

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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| **Version** | **Amendments** |
| v1.01 | **FY 2014-15 Expenditure on minerals exploration and mining correction**  Amendments made to Table 2.5 (page 14):   * MRSDA Exploration expenditure amended from $32.3M to $47.5M * MRSDA Mining expenditure $622.3M to $607.8M |
| v1.01 | **FY 2016-17 Gold production and Sale Value correction**  Amendments made to Introduction (page4) and Table 2.7 (page 16):   * Gold Production from 329,452 ounces to 312,229 ounces * Gold Sales Value from $547.8M to $519.8M |
| V1.02 | **Table 2.2.2.3 Gas Production**  Updated the table to 2016-17 data. |

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For more information see the Earth Resources Regulation website [www.earthresources.vic.gov.au/earth-resources-regulation](http://www.earthresources.vic.gov.au/earth-resources-regulation)

This document is also available in PDF and accessible Word format at   
<http://earthresources.efirst.com.au/categories.asp?cID=46&c=4307>

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# Introduction

The Earth Resources Regulation Branch (ERR) in the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) 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 tenement management regime and conducts monitoring and compliance operations to ensure that authority holders comply with their statutory obligations.

Earth Resources Regulation administered 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);
* *Pipelines Act 2005* (licensing and regulation of high pressure pipelines onshore);
* *Geothermal Energy Resources Act 2005* (geothermal energy exploration and development); and
* *Greenhouse Gas Geological Sequestration Act 2008* (greenhouse gas storage onshore).

The 2016-17 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, licensing, revenues and regulatory actions.

All production and expenditure figures are certified by authority holders and submitted to Earth Resources Regulation.

Key observations and statistics for 2016-17 include:

* There were 411 licences as at 30 June 2017, which was a decline of 6.4 per cent compared to 2015-16.
* The number of new licences granted and renewed increased to 68 from 57 in 2015-16.
* In the petroleum sector, production from three new development wells came on stream in September 2016. H-2 well from Halladale field, S-1 and S-2ST1 wells from Speculant field were located within Offshore Petroleum Production Licence VIC/L1(V) located within three nautical mile zone.
* In the extractive sector, 529 quarries produced a total of 57.4 million tonnes of rock at a reported value of $849 million dollars, an increase of 4.5 per cent ($33.5 million) year on year.
* The minerals sector continued to reflect the general trend of a fluctuating commodity market over the past five years. The production of gold remained high with a further increase of 21.6 per cent to 312,229 ounces, while the production of brown coal decreased by 6.1 per cent. The amount spent on exploration increased from $38.0 million to $43.5 million (14.5 per cent increase).
* State revenue (rent, royalty and administrative fees) derived from the earth resources sector totalled $87.9 million, an increase of 69 per cent ($36 million). This increase was mostly attributable to an adjustment in the royalty rate for brown coal, which came into effect on 1 January 2017.

# 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 2016-17, no Petroleum Exploration Permits, Retention Leases or Production Leases applications were received or granted.

**Table 1.1 Overview of petroleum tenements current as at 30 June 2017**

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

Source: DEDJTR

#### Onshore

No onshore petroleum retention licence or exploration permit applications were received or granted in 2016-17.

**Table 1.2 Overview of onshore petroleum exploration permits**

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

Source: DEDJTR

**Table 1.3 Overview of onshore petroleum retention licences**

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

Source: DEDJTR

#### Offshore (Victorian Waters)

No offshore petroleum exploration permits were granted and no applications were received. No applications for offshore petroleum retention and production licences were received nor were any granted.

**Table 1.4 Overview of offshore petroleum exploration permits**

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

Source: DEDJTR

**Table 1.5 Overview of offshore petroleum retention leases**

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

Source: DEDJTR

**Table 1.6 Overview of offshore petroleum production licences**

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

Source: DEDJTR

#### Greenhouse gas storage

There was one application for a Greenhouse Gas Access Permit.

**Table 1.7 Overview of offshore Greenhouse Gas Assessment Permit**

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

Source: DEDJTR

### Petroleum exploration and development

No drilling or seismic activities occurred on Onshore Petroleum tenements in Victoria.

#### Drilling

During 2016/17, 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 banned by law.

**Table 1.8 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 | 0 | 0 | 0 |
| Total | 0 | 1 | 3 | 1 | 0 | 5 |

Source: DEDJTR

**Graph 1.1 Number of exploration wells drilled**

Source: DEDJTR

#### Geophysical Surveys

Enterprise II 3D TZ (Transition Zone) Marine Seismic Survey was acquired in Offshore Petroleum Exploration Permit VIC/P42(V), Onshore (Petroleum Exploration Permits) PEP 168, PEP169 and (Petroleum Production Licence) PPL8. The survey was initiated in January and completed in April 2017.

#### Production

Production from three new development wells came on stream in September 2016. H-2 well from Halladale field, S-1 and S-2ST1 wells from Speculant field were located within Offshore Petroleum Production Licence VIC/L1(V) located within three nautical mile zone.

Carbon dioxide production at Boggy Creek (PPL3) and gas injection and production at the Iona gas storage facility (PPL1 and PPL2) which are both onshore facilities located in the Otway Basin.

**Table 1.9: Otway onshore production and injection 2016-17^**

| Field | Condensate (bbl\*) | Gas Production (MMscf\*\*) | CO2 Prod. (tonnes) | Gas Injection (MMscf) | Comments |
| --- | --- | --- | --- | --- | --- |
| Iona | 587 | 9,668 | - | 13,952 |  |
| Boggy Creek | 3.7 | - | 34,937 | - | Ex wellhead figures |
| Halladale BlackWatch and Speculant (HBWS) | 201,935 | 19,598 | - | - |  |

Source: DEDJTR

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

^ Table updated the 2016-17 figures

### Geothermal energy

As at 30 June 2017, there were six current geothermal energy exploration permits. No geothermal energy retention leases or production licences were granted in 2016-17. Geothermal energy activities in Victoria remain limited to exploration.

### Geothermal energy tenements

No geothermal energy tenements in 2016-17.

**Table 1.10 Overview of geothermal exploration permits**

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

Source: DEDJTR

## Pipelines

One onshore application and one offshore application were granted during the year. Five alterations to pipeline routes were registered, with four classified as minor alterations and one classified as a significant alteration.

**Table 1.11 Onshore pipeline licences applications received and granted**

|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
| --- | --- | --- | --- | --- | --- | --- |
| Application Received | 0 | 0 | 2 | 3 | 1 | 0 |
| Granted | 1 | 0 | 1 | 0 | 3 | 1 |

Source: DEDJTR

**Table 1.12 Offshore pipeline licences applications received and granted (Victorian waters)**

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

Source: DEDJTR

**Table 1.13 Pipeline licences current as at 30 June 2017**

| Tenement | Number of licences |
| --- | --- |
| Onshore | 214 |
| Offshore (Vic) | 14 |

Source: DEDJTR

**Table 1.14 Onshore pipeline licence alterations of route registered**

| Type of Alteration of Route | Number of registrations |
| --- | --- |
| Minor | 4 |
| Significant | 1 |
| Total | 5 |

Source: DEDJTR

# Minerals

## Mineral tenements

The number of current retention and prospecting licences continued to increase year on year. The area covered by exploration licences also increased by 7 per cent. The total number of exploration and mining licences continued to reduce year on year.

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

| Tenement Type | 2012 | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Exploration Licences | 326 | | 311 | | 271 | | 247 | | 211 | | 180 |
| Mining Licences | 208 | | 212 | | 191 | | 171 | | 170 | | 162 |
| Prospecting Licences | 1 | | 13 | | 31 | | 41 | | 51 | | 54 |
| Retention Licences | 0 | | 1 | | 1 | | 8 | | 11 | | 15 |
| Totals | 535 | | 537 | | 494 | | 467 | | 443 | | 411 |
| Change year-on-year (%) | 2.9 | | 0.4 | | -8.0 | | -5.5 | | -6.0 | | -6.4 |

Source: DEDJTR

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

Source: DEDJTR

**Table 2.2 New licence applications and licence renewals in 2016-17**

|  | Received | Granted / Renewed | Withdrawn | Refused |
| --- | --- | --- | --- | --- |
| Exploration Licence Applications | 41 | 21 | 6 | 0 |
| Renewal Exploration Licence Applications | 18 | 17 | 0 | 0 |
| Sub Total Exploration Licence Applications | **59** | **38** | **6** | **0** |
| Mining Licence Applications | 1 | 0 | 1 | 0 |
| Renewal Mining Licence Applications | 10 | 15 | 0 | 0 |
| Sub Total Mining Licence Applications | **11** | **15** | **1** | **0** |
| Prospecting Licence Applications | 19 | 11 | 0 | 0 |
| Retention Licence Applications | 3 | 4 | 0 | 0 |
| Total | **92** | **68** | **7** | **0** |

Source: DEDJTR

**Table 2.3 Licences granted and renewed**

| Year | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
| --- | --- | --- | --- | --- | --- | --- |
| Exploration Licences Granted | 62 | 41 | 37 | 37 | 17 | 21 |
| Exploration Licences Renewed | 74 | 52 | 57 | 19 | 13 | 17 |
| Subtotal Exploration Licences Granted and Renewed | **136** | **93** | **94** | **56** | **30** | **38** |
| Mining Licences Granted | 12 | 11 | 9 | 3 | 2 | 0 |
| Mining Licences Renewed | 21 | 14 | 28 | 14 | 10 | 15 |
| Sub Total Mining Licences Granted and Renewed | **33** | **25** | **37** | **17** | **12** | **15** |
| Prospecting Licences Granted | 1 | 12 | 18 | 13 | 12 | 11 |
| Retention Licences Granted | 0 | 0 | 1 | 7 | 3 | 4 |
| Total Licences | **170** | **130** | **150** | **93** | **57** | **68** |

Source: DEDJTR

**Graph 2.3 a) Exploration licences granted and renewed**

Source: DEDJTR

**Graph 2.3 b) Mining licences granted and renewed**

Source: DEDJTR

**Graph 2.3 c) Prospecting\* and retention licences granted**

Source: DEDJTR   
\* A prospecting licence cannot be renewed.

The total area covered by exploration licences (current and in application) was 51,984 km2, an increase of 7 per cent compared to 2017.

**Table 2.4 Total area covered by exploration licences (current and in application as at 30 June 2016)**

| Year | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| --- | --- | --- | --- | --- | --- | --- |
| Total area (km2) | 83,900 | 77,366 | 67,833\* | 54,698\* | 48,569 | 51,984 |

Source: DEDJTR

\*Figures for 2014 and 2015 have been revised due to calculation errors.

**Graph 2.4 a) Total area of Victoria covered by mineral exploration licences**

Source: DEDJTR

## Mineral exploration and mining expenditure

Australian Bureau of Statistics (ABS) data shows an increase of 40.8 per cent ($28.9 M to $40.7M) in Victorian exploration expenditure in 2016/17 compared to 2015/16. Data reported to Earth Resources Regulation on mineral exploration shows that the amount spent on exploration increased from $38.0 million to $43.5 million (14.5 per cent increase). MRSDA data shows that expenditure on mining has increased 10.6 per cent from $685.6 million to $758.3 million.

**Table 2.5 Expenditure on mineral exploration and mining development ($A million)**

|  | 2011-12 | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 |
| --- | --- | --- | --- | --- | --- | --- |
| Mineral Exploration (ABS)1 | 58.5 | 38.6 | 32.6 | 22.9 | 28.9 | 40.7 |
| MRSDA Exploration2 | 37.8 | 39.7 | 30.5 | 47.5^ | 38.0 | 43.5 |
| MRSDA Mining3 | 813.8 | 701.2 | 650.3 | 607.8^ | 685.6 | 758.3 |

Source: Figures collated from activity reports forwarded to DEDJTR required under the MRSDA, and ABS, Actual and Expected Private Mineral Exploration (Catalogue No. 8412.0)

^ Data corrected as at 15/06/2018

By sector, exploration in gold mining and mineral sands accounted for over two-thirds of all exploration expenditure.

**Graph 2.5 a) Expenditure on mineral exploration and mining**

Source: DEDJTR

*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 2.6 Expenditure on mineral exploration and mining by commodity\***

| Sector | Exploration  ($A million) | As % of total | Mining  ($A million) | As % of total |
| --- | --- | --- | --- | --- |
| Coal | 0.46 | 2.4% | 431.21 | 55.1% |
| Gold | 8.29 | 42.4% | 275.99 | 36.6% |
| Mineral Sands | 4.76 | 24.4% | 15.55 | 2.0% |
| Other\*\* | 6.03 | 30.8% | 48.99 | 6.3% |
| Total | 19.55 | 100% | 771.74 | 100% |

Source: DEDJTR

\*Notes: Expenditures are allocated to commodity according to the primary nominated mineral commodity on the licence.

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

**Graph 2.6 Mineral exploration and mining expenditure by commodity (MRSDA) 2016-17**

Source: DEDJTR

## Mineral production

Gold production increased 72.8K ounces (28.4 per cent) from 256,653 ounces to 329,452 ounces. Brown coal production decreased by 6.1 per cent from 59.75 million tonnes to 56.1 million tonnes.

**Table 2.7 Mineral production over time\***

| Year | Brown Coal  (1000 Tonnes) | Gold  (Ounce) | Antimony  (Tonnes) | Zircon  (Tonnes) | Rutile  (Tonnes) | Ilmenite  (Tonnes) | Feldspar  (Tonnes) | Gypsum  (M³) | Kaolin and fine clay  (Tonnes) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2011-12 | 69,124 | 211,201 | 5,007 | 187,538 | 261,744 | 42,814 | 95,310 | 630,258 | 80,202 |
| 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 |
| Change year-on-year (%) | -6.1% | 21.6% | -13.6% | -12.4% | -18.3% | -22.2% | -100.0% | -10.2% | -5.0% |

Source: DEDJTR, statutory returns under the MRSDA.

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

\*\* Data correction for 2015/16 values

^Data corrected as at 15/06/2018

**Table 2.8 Mineral production sales values (A$ million)**

| Mineral | 2014-15 | 2015-16 | 2016-17 | Change year-on-year (%) |
| --- | --- | --- | --- | --- |
| Brown Coal\* | N/A | N/A | NA | NA |
| Gold | 286.9 | 411.4\*\* | 519.8^ | +26.3% |
| Antimony | 37.8 | 30.6 | 33.6 | +9.8% |
| Heavy Mineral Sands (Zircon, Rutile, Ilmenite) | 185.1 | 175.9 | 188.5 | +7.2% |
| Industrial Minerals (Feldspar, Gypsum, Kaolin & fine clay) | 10.2 | 10.0 | 8.0 | -20.0% |
| Others (including silver, peat and quartz) | 0.1 | 0.6 | 0.2 | -66.7% |
| Total (excl. brown coal) | **520.1** | **628.5** | **750.1** | +19.3% |

Source: DEDJTR, statutory returns under the MRSDA.

\*No unit value is assigned to brown coal for the purposes of determining its production value. Brown 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 brown coal.

\*\*The average price of gold for 2015-16 was used multiplied by production amount.

^Data corrected as at 15/06/2018

**Graph 2.8 Gold production (ounces) by year**

Gold production for 2016-17 was 312,229 ounces, being the highest in the last six years.

Source: DEDJTR

**Table 2.9 Brown coal production (‘000 tonnes) by year**

| **Year** | **Maddingley Brown Coal Co.  Bacchus Marsh** | **Alcoa Anglesea** | **Loy Yang** | **Yallourn** | **Hazelwood** | **Annual Total** |
| --- | --- | --- | --- | --- | --- | --- |
| **2011-12** | 21 | 1,022 | 30,237 | 17,404 | 20,440 | 69,124 |
| **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 |

Source: DEDJTR, 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 2017, there were 888 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 2017**

| Tenement | Application\*\* | Current |
| --- | --- | --- |
| Work Authority | 25 | 888 |

Source: DEDJTR

\*A Work Authority is granted under the MRSDA.

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

**Graph 3.1 Extractive industry quarries 2012-13 to 2016-17**

Source: DEDJTR

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

A total of 529 quarries reported production in 2016/17 compared to 535 in 2015/16.

Sales volume 2016-17 increased by 21.3 per cent (10.1 million tonnes). Sales value increased by $33.5 million or 4.5 per cent compared to 2014-15 and 2015-16.

**Table 3.2 Victorian Extractive industry sale by Product Type 2016-17**

|  |  |  |  |
| --- | --- | --- | --- |
| **Product Group** | **Product Type** | **Sales Volume (Million Tonnes)** | **Sales Value**  **($Am)** |
| **Single Size Products** | Aggregate | 20.65 | 383.47 |
| Armour | 0.10 | 1.64 |
| **Single Size Products Total** |  | **20.76** | **385.12** |
| **Multi Size Products** | Fill | 3.33 | 29.95 |
| Road Base | 6.37 | 84.66 |
| Road Sub-Base | 10.39 | 125.57 |
| **Multi Size Products Total** |  | **20.08** | **240.17** |
| **Clay Products** | Brick | 0.78 | 2.17 |
| Stoneware Pottery | 0.00 | 0.03 |
| Tile/Pipe | 0.03 | 0.08 |
| **Clay Products Total** |  | **0.81** | **2.28** |
| **Limestone Products** | Agriculture | 0.52 | 14.14 |
| Cement | 0.03 | 0.57 |
| Lime | 0.15 | 2.43 |
| **Limestone Products Total** |  | **0.69** | **17.15** |
| **Sand Products** | Concrete Sand | 8.94 | 124.40 |
| Fine Sand | 1.70 | 16.95 |
| Foundry Sand | 0.74 | 17.22 |
| Industrial Filters | 0.03 | 0.31 |
| **Sand Products Total** |  | **11.41** | **158.88** |
| **Miscellaneous** | Dimension Stone | 0.07 | 1.00 |
| Soil | 0.03 | 0.42 |
| Unspecified | 3.56 | 44.25 |
| **Miscellaneous Total** |  | **3.67** | **45.66** |
| **Grand Total** |  | **57.42** | **849.27** |

**S**ource: DEDJTR, statutory returns under the MRSDA.

**T****able 3.3 Victorian extractive industries sales by rock type 2016-17**

|  |  |  |  |
| --- | --- | --- | --- |
| **Rock Type** | **Product Type** | **Sales Volume** | **Sales Value** |
| **(million tonnes)** | **($Am)** |
| Hard Rock | BASALT | 20.72 | 333.97 |
|  | GNEISS | 0.03 | 0 |
|  | GRANITE | 5.73 | 101.09 |
|  | HORNFELS | 5 | 73.1 |
|  | QUARTZITE | 0.05 | 0.54 |
|  | RHYODACITE | 1.8 | 38.03 |
|  | SCHIST | 0.21 | 4.04 |
|  | SLATE | 0.03 | 0.98 |
|  | TRACHYTE | 0.03 | 0.54 |
| **Hard Rock Total** |  | **33.6** | **552.29** |
| Soft Rock | CLAY & CLAY SHALE | 1.08 | 2.62 |
|  | LIMESTONE | 1.78 | 25.58 |
|  | SAND & GRAVEL | 16.59 | 216.74 |
|  | SEDIMENTARY\* | 2.95 | 37.09 |
|  | SCORIA | 0.67 | 11.09 |
|  | SOIL | 0.03 | 0.42 |
|  | TUFF | 0.72 | 3.44 |
| **Soft Rock Total** |  | **23.82** | **296.98** |
| Other/Aggregates |  | 0 | 0 |
| **GRAND TOTAL** |  | **57.42** | **849.27** |

Source: DEDJTR, statutory returns under the MRSDA.

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

# Revenue and bonds

## Revenue

In 2016-17, a total of $87.9 million was collected from industry in royalties and fees under the relevant Acts. This was an increase of 69 per cent ($36 million) compared to $51.9 million collected in 2015-16. This increase was mostly 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 2016-17**

| Revenue Stream | Revenue ($A million) |
| --- | --- |
| Fees and charges | 0.7 |
| Rent | 1.4 |
| Royalty | 84.4 |
| Mine Stability Levy | 1.4 |
| Total | **87.9** |

Source: DEDJTR

**Graph 4.1 a) Mineral, extractive and petroleum revenue 2016-17**

Source: DEDJTR

**Table 4.2 Minerals, extractive and petroleum royalties 2016-17**

| Sector | Royalties ($A million) |
| --- | --- |
| Mining | 66.2 |
| Extractive | 14.9 |
| Petroleum | 3.4 |
| Total | **84.5** |

Source: DEDJTR

**Graph 4.2 Mineral, extractive and petroleum royalties 2016-17**

Source: DEDJTR

## Rehabilitation bonds

The total monetary value of the rehabilitation bonds held by Earth Resources Regulation in 2016-17 was $474.5 million, an increase of 43.5 per cent ($144 million) year on year.

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

| Year | Exploration Licence | Mining Licence | Prospecting Licence | Retention Licence | Extractive Industry 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** |

Source: DEDJTR

**Graph 4.3 a) Value of rehabilitation bonds by authority type ($A million) 2011-12 to 2016-17**

Source: DEDJTR

**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 |

Source: DEDJTR

**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.

|  |  |  |  |
| --- | --- | --- | --- |
| **Activities** | **2014-15** | **2015-16** | **2016-17** |
| Audit | 155 | 186 | 170 |
| Environmental Review Committees | 35 | 76 | 96 |
| Inspections | 380 | 366 | 357 |
| Meetings | 49 | 199 | 106 |
| Site Closures | 28 | 32 | 25 |
| Site Visits | 51 | 80 | 86 |
| **Total** | **698** | **939** | **840** |

**Graph 5.1 Monitoring, compliance and enforcement activities 2016-17**

Source: DEDJTR

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