



Mine Safety and Health Fee Funding Model Options



Project Management Office

May 2018

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The findings in this report have been formed on the above basis.

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Introduction

Introduction, purpose and scope

Introduction

The Project Management Office (**PMO**) is currently investigating alternative options for funding the resources safety and health regulator. This review follows the release of the Coal Workers' Pneumoconiosis Select Committee's (**CWP Select Committee**) findings of their inquiry into the re-identification of coal worker's pneumoconiosis in Queensland.

Further background is presented adjacent.

Purpose

The PMO has identified both the potential costs of the resources safety and health regulator (**Regulator**) under four alternative regulator models and four alternative fee models by which to recover these costs.

The purpose of this report is to present the modelling that supports the proposed structure and magnitude of the safety and health fee (also known as the **levy**) under each regulator and fee model combination.

Scope

Specifically, the scope of this report includes:

- Identification of key assumptions underpinning the modelling, including documenting sources of information;
- Calculation of the fee under each regulator and fee model combination over a five year horizon, commencing in FY19; and
- Consideration only of the fee as it applies to the coal mines, mineral mines, quarries and explosives industries.

The Petroleum and Gas fee is **not** considered in this report.

Project background

On 15 September 2016, the Queensland Parliament established the Coal Workers' Pneumoconiosis Select Committee (CWP Select Committee) to conduct an inquiry into the re-emergence of coal workers' pneumoconiosis (CWP) in Queensland.

On 29 May 2017, the CWP Select Committee released a report no. 2 – *Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland*. The report makes 68 recommendations, a number of which relate to structural changes and funding for the resources safety and health regulator, currently the Resources Safety and Health (RSH) division within the Department of Natural Resources, Mines and Energy (DNRME) – formerly the Department of Natural Resources and Mines (DNRM).

In undertaking its inquiry the CWP Select Committee considered the funding source for the regulatory framework for mine safety and health in Queensland. The CWP Select Committee acknowledged the importance of ensuring that the operations of the regulator are appropriately funded. With this in mind the CWP Select Committee examined the suitability of the current safety and health fee (also known as the levy) under Part 2A of Chapter 2 of the Coal Mining Safety and Health Regulation 2001.¹

The CWP Select Committee report no. 2 found that the current safety and health fee is not an appropriate method of funding a truly independent mine safety and health regulator with a fully functional mines inspectorate.² The CWP Select Committee recommended that the safety and health fee currently provided for by Part 2A of Chapter 2 of the Coal Mining Safety and Health Regulation 2001 be abolished; and that the regulator be funded by a dedicated proportion of coal and mineral royalties.³

The Queensland Government's response to the CWP Select Committee report supported, or supported in principle, all 68 recommendations. The government noted that a number of recommendations required further investigation and consultation with stakeholders. The recommendations relating to funding the regulator were among those.

The government has established a Project Management Office (PMO), led by a person independent of existing government agency structures (PMO Executive), to undertake consultation and develop options for the Minister for Natural Resources, Mines and Energy on an alternative regulator model and a sustainable and effective funding model for the regulator.

Source: Discussion Paper 2 – Funding the resources safety and health regulator in Queensland, May 2018

¹ *The Coal Mining Safety and Health Regulation 2001 was remade as the Coal Mining Safety and Health Regulation 2017 and commenced on 1 September 2017.*

² *Coal Workers' Pneumoconiosis Select Committee, 55th Queensland Parliament, Black lung white lies: Inquiry into the re-identification of Coal Workers' Pneumoconiosis in Queensland, report no. 2, May 2017, p. 77.*

³ *As above, p. 79.*

Limitations

Limitations

This report presents the findings of the modelling of various fee structures to recover the costs of four alternative regulator models. This modelling is based on a number of assumptions, all of which are outlined in this report.

KPMG has worked closely with the PMO in the development of the assumptions, which are indicative in nature and have been developed for the purpose of presenting indicative findings to the industry. The assumptions and outputs, however, should not be considered a KPMG opinion and are open to change subject to the PMO's ongoing consultation with the industry.

As such, this report should be considered a starting point to understanding the different impacts of each regulator model and fee model and not the definitive end point.



Key assumptions

Summary of key assumptions

Key assumptions

The analysis presented in this report considers the proposed fee under a range of regulator and fee model combinations. In preparing the analysis, a number of overarching assumptions were required. These include:

- Employee numbers;
- Operator numbers;
- Regulator model costs; and
- Fee model structures.

How assumptions were developed, including key data sources, for each of these items is presented on the following pages.

As presented in the *Introduction* section, these assumptions and the sources of base data have been discussed and agreed with the PMO. They are also only indicative in nature and may change subject to the PMO's ongoing consultation with the industry.

Cost recovery

There is a requirement for the Fee Models to provide for cost recovery of any implemented Regulatory Model. This is based on the Queensland Government's overarching cost recovery policy which states that unless government has made a deliberate decision otherwise, fees or charges applied by departments and statutory bodies for the provision of goods and services will reflect full cost recovery.¹

It is acknowledged that this is not achieved at Fee Model 1. Fee Model 1 is the status quo which presents the prevailing methodology for calculation of the safety and health fee. Under the current fee schedule, full cost recovery will not be achieved, especially given the additional costs associated with CWP.

Exemptions

The modelling undertaken by KPMG reflects the current government policy position to exempt small operators (e.g. those with five or fewer workers). This exemption exists as the administrative burden of collecting fees from small operators exceeds the revenue acquired.

Projection period

The projection period for this analysis is five years commencing in FY19, that is from FY19 to FY23.

¹ Queensland Treasury (2018) *Principles for Fees and Charges*, p. 2

Employee numbers

Employee numbers (total)

The current fee framework is based upon a per employee fee. As such, overall industry employee numbers is a key underlying assumption.

KPMG was provided annual DNRME safety and health fee census data up to FY17, the most recent completed financial year. This information identified an overall declining trend for employees, declining from approximately 52,400 in FY14 to approximately 45,800 in FY17. This corresponds to an average year-on-year decline of 4.4% over this period. Declining employee numbers reflects market conditions over recent years which have included mine operators seeking cost savings and productivity improvements in reaction to a downward trend in commodity prices.

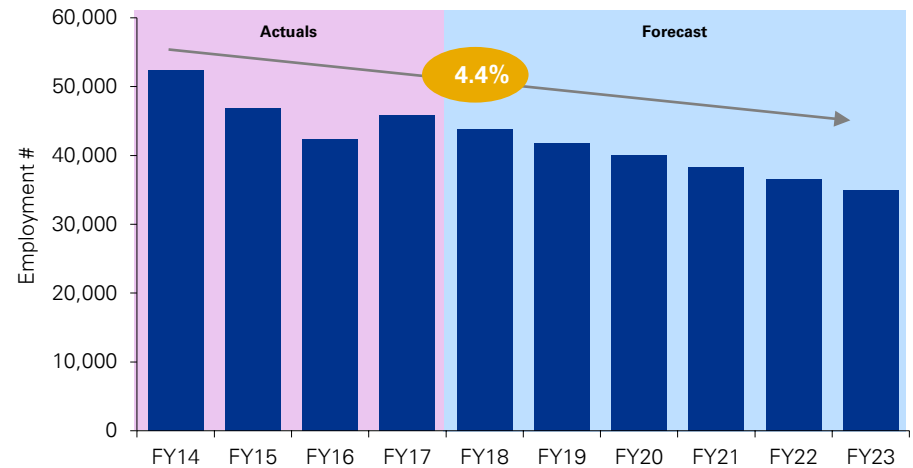
Against this backdrop, the PMO has indicated that going forward, this same decline would be a prudent mechanism to project employee levels over the coming five year period (FY19 to FY23). The adjacent chart presents both the historical actual and projected decline in employment of the projection period. KPMG will, however, be providing the PMO with sensitivity analysis that will explore alternative outlooks for employee growth.

Employee numbers (by tier)

Given a core component of the proposed fee models is to categorise operators into tiers based on the number of employees, we have also provided the following table which presents the employee numbers and average year-on-year employee growth for the current tiers.

When projecting a decline in employee numbers going forward, the historical trend decline from FY14 to FY17 for each relevant tier has been applied.

Total worker numbers, actual and forecast



Source: DNRME, 2017
Queensland Mining, Quarry and Explosives Industry Employment - Raw Data

Total worker numbers by tier			
Tier	FY17		Annual growth
	Employees	% of total	FY14 FY17
Exempt: (1-5 employees)	626	1.4%	-4.4%
Tier 1: (6-10 employees)	545	1.2%	-3.9%
Tier 2: (11+ employees)	44,627	97.4%	-4.4%
Total	45,798	100.0%	-4.4%

Source: Queensland Mining, Quarry and Explosives Industry Employment – Raw Data, DNRME, 2017
Note: Annual growth rates for each tier will not add to the total growth rate. The total annual rate is an average across the total employee population.

Operator numbers

Operator numbers (total)

Whilst operator numbers are not used as a basis for calculating the current fee, one of the proposed fee models includes a fixed fee component based on operator size (as well as a variable fee component per worker).

KPMG was provided operator numbers from the DNRME safety and health fee census data up to FY17, the most recent completed financial year. In contrast to employees, the total number of operators has increased in recent years from 1,385 in FY14 to 1,987 in FY17, at an average year-on-year increase of 12.8% over this period. All of this growth is driven by small operators (with five or fewer workers), who are exempt under the current fee structure.

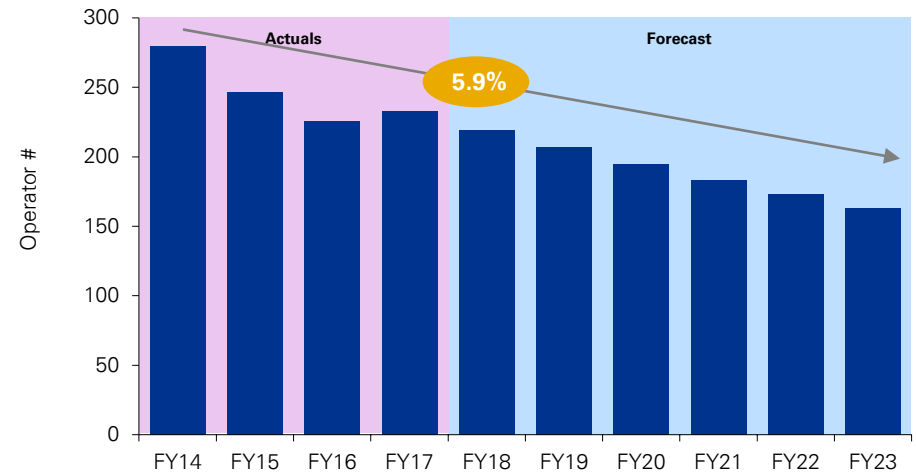
Similarly to employees, Tier 1 and Tier 2 operators have been in decline. Going forward, the PMO has indicated this same decline would be a prudent mechanism to project operator levels over the coming five year period (FY19 to FY23). The adjacent chart presents both the historical actual and projected decrease in the number of Tier 1 and Tier 2 operators over the projection period. This demonstrates an average year-on-year decline of 5.9% over the same period. In line with employee growth, KPMG will also be providing the PMO with sensitivity analysis that will explore alternative outlooks for operator growth.

Operator numbers (by tier)

Given a core component of the proposed fee models is to categorise operators into tiers based on the number of employees, we have also provided the following table which presents the operator numbers and average year-on-year growth (decline) for the current tiers of operators.

When projecting a decline in operator numbers going forward for Tier 1 and Tier 2 operators, the historical trend decline from FY14 to FY17 for each relevant tier has been applied.

Tier 1 and Tier 2 operator numbers, Actuals and forecast



Source: DNRME, 2017

Queensland Mining, Quarry and Explosives Industry Employment - Raw Data

Total operator numbers by tier			
Tier	FY17		Annual growth
	Operators	% of total	FY14 FY17
Exempt: (1-5 employees)	1,754	88.3%	16.7%
Tier 1: (6-10 employees)	71	3.6%	-3.5%
Tier 2: (11+ employees)	162	8.1%	-6.9%
Total	1,987	100.0%	12.8%

Source: Queensland Mining, Quarry and Explosives Industry Employment – Raw Data, DNRME, 2017
 Note: Annual growth rates for each tier will not add to the total growth rate. The total annual rate is an average across the total operator population.

Regulator costs

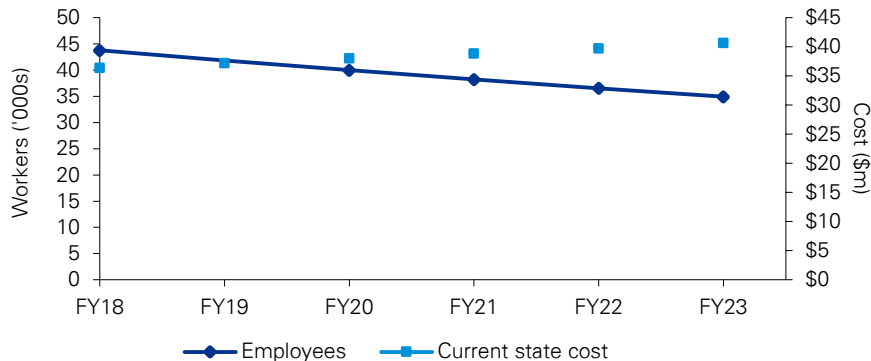
Current state regulator costs

In FY18 the costs incurred by the regulator relevant to the coal mines, mineral mines, quarries and explosives industries are estimated to be in the order of \$36.4m. It is understood that these costs, along with new CWP-related costs, will continue to be incurred under all future.

Costs under the current state are assumed to increase at 2.25% per annum, in line with Queensland Treasury inflation projections for FY19, as presented in the 2017-18 Mid Year Fiscal and Economic Review.

The current state is unsustainable over the longer term without ongoing review of fee rates. While costs and fee indexation are increasing at a similar rate in the current state, employee numbers are projected to decline. The contrasting trends of cost and employment are presented in the following chart.

Cost v employment comparison



Alternative regulator model costs

The PMO's March 2018 Discussion Paper 1 – *Options for resources safety and health regulator model in Queensland*, outlined the four alternative regulator models under consideration. These models incorporate the existing activities of the regulator plus the new activities as identified by the CWP Select Committee. The models include:

- **Regulator Model 1: A Mine Safety and Health Authority** – This is a standalone authority that reflects the model recommended by the CWP Select Committee, including establishing the Authority in Mackay and the introduction of mobile health units.
- **Regulator Model 2: A standalone statutory authority** – This option proposes the creation of a standalone entity separate and independent of DNRME with a different governance structure to that proposed by the CWP Select Committee in Regulator Model 1. This model does not include establishing the Authority in Mackay or the introduction of mobile health units.
- **Regulator Model 3: A division within a department or agency** - This option proposes the establishment of the regulator within an existing governmental structure. The model does not prescribe which government department or agency, and may create a new entity separate and independent of DNRME or provide an amendment to current arrangements. This model does not include establishing the Authority in Mackay or the introduction of mobile health units.
- **Regulator Model 4: A combined work health and safety and resources safety and health regulator** - This option proposes moving the Resources Safety and Health division currently within DNRME into the work health and safety framework within the Office of Industrial Relations. This would create a single government entity responsible for the administration of safety and health across all industry sectors. This model does not include establishing the Authority in Mackay or the introduction of mobile health units.

Regulator costs (cont.)

The PMO's May 2018 Discussion Paper 2 – *Funding the resources safety and health regulator in Queensland*, presents the cost of each regulator model. These are presented in the following table. Noting that the costs of the regulator pre-CWP is \$36.4m, additional administrative and regulatory costs associated with CWP-related initiatives are estimated at approximately \$4m per annum.

The chart on the following page presents projected cost for each regulator model over the five year projection period commencing FY19 when compared to the projected costs of the current state regulator.

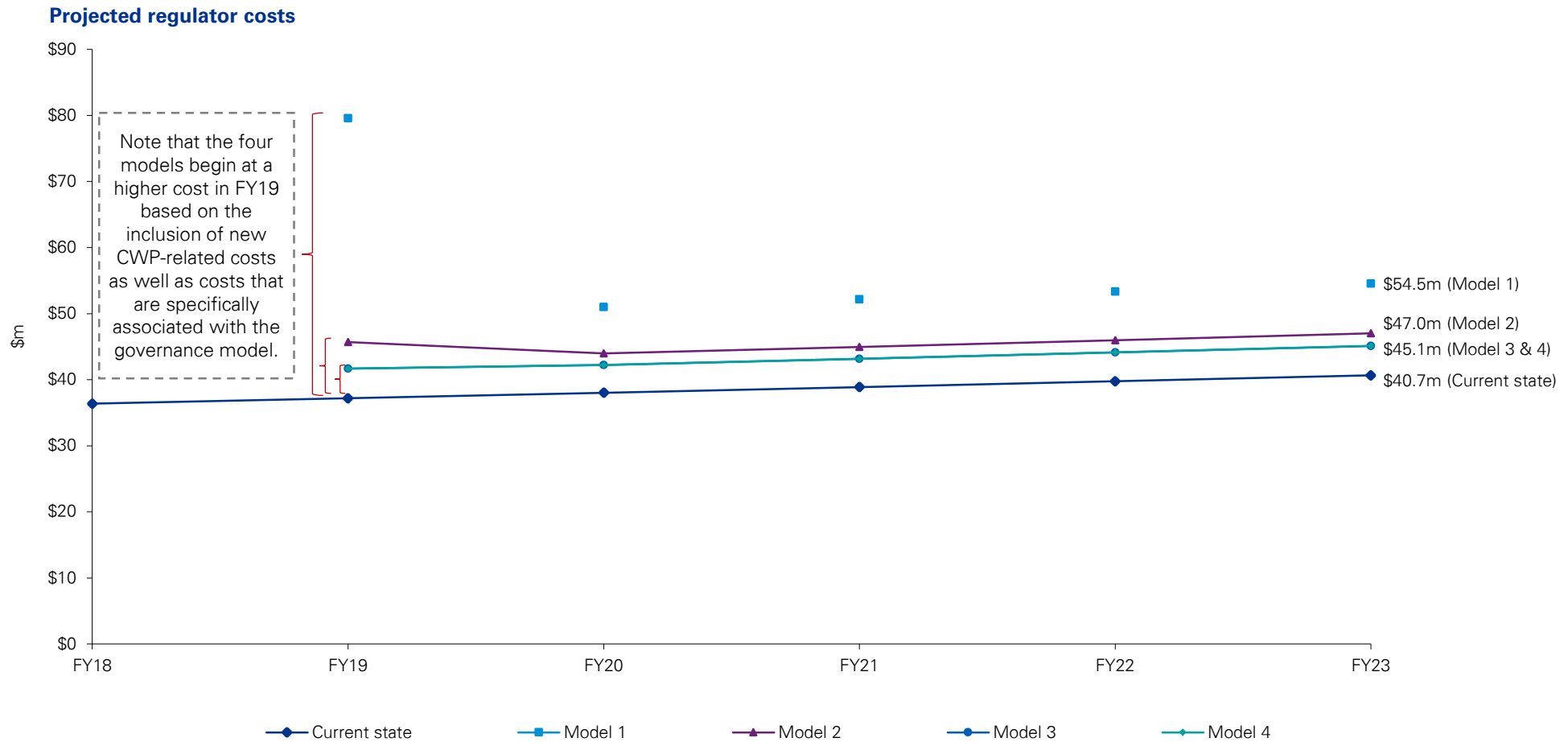
Regulator costs (FY18, \$m)		
	Set up and one off costs	Ongoing annual costs
Regulator Model 1: A Mine Safety and Health Authority	\$29.05	\$48.79
Regulator Model 2: A standalone statutory authority	\$2.65	\$42.06
Regulator Model 3: A division within a department or agency	\$0.40	\$40.38
Regulator Model 4: A combined work health and safety and resources safety and health regulator	\$0.40	\$40.38

Source: Discussion Paper 2 – Funding the resources safety and health regulator in Queensland, PMO, May 2018

More detail relating to the operational and cost differences between each regulator model is presented in the PMO's Discussion Paper 1 – *Options for resources safety and health regulator model in Queensland* and the PMO's May 2018 Discussion Paper 2 – *Funding the resources safety and health regulator in Queensland*.

In addition to the CWP-related costs, costs under each regulator model have been assumed to increase at 2.25% per annum, in line with Queensland Treasury inflation projections for FY19 as presented in the 2017-18 Mid Year Fiscal and Economic Review.

Regulator costs (cont.)



Fee models

Current fee model

The existing fee model includes charging each operator a fee for each person they employ. The magnitude of this fee increases depending on the size of the operator. The current structure is presented in the following table.

Current state fee model (FY18)			
Tier	Workers	Base fee per worker (\$)	Base multiplier
Exempt tier	1-5	NA	0
Tier 1	6-10	\$110.80	1
Tier 2	11 +	\$880.00	~8

Source: DNRME

Under this model the total fee payable for an operator is calculated as follows:

No. employees x Base fee per worker (refer applicable tier) = Total fee payable

For example, an operator with 200 workers would pay a fee of \$176,000, i.e.:

$$200 \times \$880.00 = \$176,000$$

Under this model, the base fee per worker for a Tier 2 operator is almost 8 times higher than the base fee for a Tier 1 operator. This is referred to throughout the document as a 'base multiplier'. The base multiplier essentially provides a mechanism by which to allocate varying cost burden proportions based on the size of the operator.

Alternative fee models

The PMO's May 2018 Discussion Paper 2 – *Funding the resources safety and health regulator in Queensland*, outlines the four alternative fee models under consideration. These include:

- **Fee Model 1: Current safety and health fee** - status quo with the existing tiers and fee levels per worker.
- **Fee Model 2: Increased fees within existing tiers** – an alternative model based on existing tiers of the safety and health fee with an increase to fee levels per worker.
- **Fee Model 3: New tiers and adjusted fees** – an alternative model based on new tiers and adjusted fee levels per worker.
- **Fee Model 4: Base and variable fee** – The model includes a flat-rate base charge using the tiers proposed in Model 3 to cover the fixed costs of the regulator. It also includes a variable charge that is based on both employment numbers and safety risks.

The remainder of this section presents the key attributes and assumptions of each fee model.

Fee Model 1: Current safety and health fee

Under Fee Model 1 there would be no change to the current fee model structure or base fee. In line with Queensland Government policy relating to indexation for fees and charges, it is assumed the base fee for each tier will increase by 2.5% per annum from FY19.

The current fee model is designed to recover the cost of the regulator. Retaining current charges while increasing the cost of the regulator (refer previous discussion on future regulator model costs) will result in this Model being unsustainable.

Fee Model 2: Increased fees within existing tiers

Under Fee Model 2, base fee per worker rates would be increased in FY19 to allow for full cost recovery of the regulator costs. When increasing the base fee per worker rates, the existing base multiplier of approximately 8 between Tier 1 and Tier 2 will be retained.

Base fee escalation under this model will also be set to ensure full cost recovery of the regulator costs in every year, while retaining the existing base multiplier in each year.

Fee models (cont.)

Fee Model 3: New tiers and adjusted fees

Under Fee Model 3, the existing Tier 2 operators are to be split across three separate tiers. New 'base multipliers' have also been developed for the new tier system based on consultation with the PMO. As outlined earlier, the new tiers and base multipliers are indicative and subject to change. This is presented in the following table.

Fee Model 3				
Tier	Workers	FY17		Base multiplier
		No. operators	% Total	
Exempt tier	0-5	1,754	88.3%	0
Tier 1	6-10	71	3.6%	1
Tier 2	11-19	42	2.1%	5
Tier 3	20-99	48	2.4%	7.5
Tier 4	100+	72	3.6%	10

As per the current state, the total fee payable for an operator under Model 3 is calculated as follows:

$$\text{No. employees} \times \text{Base fee per worker (applicable tier)} = \text{Total fee payable}$$

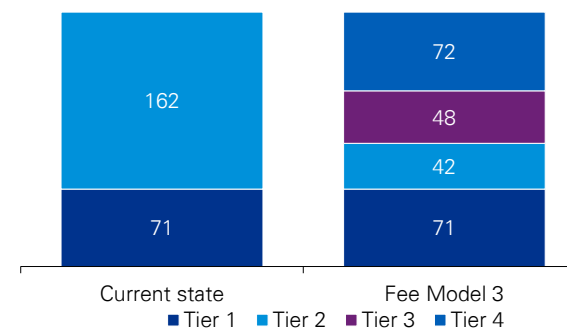
The intention for an expanded tier system is to provide greater progression across the tiers and as much as possible to create four tiers (excluding exempt operators) of similar size when considering the number of operators. The split of operators within each tier, including a comparison to the current tier system, is presented in the adjacent chart.

Under Model 3, per worker base fees (after consideration of the base multiplier) would be established to allow full cost recovery of the regulator costs in FY19.

Base fee escalation under this model will also be set to ensure full cost recovery of

the regulator costs in every year, while retaining the base multipliers in each year.

Breakdown of operators by Tier (excluding exempt operators) for FY17



The following table presents the assumed growth (decline) rates for employees under this new tier structure which is based on growth (decline) over the period FY14 to FY17. These rates are as per those presented on page 9, however, tailored for the new tier structure.

Employee growth by operator tier		
Tier	Workers	Annual decline
Exempt tier	0-5	-4.4%
Tier 1	6-10	-3.9%
Tier 2	11-19	-8.6%
Tier 3	20-99	-9.9%
Tier 4	100+	-4.1%
Total	na	-4.4%

Source: Queensland Mining, Quarry and Explosives Industry Employment – Raw Data, DNRME, 2017
 Note: Annual growth rates for each tier will not add to the total growth rate. The total annual rate is an average across the total employee population.

Fee models (cont.)

Fee Model 4: Base and variable fee

Fee Model 4 includes the introduction of a base charge per operator, plus a variable charge per employee:

- The **base charge** is to be set in order to recover the fixed costs of the regulator (e.g. administration costs), which are set at an indicative proportion of **30%** of total regulator costs.
- The **variable charge** is to be set in order to recover the remaining regulator costs (set at the indicative proportion of **70%**) which are proactive and reactive (e.g. cost of inspections).

The base charge will vary depending upon the size of the operator in line with the tier system introduced under Fee Model 3. The variable charge will be based on the type of operator, through the application of a 'risk multiplier', and the number of employees.

Base charge

The following table presents the proposed structure of the base charge.

Fee Model 4 Base charge based on <u>size of operator</u>		
Tier	Workers	Base multiplier
Exempt tier	0-5	0
Tier 1	6-10	1
Tier 2	11-19	5
Tier 3	20-99	20
Tier 4	100+	100

As outlined earlier, the new tiers and base multipliers are indicative and subject to change.

The following table presents the projected growth (decline) in operator numbers by tier, which is based on historical trend over the period FY14 to FY17. These rates are as per those presented on page 10, however, tailored for the new tier structure.

Operator growth by tier		
Tier	Workers	Annual growth
Exempt tier	0-5	16.7%
Tier 1	6-10	-3.5%
Tier 2	11-19	-7.5%
Tier 3	20-99	-8.2%
Tier 4	100+	-5.8%
Total	NA	12.8%

Source: Queensland Mining, Quarry and Explosives Industry Employment – Raw Data, DNRME, 2017
 Note: Annual growth rates for each tier will not add to the total growth rate. The total annual rate is an average across the total operator population.

Fee models (cont.)

Variable charge

The following table presents the proposed structure of the variable charge.

Fee Model 4 Variable charge based on type of operator and no. of employees*	
Operator type	Risk multiplier
Coal / Metals Surface	1.0
Coal / Metals Underground & Metals Other [^]	1.2
Quarry	0.5
Explosives	0.8

*excluding exempt operators.
[^] includes ore processing facilities at mine sites

The risk multiplier reflects the inherent risk associated with each type of operation. The risk multipliers employed here are indicative only and based on those currently used in New South Wales. Should Fee Model 4 be adopted, risk multipliers that fully reflect circumstances in Queensland would be required to be formulated according to Queensland data and consultation with Queensland stakeholders.

The per employee variable charge would be set to recover the remaining 70% of proactive regulator costs.

The adjacent table presents the projected growth (decline) in employees by operator type, which is based on historical trend over the period FY14 to FY17.

Employee growth by operator type*	
Operator type	Growth/Decline (%)
Coal Surface	-2.8%
Coal Underground	-6.5%
Metals Surface	-9.1%
Metals Underground	-3.9%
Metals Other [^]	-3.9%
Quarry	-5.0%
Explosives	-7.7%
Total	-4.4%

*excluding employee of exempt operators.
[^] includes ore processing facilities at mine sites
 Source: Queensland Mining, Quarry and Explosives Industry Employment – Raw Data, DNRME, 2017
 Note: Annual growth rates for each tier will not add to the total growth rate. The total annual rate is an average across the total employee population.

Payment calculation

The total fee payable for an operator under Model 4 is calculated as follows:

$$\begin{aligned}
 & \text{Base charge (applicable operator size / tier)} \\
 & + \\
 & \text{No. employees x Variable charge per worker (incorporating the risk multiplier} \\
 & \quad \text{for the applicable operator type)} \\
 & = \\
 & \text{Total fee payable}
 \end{aligned}$$



Projected fee rates

Fee Model 1 - Current safety and health fee

The following presents the per worker fee for each tier under Fee Model 1 over the five years from FY19 to FY23, as per the current trajectory of charges.

Fee Model 1: Current safety and health fee Per worker fee projections

	Workers	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Annual growth
Exempt	0 to 5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.0%
Tier 1	6 to 10	\$110.80	\$113.57	\$116.41	\$119.32	\$122.30	\$125.36	2.5%
Tier 2	11 plus	\$880.00	\$902.00	\$924.55	\$947.66	\$971.36	\$995.64	2.5%

NB: The annual growth as described in the table is a compound annual growth rate (CAGR)

The charts on the following page present total revenue generated under Fee Model 1 compared to cost under the four alternative regulator models.

Retention of the current state is projected to result in the regulator being unable to operate on a full cost recovery basis both in FY19 and also on an ongoing basis. The annual shortfall / deficit is projected to increase over the projection period as the forecast decline in workers results in a net decrease in revenue each year whereas the regulator costs are increasing in each year.

The shortfall is greatest under Regulator Model 1, where the annual shortfall increases to \$20.6m in FY23. The total shortfall over the five year period (excluding set up / one-off costs) is projected to be in the order of \$84.1m under this Model.

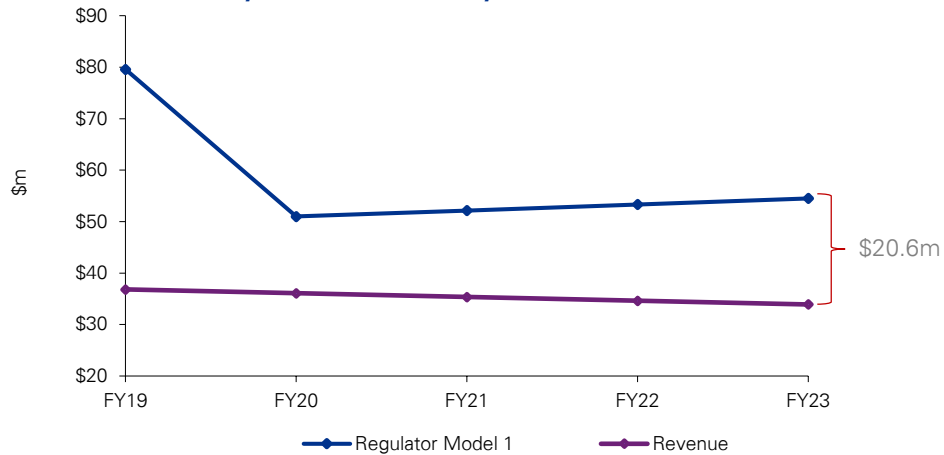
Projected annual and total shortfalls under this Fee Model are presented in the adjacent table.

Financial shortfall under Fee Model 1		
Regulator Model	Annual shortfall (FY23)	Cumulative shortfall* (FY19 to FY23)
Regulator Model 1: A Mine Safety and Health Authority	\$20.6m	\$84.1m
Regulator Model 2: A standalone statutory authority	\$13.1m	\$48.1m
Regulator Model 3: A division within a department or agency	\$11.2m	\$39.1m
Regulator Model 4: A combined work health and safety and resources safety and health regulator	\$11.2m	\$39.1m
*Excluding set up / one-off costs.		

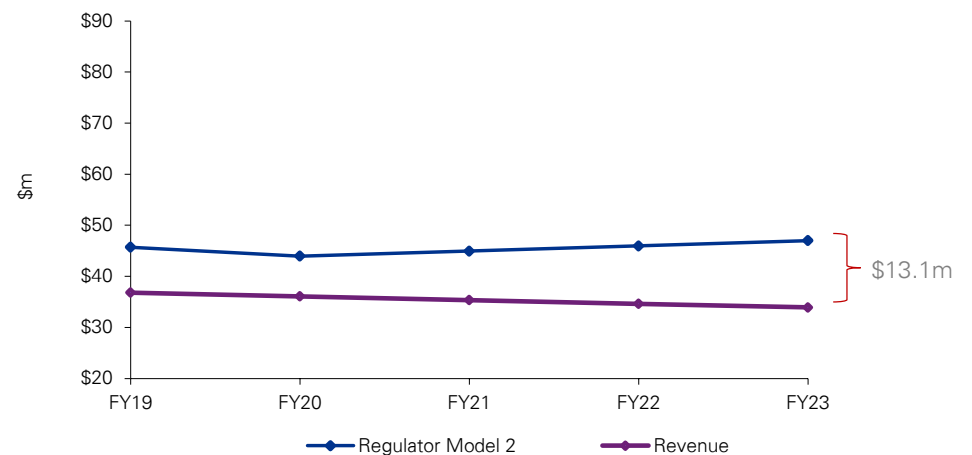
Fee Model 1 - Current safety and health fee (cont.)

The following charts present the ability to recover costs of the four alternative regulator models under Fee Model 1. Under all regulator models, there is a funding gap between revenues and costs.

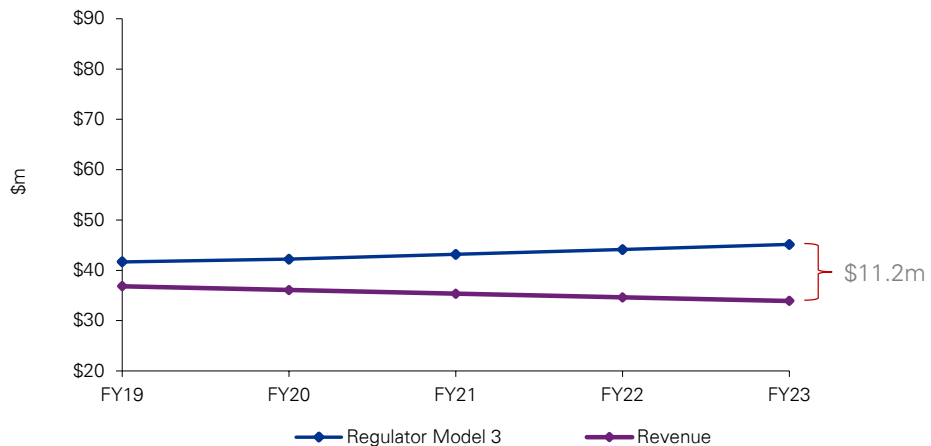
Fee Model 1: Current Safety and Health Fee vs Regulator Model 1: Mine Safety and Health Authority



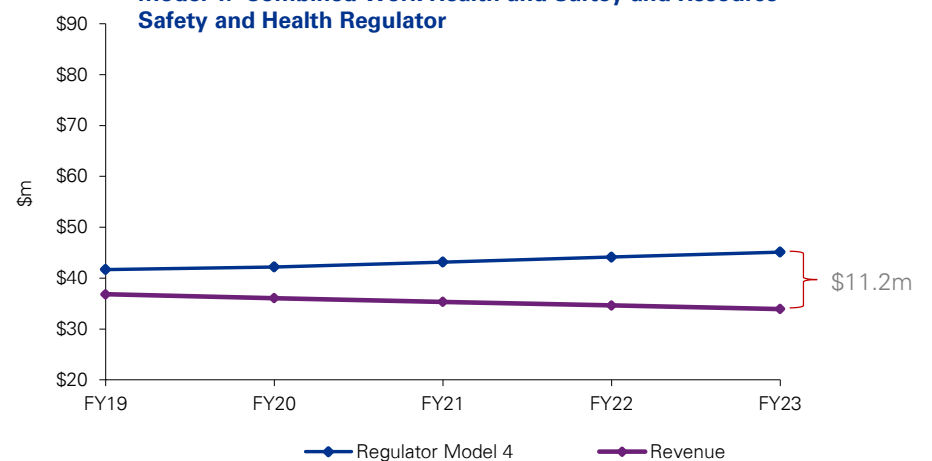
Fee Model 1: Current Safety and Health Fee vs Regulator Model 2: Standalone Statutory Entity



Fee Model 1: Current Safety and Health Fee vs Regulator Model 3: Division within a Department Agency



Fee Model 1: Current Safety and Health Fee vs Regulator Model 4: Combined Work Health and Safety and Resource Safety and Health Regulator



Fee Model 2 - Increased fees within existing tiers

The following presents the per worker fee required for each tier under Fee Model 2 in order to achieve cost recovery over the five years from FY19 to FY23 relative to the four alternative regulator models.

Fee Model 2: Increased fees within existing tiers per worker fee projections per regulator model

	Workers	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Annual growth
Mine Safety and Health Authority								
Exempt	0 to 5	\$0.00	\$0	\$0	\$0	\$0	\$0	na
Tier 1	6 to 10	\$110.80	\$154	\$165	\$176	\$188	\$201	7.0%
Tier 2	11 plus	\$880.00	\$1,222	\$1,307	\$1,398	\$1,496	\$1,600	7.0%
Standalone Statutory Entity								
Exempt	0 to 5	\$0.00	\$0	\$0	\$0	\$0	\$0	na
Tier 1	6 to 10	\$110.80	\$133	\$142	\$152	\$162	\$174	7.0%
Tier 2	11 plus	\$880.00	\$1,053	\$1,127	\$1,205	\$1,289	\$1,379	7.0%
Division within a Department Agency								
Exempt	0 to 5	\$0.00	\$0	\$0	\$0	\$0	\$0	na
Tier 1	6 to 10	\$110.80	\$127	\$136	\$146	\$156	\$167	7.0%
Tier 2	11 plus	\$880.00	\$1,011	\$1,082	\$1,157	\$1,238	\$1,324	7.0%
Combined Work Health and Safety and Resource Safety and Health Regulator								
Exempt	0 to 5	\$0.00	\$0	\$0	\$0	\$0	\$0	na
Tier 1	6 to 10	\$110.80	\$127	\$136	\$146	\$156	\$167	7.0%
Tier 2	11 plus	\$880	\$1,011	\$1,082	\$1,157	\$1,238	\$1,324	7.0%

NB: The annual growth as described in the table is a compound annual growth rate (CAGR) for the period FY19-FY23.

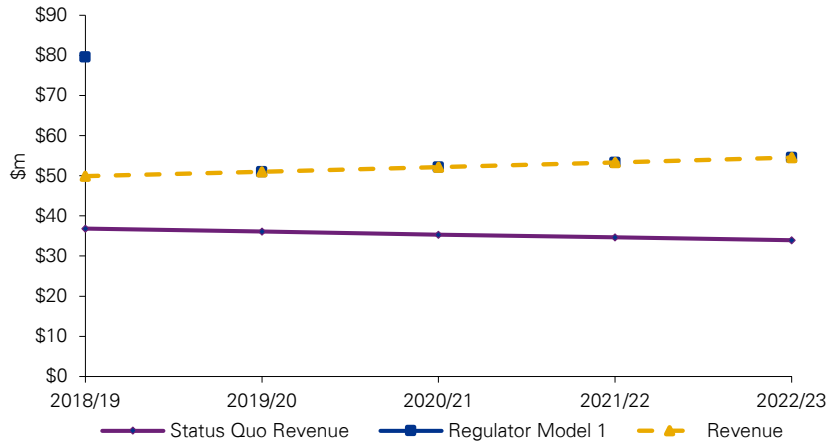
A one off increase in per worker fees from 2017/18 to 2018/19 is projected as follows: 39% under Regulator Model 1, 20% under Regulator Model 2 and 15% under Regulator Model 3 and 4 in FY19. After this one off increase all per worker fees are forecast to increase by 7.0% per annum in order to fully recover regulator costs under all of the 4 regulatory models being considered. While regulator costs are projected to increase at an annual rate of 2.25%, fee rates are required to increase at the higher annual rate of 7.0% in order to compensate for the projected decline in employees across the sector.

The charts on the following page present total revenue generated under this Fee Model compared to cost under the four alternative regulator models.

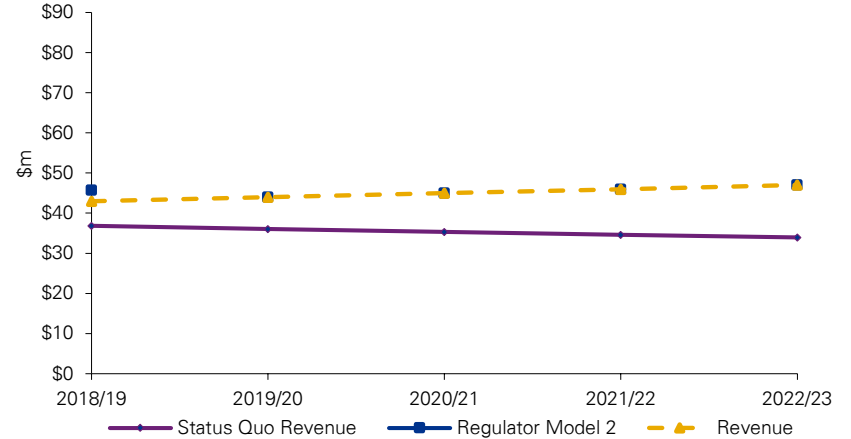
Fee Model 2 - Increased fees within existing tiers (cont.)

The following charts present the costs of the four alternative regulator models against revenue generated under Fee Model 2.

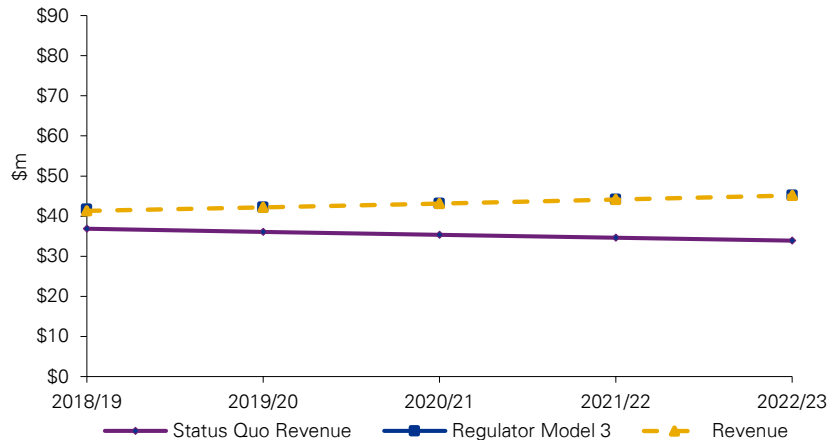
Fee Model 2: Increased fee rates vs Regulator Model 1: Mine Safety and Health Authority



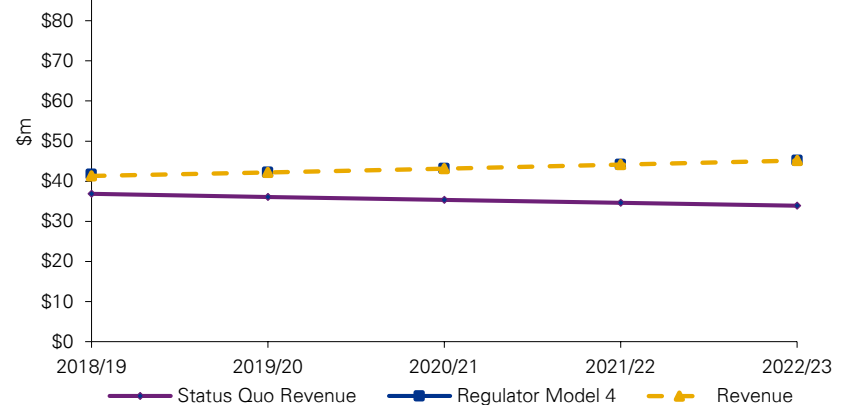
Fee Model 2: Increased fee rates vs Regulator Model 2: Standalone Statutory Entity



Fee Model 2: Increased fee rates vs Regulator Model 3: Division within a Department Agency



Fee Model 2: Increased fee rates vs Regulator Model 4: Combined Work Health and Safety and Resource Safety and Health Regulator



Fee Model 2 - Increased fees within existing tiers (cont.)

Worked example

The following provides a worked example for Fee Model 2. As presented earlier, the calculation for this model (as per Fee Model 1) is as follows:

No. employees x Base fee per worker (refer applicable tier) = Total fee payable

If the operator had 200 workers, the fee payable under Regulator Model 1 in FY19 would be \$244,400, i.e.:

$$200 \times \$1,222 = \$244,400$$

Total fee analysis

The adjacent table presents a summary of the total fee for operators at the lower and upper level of each tier under Fee Model 2 compared to the total fee for these same operators under Fee Model 1.

Fee Model 2: Increased fees within existing tiers (FY19)				
Current state	FY19 forecast		Tier 2	
Fee charge (per person)	\$114		\$902	
# workers	6	10	11	2,100
Total cost	\$681	\$1,136	\$9,922	\$1,894,200
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 1: Mine Safety and Health Authority				
	Tier 1		Tier 2	
Fee charge (per person)	\$154		\$1,222	
# workers	6	10	11	2,100
Total cost	\$923	\$1,538	\$13,439	\$2,565,555
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 2: Standalone Statutory Entity				
	Tier 1		Tier 2	
Fee charge (per person)	\$133		\$1,053	
# workers	6	10	11	2,100
Total cost	\$796	\$1,326	\$11,585	\$2,211,639
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 3: Division within a Department Agency				
	Tier 1		Tier 2	
Fee charge (per person)	\$127		\$1,011	
# workers	6	10	11	2,100
Total cost	\$764	\$1,273	\$11,122	\$2,123,292
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 4: Combined WH&S and Resource Safety and Health Regulator				
	Tier 1		Tier 2	
Fee charge (per person)	\$127		\$1,011	
# workers	6	10	11	2,100
Total cost	\$764	\$1,273	\$11,122	\$2,123,292
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>

Note: The upper bound of 2,100 workers in Tier 2 is reflective of the largest single operator. Upper and lower worker numbers are otherwise reflective of the start or end point of the tier.

Fee Model 3 - New tiers and adjusted fees

The following presents the per worker fee required for each tier under Fee Model 3 in order to achieve cost recovery over the five years from FY19 to FY23 relative to the four alternative regulator models.

Fee Model 3: New tiers and adjusted fees Per worker fee projections

Workers	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Annual growth	
Mine Safety and Health Authority								
Exempt	0-5	\$0.00	\$0	\$0	\$0	\$0	na	
Tier 1	6-10	\$110.80	\$124	\$132	\$141	\$151	\$161	6.8%
Tier 2	11-19	\$880.00	\$620	\$662	\$707	\$755	\$807	6.8%
Tier 3	20-99	\$880.00	\$930	\$994	\$1,061	\$1,133	\$1,210	6.8%
Tier 4	100 +	\$880.00	\$1,240	\$1,325	\$1,415	\$1,511	\$1,613	6.8%
Standalone Statutory Entity								
Exempt	0-5	\$0.00	\$0	\$0	\$0	\$0	na	
Tier 1	6-10	\$110.80	\$107	\$114	\$122	\$130	\$139	6.8%
Tier 2	11-19	\$880.00	\$535	\$571	\$610	\$651	\$695	6.8%
Tier 3	20-99	\$880.00	\$802	\$856	\$915	\$977	\$1,043	6.8%
Tier 4	100 +	\$880.00	\$1,069	\$1,142	\$1,220	\$1,302	\$1,390	6.8%
Division within a Department Agency								
Exempt	0-5	\$0.00	\$0	\$0	\$0	\$0	na	
Tier 1	6-10	\$110.80	\$103	\$110	\$117	\$125	\$133	6.8%
Tier 2	11-19	\$880.00	\$513	\$548	\$585	\$625	\$667	6.8%
Tier 3	20-99	\$880.00	\$770	\$822	\$878	\$938	\$1,001	6.8%
Tier 4	100 +	\$880.00	\$1,026	\$1,096	\$1,171	\$1,250	\$1,335	6.8%
Combined Work Health and Safety and Resource Safety and Health Regulator								
Exempt	0-5	\$0.00	\$0	\$0	\$0	\$0	na	
Tier 1	6-10	\$110.80	\$103	\$110	\$117	\$125	\$133	6.8%
Tier 2	11-19	\$880.00	\$513	\$548	\$585	\$625	\$667	6.8%
Tier 3	20-99	\$880.00	\$770	\$822	\$878	\$938	\$1,001	6.8%
Tier 4	100 +	\$880.00	\$1,026	\$1,096	\$1,171	\$1,250	\$1,335	6.8%

NB: The annual growth as described in the table is a compound annual growth rate (CAGR) for the period FY19-FY23

Under Regulator Model 1, the per worker fee is projected to increase for Tier 1 (12%), Tier 3 (6%) and Tier 4 (41%), however, decrease for Tier 2 (6%) in FY19 when compared to the current fee. Under Regulator Models 2, 3 and 4 the per worker fee under all tiers is projected to decrease, with the exception of Tier 4 which is projected to increase by 21%, 17% and 17% respectively under these Regulator Models. This is presented in the following table.

Per worker fee increase under Fee Model 3 compared to current state (FY18 to FY19)					
Regulator Model	Exempt	Tier 1	Tier 2	Tier 3	Tier 4
	0-5	6 10	11 19	20 99	100 +
1 Mine Safety and Health Authority	NA	12%	-30%	6%	41%
2 Standalone statutory authority	NA	-4%	-39%	-9%	21%
3 Division within a department or agency	NA	-7%	-42%	-13%	17%
4 Combined work health and safety and resource safety and health regulator	NA	-7%	-42%	-13%	17%

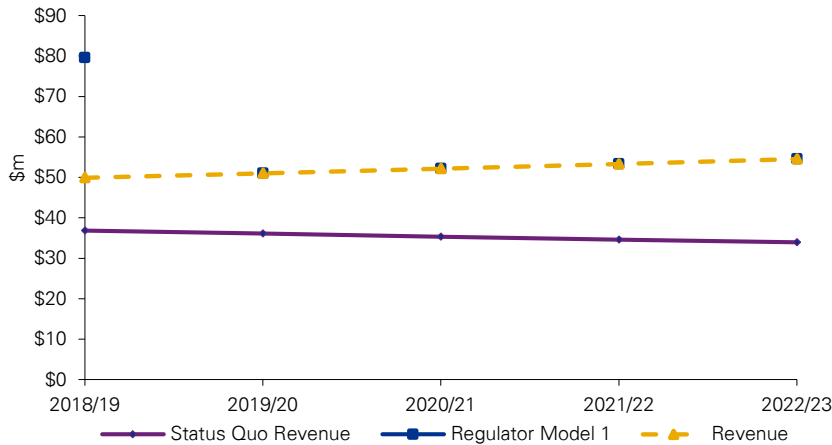
Overall, under Fee Model 3 larger operators are required to pay an increasing portion of overall regulator costs. The indicative tier and multiplier structure applied under Fee Model 3 results in Tier 1 Operators only being projected to pay more per worker under Regulator Model 1. Operators who fall within the new Tier 2 (operators with 11 to 19 employees) are to gain most under this Fee Model with the base fee reducing under all regulator models.

While regulator costs are projected to increase at an annual rate of 2.25%, fee rates are required to increase at an annual rate of 6.8% in order to compensate for the projected decline in the number of employees across the sector. The charts on the following page present total revenue generated under this Fee Model 3 compared to cost under the four alternative regulator models.

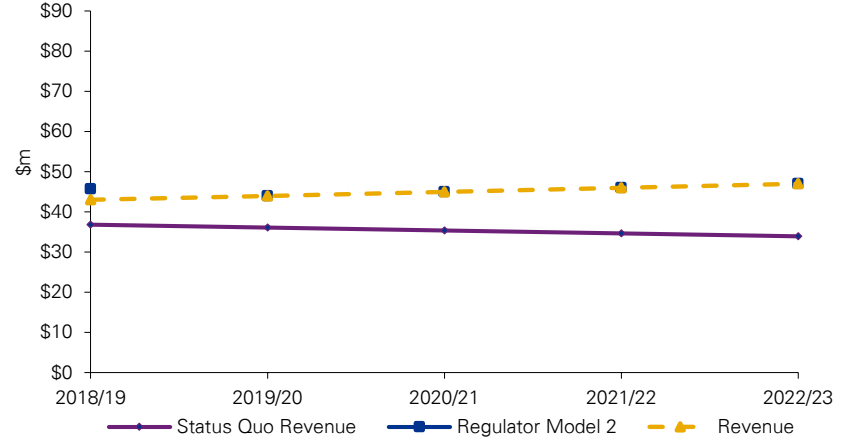
Fee Model 3 - New tiers and adjusted fees (cont.)

The following charts present the costs of the four alternative regulator models against revenue generated under Fee Model 3.

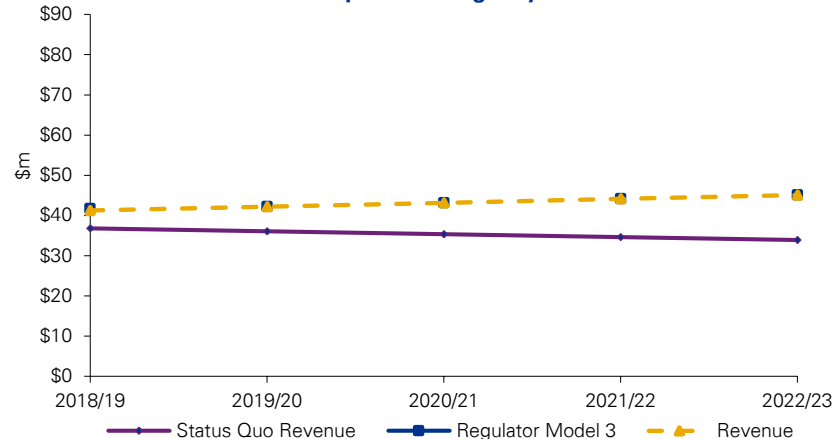
Fee Model 3: New tiers and adjusted fees vs Regulator Model 1: Mine Safety and Health Authority



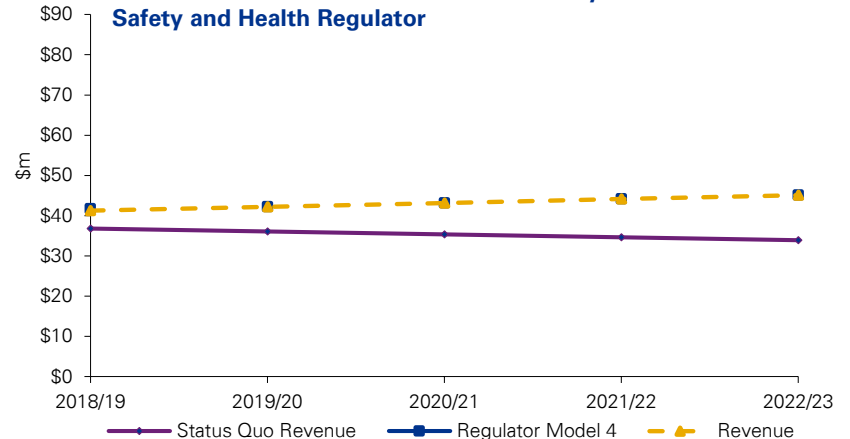
Fee Model 3: New tiers and adjusted fees vs Regulator Model 2: Standalone Statutory Entity



Fee Model 3: New tiers and adjusted fees vs Regulator Model 3: Division within a Department Agency



Fee Model 3: New tiers and adjusted fees vs Regulator Model 4: Combined Work Health and Safety and Resource Safety and Health Regulator



Fee Model 3 - New tiers and adjusted fees (cont.)

Worked example

The following provides a worked example for Fee Model 3. As presented earlier, the calculation for this model (as per Fee Model 1) is as follows:

$$\text{No. employees} \times \text{Base fee per worker (refer applicable tier)} = \text{Total fee payable}$$

If the operator had 200 workers, the fee payable under Regulator Model 1 in FY19 would be \$248,000, i.e.:

$$200 \times \$1,240 = \$248,000$$

Total fee analysis

The adjacent table presents a summary of the total fee for operators at the lower and upper level of each tier under Fee Model 3 compared to the total fee for these same operators under Fee Model 1.

Fee Model 3: New tiers and adjusted fees (FY19)								
Current state forecast FY19 forecast	Tier 1		Tier 2					
Fee charge (per person)	\$114		\$902					
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$681	\$1,136	\$9,922	\$17,138	\$18,040	\$89,298	\$90,200	\$1,894,200
	<i>Min</i>	<i>Max</i>	<i>Min</i>					<i>Max</i>
RM 1: Mine Safety and Health Authority	Tier 1		Tier 2		Tier 3		Tier 4	
Fee charge (per person)	\$124		\$620		\$930		\$1,240	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$744	\$1,240	\$6,822	\$11,783	\$18,604	\$92,091	\$124,028	\$2,604,590
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 2: Standalone Statutory Entity	Tier 1		Tier 2		Tier 3		Tier 4	
Fee charge (per person)	\$107		\$535		\$802		\$1,069	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$642	\$1,069	\$5,881	\$10,157	\$16,038	\$79,387	\$106,919	\$2,245,290
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 3: Division within a Department Agency	Tier 1		Tier 2		Tier 3		Tier 4	
Fee charge (per person)	\$103		\$513		\$770		\$1,026	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$616	\$1,026	\$5,646	\$9,752	\$15,397	\$76,216	\$102,648	\$2,155,598
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
RM 4: Combined WH&S and Resource Safety and Health Regulator	Tier 1		Tier 2		Tier 3		Tier 4	
Fee charge (per person)	\$103		\$513		\$770		\$1,026	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$616	\$1,026	\$5,646	\$9,752	\$15,397	\$76,216	\$102,648	\$2,155,598
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>

Note: The upper bound of 2,100 workers in Tier 2 is reflective of the largest single operator. Upper and lower worker numbers are otherwise reflective of the start or end point of the tier.

Fee Model 4 - Base and variable fee

The following presents the per operator (base charge) and per worker (variable charge) fee required under Fee Model 4 in order to achieve cost recovery in the first (i.e. FY19) and last (i.e. FY23) years of the projection period relative to the four alternative regulator models.

Fee Model 4: Base and variable fee Per operator and per worker fee projections

		2018/19	2022/23	Annual growth	2018/19	2022/23	Annual growth	
		RM 1: Mine Safety and Health Authority			RM 2: Standalone Statutory Entity			
Base Fee (per operator)	Exempt	0-5	\$0	\$0	na	\$0	\$0	na
	Tier 1	6-10	\$2,008	\$2,815	8.8%	\$1,731	\$2,427	8.8%
	Tier 2	11-19	\$10,042	\$14,075	8.8%	\$8,657	\$12,133	8.8%
	Tier 3	20-99	\$40,169	\$56,298	8.8%	\$34,628	\$48,532	8.8%
	Tier 4	100 +	\$200,845	\$281,491	8.8%	\$173,139	\$242,660	8.8%
Variable Charge (per worker)	Coal / Metals Surface		\$814	\$1,054	6.7%	\$701	\$909	6.7%
	Coal / Metals Underground		\$976	\$1,265	6.7%	\$842	\$1,091	6.7%
	Metals Other ^		\$976	\$1,265	6.7%	\$842	\$1,091	6.7%
	Quarry		\$407	\$527	6.7%	\$351	\$454	6.7%
	Explosives		\$651	\$843	6.7%	\$561	\$727	6.7%
		RM 3: Division within a Department Agency			RM 4: Combined WH&S and Regulator			
Base Fee (per operator)	Exempt	0-5	\$0	\$0	na	\$0	\$0	na
	Tier 1	6-10	\$1,662	\$2,330	8.8%	\$1,662	\$2,330	8.8%
	Tier 2	11-19	\$8,311	\$11,648	8.8%	\$8,311	\$11,648	8.8%
	Tier 3	20-99	\$33,245	\$46,593	8.8%	\$33,245	\$46,593	8.8%
	Tier 4	100 +	\$166,223	\$232,966	8.8%	\$166,223	\$232,966	8.8%
Variable Charge (per worker)	Coal / Metals Surface		\$673	\$873	6.7%	\$673	\$873	6.7%
	Coal / Metals Underground		\$808	\$1,047	6.7%	\$808	\$1,047	6.7%
	Metals Other ^		\$808	\$1,047	6.7%	\$808	\$1,047	6.7%
	Quarry		\$337	\$436	6.7%	\$337	\$436	6.7%
	Explosives		\$539	\$698	6.7%	\$539	\$698	6.7%

NB: The annual growth as described in the table is a compound annual growth rate (CAGR) for the period FY19 – FY23.

^ includes ore processing facilities at mine sites

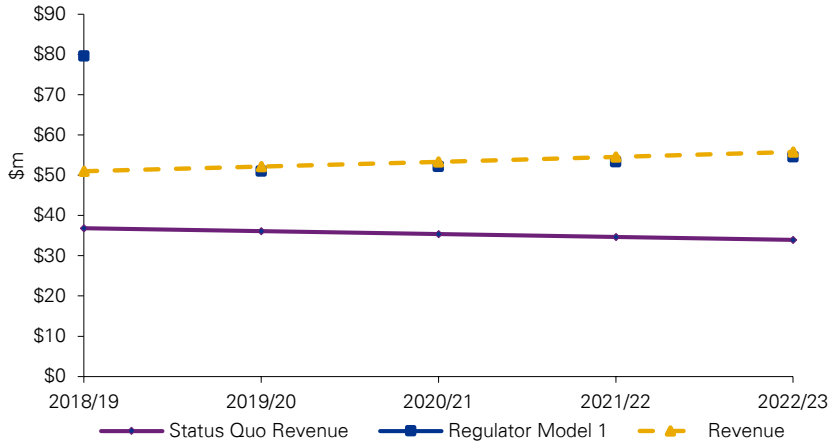
While regulator costs are projected to increase at an annual rate of 2.25%, both base and variable charge rates are required to increase at a significantly higher annual rate in order to compensate for the projected decline in operators and employees across the sector.

The charts on the following page present total revenue generated under this Fee Model compared to cost under the four alternative regulator models.

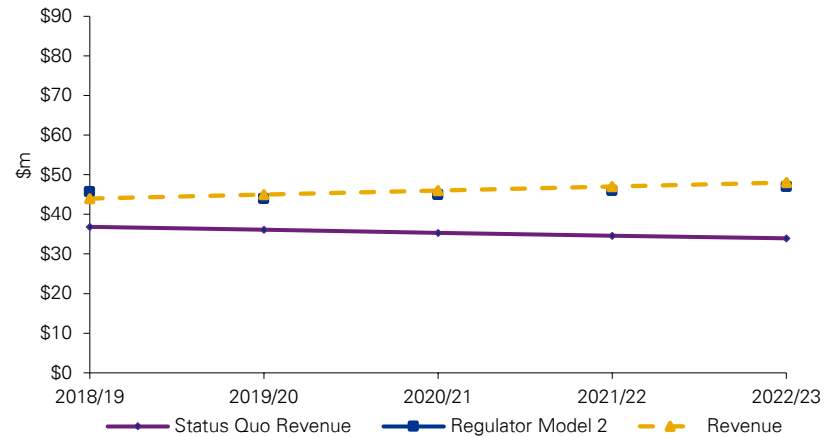
Fee Model 4 - Base and variable fee (cont.)

The following charts present the costs of the four alternative regulator models against revenue generated under Fee Model 4.

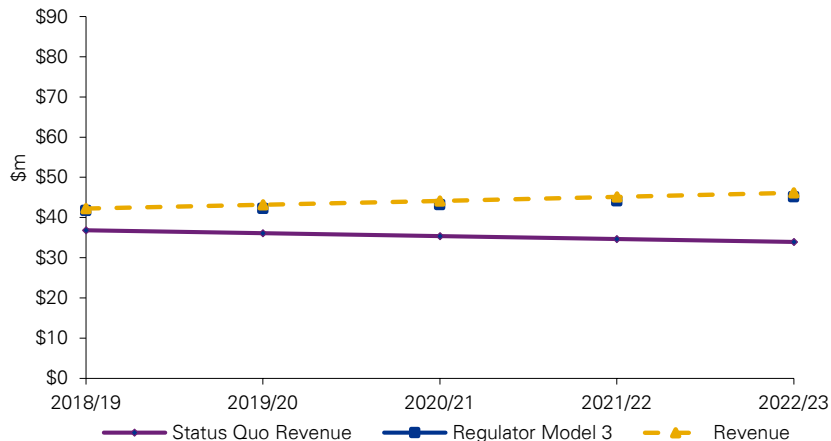
Fee Model 4: Fixed and variable charging vs Regulator Model 1: Mine Safety and Health Authority



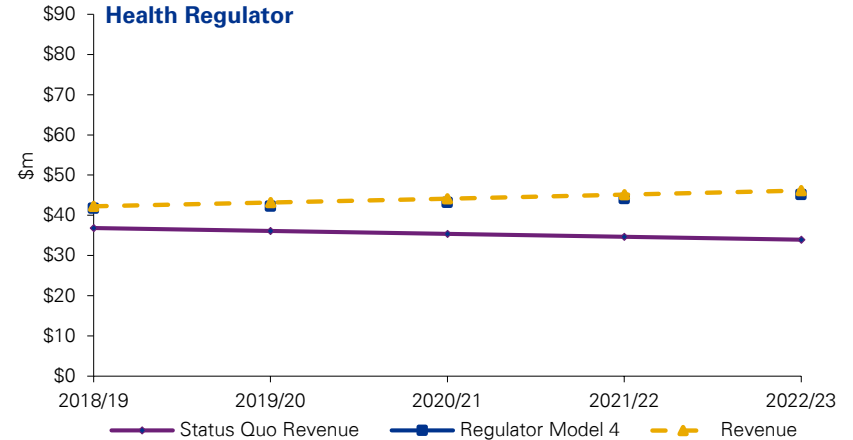
Fee Model 4: Fixed and variable charging vs Regulator Model 2: Standalone Statutory Entity



Fee Model 4: Fixed and variable charging vs Regulator Model 3: Division within a Department Agency



Fee Model 4: Fixed and variable charging vs Model 4: Combined Work Health and Safety and Resource Safety and Health Regulator



Fee Model 4 - Base and variable fee (cont.)

Worked example

The following provides a worked example for Fee Model 4. As presented earlier, the calculation for this model is as follows:

Base charge (applicable operator size / tier)

+

No. employees x Variable charge per worker (incorporating the risk multiplier for the applicable operator type)

=

Total fee payable

If the operator had 200 workers and was an above ground (surface) coal miner, the fee payable under Regulator Model 1 in FY19 would be \$363,645, i.e.:

$$\$200,845 + [200 \times (\$814 \times 1.0)] = \$363,645$$

Total fee analysis

The adjacent table presents a summary of the total fee for operators at the lower and upper level of each tier under Fee Model 4 compared to the total fee for these same operators under Fee Model 1. Above ground coal and metal mines are used as an example in the opposite.

Under the current settings applied to this model, smaller operators contribute a larger share to overall cost recovery when compared to the current state. For example, under Regulator Model 1 Tier 1 operators are projected to contribute 0.4% of the total base charge under Fee Model 4, plus approximately 1.2% of total variable charges (in line with their employment share). This compares to 0.2% under Fee Model 1 and 2 and 0.1% under Fee Model 3. Should the multipliers for the base (i.e. fixed) charge be amended this outcome may change.

Example mine type: Coal / Metal Surface								
Current state - FY19 forecast	Tier 1				Tier 2			
Proposed fixed charge (per operator)	No fixed charge				No fixed charge			
Variable charge (per person)	\$114				\$902			
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$681	\$1,136	\$9,922	\$17,138	\$18,040	\$89,298	\$90,200	\$1,894,200
	<i>Min</i>	<i>Max</i>	<i>Min</i>					<i>Max</i>
Mine Safety and Health Authority	Tier 1		Tier 2		Tier 3		Tier 4	
Proposed fixed charge (per operator)	\$2,008		\$10,042		\$40,169		\$200,845	
Variable charge (per person)	\$814		\$814		\$814		\$814	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$6,891	\$10,146	\$18,993	\$25,503	\$56,444	\$120,730	\$282,220	\$1,909,707
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
Standalone Statutory Entity	Tier 1		Tier 2		Tier 3		Tier 4	
Proposed fixed charge (per operator)	\$1,731		\$8,657		\$34,628		\$173,139	
Variable charge (per person)	\$701		\$701		\$701		\$701	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$5,940	\$8,746	\$16,373	\$21,985	\$48,658	\$104,075	\$243,288	\$1,646,265
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
Division within a Department Agency	Tier 1		Tier 2		Tier 3		Tier 4	
Proposed fixed charge (per operator)	\$1,662		\$8,311		\$33,245		\$166,223	
Variable charge (per person)	\$673		\$673		\$673		\$673	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$5,703	\$8,397	\$15,719	\$21,107	\$46,714	\$99,918	\$233,569	\$1,580,502
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
Combined WH&S and Resource Safety and Health Regulator	Tier 1		Tier 2		Tier 3		Tier 4	
Proposed fixed charge (per operator)	\$1,662		\$8,311		\$33,245		\$166,223	
Variable charge (per person)	\$673		\$673		\$673		\$673	
# workers	6	10	11	19	20	99	100	2,100
Total cost	\$5,703	\$8,397	\$15,719	\$21,107	\$46,714	\$99,918	\$233,569	\$1,580,502
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>

Note: The upper bound of 2,100 workers in Tier 2 is reflective of the largest single operator. Upper and lower worker numbers are otherwise reflective of the start or end point of the tier.

Any minor variations when calculating the above are as a result of rounding issues.

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