sale value of $825.9 million.

**Table 2.11 Mineral production over time\***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Financial Year | Coal  (1000 Tonnes) | Gold  (Ounce) | Antimony  (Tonnes) | Zircon  (Tonnes) | Rutile  (Tonnes) | Ilmenite  (Tonnes) | Feldspar  (Tonnes) | Gypsum  (M³) | Kaolin and Clay  (Tonnes) |
| 2012-13 | 59,854 | 225,776 | 4,558 | 86,243 | 140,842 | 67,067 | 61,578 | 499,681 | 204,164 |
| 2013-14 | 58,001 | 225,168 | 5,336 | 128,064 | 243,355 | 563,371 | 44,254 | 454,526 | 167,333 |
| 2014-15 | 60,957 | 198,387 | 3,684 | 77,162 | 85,983 | 383,369 | 40,232 | 335,374 | 152,047 |
| 2015-16 | 59,757 | 256,653 | 5,945 | 52,026 | 90,318 | 57,763 | 30,730 | 314,759 | 202,229 |
| 2016-17 | 56,095 | 312,229 | 5,138 | 45,597 | 73,812 | 44,944 | 0 | 282,720 | 192,150 |
| 2017-18^ | 45,062 | 364,225 | 2,570 | 27,515 | 48,381 | 24,390 | 0 | 395,707 | 171,932 |
| Change year-on-year (%) | -19.7% | 16.7% | -50.0% | -39.7% | -34.5% | -45.7% | 0.0% | 40.0% | -10.5% |

Source: DJPR, statutory returns under the MRSDA.

\*Gold reported in troy ounces, coal in thousand tonnes, gypsum in cubic meters, and the remainder in tonnes.

^Data as at 17/12/2018 from Expenditure & Activity Reports on Mining and Prospecting licences received from the industry (84%).

**Table 2.12 Mineral production sales values (A$ million)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | Coal\* | Gold | Antimony | Mineral Sands (Zircon, Rutile, Ilmenite) | Industrial Minerals (Feldspar, Gypsum, Kaolin & fine clay) | Others (including silver, peat and quartz) | Total |
| 2012-13 | N/A | $333.1 | $30.8 | $282.7 | $12.8 | $0.3 | $659.7 |
| 2013-14 | N/A | $303.4 | $12.5 | $316.5 | $14.1 | $0.2 | $646.7 |
| 2014-15 | N/A | $286.9 | $37.8 | $185.1 | $10.2 | $0.1 | $520.1 |
| 2015-16 | N/A | $411.4 | $30.6 | $175.9 | $10.0 | $0.6 | $628.5 |
| 2016-17 | N/A | $519.8 | $33.6 | $188.5 | $8.0 | $0.2 | $750.1 |
| 2017-18^ | N/A | $613.3 | $28.2 | $172.6 | $11.6 | $0.2 | $825.9 |
| Change year-on-year (%) | N/A | 18.0% | -16.1% | -8.4% | 45.0% | 0.0% | 10.1% |

Source: DJPR, statutory returns under the MRSDA.

\*No unit value is assigned to coal for the purposes of determining its production value. Coal is almost entirely used for electricity production and is largely an internal transfer within mining/generation entities. As such, there is no available market price for coal.

^Data as at 17/12/2018 from Expenditure & Activity Reports on Mining and Prospecting licences received from the industry (84%).

**Graph 2.9 Gold production (ounces) by year**

Gold production for 2017-18 was 364,225 ounces, the highest in the last six years.

Source: DJPR

**Table 2.13 Coal production (‘000 tonnes) by year and producer**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Maddingley   Bacchus Marsh | Alcoa Anglesea | Loy Yang | Yallourn | Hazelwood | Annual Total |
| **2012-13** | 18 | 913 | 28,921 | 12,885 | 17,118 | 59,854 |
| **2013-14** | 19 | 1,034 | 26,967 | 13,494 | 16,487 | 58,001 |
| **2014-15** | 19 | - | 27,624 | 17,171 | 16,144 | 60,957 |
| **2015-16** | 23 | - | 27,066 | 17,979 | 14,689 | 59,757 |
| **2016-17** | 45 | - | 27,752 | 17,674 | 10,624 | 56,095 |
| **2017-18** | 44 | - | 29,526 | 15,491 | - | 45,062 |

Source: DJPR, statutory returns under the MRSDA.

# Extractive resources

Quarries produce predominantly hard rock, clay, sand and gravel, which are mostly used for constructing houses, public infrastructure and private sector developments.

As at 30 June 2018, there were 881 current work authorities for quarries granted under the MRSDA. The total number of quarries has remained relatively stable over the last decade.

**Table 3.1 Status of extractive industry work authorities\* as at 30 June 2018**

|  |  |  |
| --- | --- | --- |
| Tenement | Application\*\* | Current |
| Work Authority | 24 | 881 |

Source: DJPR

\*A Work Authority is granted under the MRSDA.

\*\*This is when an applicant has paid a Work Authority application fee.

**Graph 3.1 Extractive industry quarries 2012-13 to 2017-18^**

^Data as at 17/12/2018 from Production and Royalty Reports on Work Authorities. received from the industry (84%).

Source: DJPR

Sales of quarry products fluctuate based on the demand from the domestic building and construction sector.

As at 17/12/2018, a total of 491 quarries reported production in 2017/18. The production volume remained steady at 57.9 million tonnes and Sales Value increased by 11.6% ($98.5M) from $849.3M to $947.8M.

**Table 3.2 Victorian Extractive industry sale by Product Type 2017-18^**

|  |  |  |  |
| --- | --- | --- | --- |
| Product Group | Product Type | Production Volume (Million tonnes) | Sales Value ($Am) |
| Clay products | Brick | 0.995 | $3.02 |
| Stoneware Pottery | 0.001 | $0.04 |
| Tile/Pipe | 0.017 | $0.08 |
| Clay products Total |  | **1.012** | **$3.14** |
| Limestone products | Agriculture | 0.597 | $16.67 |
| Cement | 0.078 | $1.70 |
| Lime | 0.080 | $1.57 |
| Limestone products Total |  | **0.754** | **$19.93** |
| Miscellaneous | Dimension Stone | 0.006 | $0.20 |
| Soil | 0.024 | $0.26 |
| Unspecified | 4.538 | $50.04 |
| Miscellaneous Total |  | **4.568** | **$50.51** |
| Multi size products | Fill | 3.585 | $36.25 |
| Road Base | 6.014 | $103.29 |
| Road Sub-Base | 10.934 | $136.75 |
| Multi size products Total |  | **20.533** | **$276.29** |
| Sand products | Concrete Sand | 7.168 | $132.10 |
| Fine Sand | 2.233 | $37.70 |
| Foundry Sand | 0.003 | $0.04 |
| Industrial Filters | 0.002 | $0.01 |
| Sand products Total |  | **9.407** | **$169.85** |
| Single size products | Aggregate | 21.535 | $426.86 |
| Armour | 0.060 | $1.18 |
| Single size products Total |  | **21.596** | **$428.04** |
| Grand Total |  | 57.869 | $947.76 |

Source: DJPR, statutory returns under the MRSDA.

^Data as at 17/12/2018 from Production and Royalty Reports on Work Authorities. received from the industry (84%).

**T****able 3.3 Victorian extractive industries sales by rock type 2017-18^**

|  |  |  |  |
| --- | --- | --- | --- |
| Rock Type | Product Type | Production Volume  (Million Tonnes) | Sales Value  ($Am) |
| Hard Rock | BASALT | 23.021 | 377.00 |
| GNEISS | 0.005 | 0.01 |
| GRANITE | 5.347 | 122.86 |
| HORNFELS | 4.462 | 75.05 |
| QUARTZITE | 0.030 | 0.36 |
| RHYODACITE | 1.779 | 43.64 |
| SCHIST | 0.273 | 5.86 |
| SLATE | 0.043 | 0.66 |
| TRACHYTE | 0.038 | 0.80 |
| Hard Rock Total |  | **34.999** | **626.24** |
| Soft Rock | CLAY & CLAY SHALE | 1.475 | 3.87 |
| LIMESTONE | 1.424 | 26.20 |
| SAND & GRAVEL | 15.503 | 236.52 |
| SCORIA | 1.128 | 17.97 |
| SEDIMENTARY\* | 2.755 | 32.01 |
| SOIL | 0.024 | 0.26 |
| TUFF | 0.562 | 4.69 |
| Soft Rock Total |  | **22.868** | **321.52** |
| GRAND TOTAL |  | 57.869 | 947.76 |

Source: DJPR, statutory returns under the MRSDA.

\*Sedimentary (usually rippable rocks including sandstone, shale, siltstone, chert, mudstone, claystone).

^Data as at 17/12/2018 from Production and Royalty Reports on Work Authorities. received from the industry (84%).

# Revenue and bonds

## Revenue Payable

Revenues has been updated from ‘revenues collected’ to ‘revenue payable’ in alignment with the financial year reporting period.

In 2017-18, a total of $102.3 million was payable from industry in royalties and fees under the relevant Acts. This was an increase of 18% ($15.7 million) compared to $86.6 million payable in 2016-17. This increase was mainly attributable to an adjustment in the royalty rate for brown coal from $0.0776/Gigajoule to $0.2324/Gigajoule, which came into effect on 1 January 2017.

**Table 4.1 Mineral, extractive and petroleum revenue payable ($A Millions)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Fees & Charges | Rent | Royalty | Mine Stability Levy | Total |
| 2015-16 | 0.7 | 2.0 | 47.7 | 1.4 | 51.8 |
| 2016-17 | 0.7 | 1.4 | 83.1 | 1.4 | 86.6 |
| 2017-18 | 0.8 | 1.7 | 99.1 | 1.5 | 103.1 |

Source: DJPR

**Graph 4.1 Mineral, extractive and petroleum revenue payable ($A Millions)**

Source: DJPR

**Table 4.2 Mineral, Extractive and Petroleum sector royalties payable in the financial year ($A Millions)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | Coal | Minerals | Extractive | Petroleum | Total |
| 2015-16 | 36.6 | 5.7 | 6.2 | 0.1 | 47.7 |
| 2016-17 | 66.9 | 6.1 | 5.9 | 4.2 | 83.1 |
| 2017-18 | 84.0 | 5.6 | 6.2 | 3.2 | 99.1 |

**Graph 4.2 Mineral, extractive and petroleum sector royalties payable ($A Millions)**

Source: DJPR

## Rehabilitation bonds

The total monetary value of the rehabilitation bonds held by Earth Resources Regulation in 2017-18 was $812.2 million, an increase of 71.2% ($337.7 million) year on year. The increase in rehabilitation bonds held in 2017-18 was mainly due to a substantial revision of the Latrobe Valley coal mine bonds.

**Table 4.3 Value of rehabilitation bonds by authority type ($A million)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Exploration Licence | Mining Licence | Prospecting Licence | Retention Licence | Work Authority | Total |
| 2011-12 | 2.5 | 156.9 | 0 | N/A | 80.9 | **240.3** |
| 2012-13 | 2.4 | 158.3 | 0.025 | N/A | 81.0 | **241.7** |
| 2013-14 | 2.1 | 183.4 | 0.091 | 0.010 | 90.9 | **276.5** |
| 2014-15 | 1.9 | 153.0 | 0.138 | 0.050 | 85.8 | **241.0** |
| 2015-16 | 2.0 | 239.6 | 0.2 | 0.1 | 88.6 | **330.5** |
| 2016-17 | 2.0 | 380.5 | 0.2 | 0.1 | 91.7 | **474.5** |
| 2017-18 | 2.0 | 717.7 | 0.2 | 0.1 | 92.2 | **812.2** |

Source: DJPR

**Graph 4.3 Value of rehabilitation bonds by authority type ($A million) 2011-12 to 2017-18**

**Table 4.4 Rehabilitation bond reviews over time**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year | Number of Bonds Reviewed | Result of Review -  Increase | Result of Review  No Change | Result of Review -  Decrease or Release |
| 2011-12 | 216 | 19 | 193 | 4 |
| 2012-13 | 258 | 37 | 220 | 1 |
| 2013-14 | 214 | 66 | 139 | 9 |
| 2014-15 | 106 | 54 | 10 | 42 |
| 2015-16 | 100 | 48 | 6 | 46 |
| 2016-17 | 91 | 46 | 12 | 33 |
| 2017-18 | 114 | 49 | 8 | 57 |

Source: DJPR

**Graph 4.4 Outcome of bond reviews over time**

# Monitoring, compliance and enforcement

Earth Resources Regulation undertakes a compliance program to ensure that authority holders comply with their obligations. Monitoring, compliance and enforcement activities under the MRSDA are summarised in the table below.

In 2017-18 Earth Resources Regulation revised the process for issuing notices and this is expected to lead to an increase in the number of notices in the future. Inspections increased 11% from 357 to 396 in 2017-18.

Improvement actions were identified in 73% (117 out of 160) Audits during 2017-18.

**Table 5.1**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Audits** | **Environmental Review Committees** | **Inspections** | **Meetings** | **Site Closures** | **Site Visits** | **Enforcement Notices \*** | **Total** |
| **2014-15** | 155 | 35 | 380 | 49 | 28 | 51 | 31 | **729** |
| **2015-16** | 186 | 76 | 366 | 199 | 32 | 80 | 59 | **998** |
| **2016-17** | 170 | 96 | 357 | 106 | 25 | 86 | 61 | **901** |
| **2017-18** | 160 | 90 | 396 | 91 | 56 | 81 | 8 | **882** |

\*s110 and s110a Notices

Source: DJPR

**Graph 5.1 Monitoring, compliance and enforcement activities**

Source: DJPR

# Petroleum, geothermal and pipelines

## Petroleum

Exploration for petroleum within Victoria’s jurisdiction occurred in the Otway and Gippsland geological basins. Production activity occurred in the Otway Basin.

Offshore activities occur within three nautical miles off the coast, as covered by Victorian legislation. Waters greater than three nautical miles offshore from the coast are covered by Commonwealth legislation and reported separately by Commonwealth Government agencies.

## Petroleum tenements

In 2017-18, no Petroleum Exploration Permits, Retention Leases or Production Leases applications were received or granted.

**Table 6.1 Overview of petroleum tenements current as at 30 June 2018**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Petroleum Exploration Permits | Petroleum Retention Leases | Petroleum Production Licences | Other Tenements (PSAA, PSDA, AA) | Total |
| Onshore | 11 | 3 | 13 | 2 | 28 |
| Offshore (Vic) | 3 | 1 | 1 | 1 | 6 |

Source: DJPR

#### Onshore

Due to the onshore moratorium, there were no onshore petroleum retention licence or exploration permit applications received or granted in 2017-18.

**Table 6.2 Overview of onshore petroleum exploration permits**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Granted** | 0 | 2 | 2 | 0 | 0 | 0 | 0 |

Source: DJPR

**Table 6.3 Overview of onshore petroleum retention licences**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Granted** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: DJPR

#### Offshore (Victorian Waters)

No offshore petroleum permits were received or granted in 2017-18

**Table 6.4 Overview of offshore petroleum exploration permits**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| **Granted** | 1 | 0 | 0 | 2 | 0 | 0 | 0 |

Source: DJPR

**Table 6.5 Overview of offshore petroleum retention leases**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Granted** | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: DJPR

**Table 6.6 Overview of offshore petroleum production licences**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Granted** | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Source: DJPR

#### Greenhouse gas storage

There were no application received or granted for Greenhouse Gas Access Permit.

**Table 6.7 Overview of offshore Greenhouse Gas Assessment Permit**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| **Granted** | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Source: DJPR

### Petroleum exploration and development

Due to the onshore Moratorium, no drilling or seismic activities occurred on Onshore Petroleum tenements in Victoria in 2017-18.

#### Drilling

During 2017-18, no onshore wells were drilled. A legislated moratorium on exploration and production of onshore conventional gas is place until June 2020, while scientific investigations are undertaken on the risks, benefits and impacts. Onshore unconventional gas activities, including hydraulic fracturing, are not permitted by law.

**Table 6.8 Number of exploration wells drilled in Victoria**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Offshore (Vic) Gippsland | Offshore (Vic) Otway | Onshore Gippsland | Onshore Otway | Onshore Murray | Total wells |
| **2011-12** | 0 | 0 | 1 | 1 | 0 | 2 |
| **2012-13** | 0 | 0 | 2 | 0 | 0 | 2 |
| **2013-14** | 0 | 0 | 0 | 0 | 0 | 0 |
| **2014-15** | 0 | 0 | 0 | 0 | 0 | 0 |
| **2015-16** | 0 | 1 | 0 | 0 | 0 | 1 |
| **2016-17** | 0 | 0 | 0 | 5 | 0 | 0 |
| **2017-18** | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 3 | 1 | 0 | 5 |

Source: DJPR

**Graph 6.1 Number of exploration wells drilled**

Source: DJPR

#### Production

Gas production located within Victoria’s three nautical mile zone.

**Table 6.9: Gas production 2017-18**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Condensate (bbl\*) | Gas Production (MMscf\*\*) | Gas Production (Petajoules^) | CO2 Prod. (tonnes) | Gas Injection (MMscf) | Comments |
| 134178 | 13,118 | 13.91 | 33,643 | - | Ex wellhead figures |

\*bbl = barrels \*\*MMscf = million standard cubic feet

(Unit Conversion: 1 Sm3 of oil = 6.29 bbl and 1 Sm3 of gas = 35.3 Scf)

**Table 6.10: Underground gas storage 2017-18**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Condensate (bbl\*) | Gas Storage (MMscf\*\*) | Gas Storage (Petajoules^) | CO2 Prod. (tonnes) | Gas Injection (MMscf) | Comments |
| 465 | 11,670 | 12.38 | - | 13,745 | Storage |

\*bbl = barrels \*\*MMscf = million standard cubic feet

(Unit Conversion: 1 Sm3 of oil = 6.29 bbl and 1 Sm3 of gas = 35.3 Scf)

^ Convert Gas mmscf to petajoules using online converter : https://www.santos.com/conversion-calculator/

### Geothermal Energy

As at 30 June 2018, there were five current geothermal energy exploration permits. No geothermal energy retention leases or production licences were granted in 2017-18. Geothermal energy activities in Victoria remain limited to exploration.

### Geothermal energy tenements

No geothermal energy tenement applications were received or granted in 2017-18.

**Table 6.11 Overview of geothermal exploration permits by year**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Description | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| Application Received | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Granted | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Licence Relinquished | 0 | 2 | 7 | 0 | 0 | 0 | 1 |
| Current Licences | 15 | 13 | 6 | 6 | 6 | 6 | 5 |

Source: DJPR

## Offshore Pipelines

**Table 6.12 Offshore pipeline licences applications received and granted (Victorian waters)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
| **Application Received** | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| **Granted** | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

Source: DJPR

**Table 6.13 Offshore Pipeline licences current as at 30 June 2018**

|  |  |
| --- | --- |
| Tenement | Number of licences |
| **Offshore (Vic)** | 14 |

Source: DJPR

**Onshore Pipelines**

Onshore pipelines are administered by the Department of Environment, Land, Water and Planning (DELWP). For more information on onshore pipelines, visit the DELWP website <https://www.energy.vic.gov.au/pipelines>

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