



Queensland

# Mineral Resources Amendment Regulation (No. 2) 2005

## Regulatory Impact Statement for SL 2005 No. 11

made under the

*Mineral Resources Act 1989*

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## Background

The Department of Natural Resources, Mines and Energy (NRM&E) administers mineral commodity royalty regimes under the *Mineral Resources Act 1989* and the *Mineral Resources Regulation 2003*, and reviews these regimes from time to time.

In 2003 NRM&E examined the royalty regimes for bauxite, mineral sands (ilmenite, rutile and zircon), silica, limestone, clays (bentonite, kaolin and structural clays), manganese, tantalum, rare earths and diamond.

The above-mentioned mineral commodities have not been reviewed for some time. Although manganese, tantalum, rare earths and diamond are not currently mined in Queensland, these were examined in terms of future potential exploitation and downstream processing within Queensland.

Of the mineral commodities examined in the 2003–04 mineral commodity royalty review, it is proposed to amend the applicable royalty rates and/or arrangements for bentonite, kaolin, silica, manganese, rare earths and tantalum.

As implementation of the proposed changes would involve amendment of the *Mineral Resources Regulation 2003* and would impose an appreciable cost on companies, this Regulatory Impact Statement has been prepared as required under the *Statutory Instruments Act 1992*, to facilitate public consultation.

The following sections summarise key features relating to the mineral commodities that are the subject of the proposed amendments. This paper will present figures based on 2001–02 production, as this was the most recent year for which statistics were publicly available at the time of preparing this document. Royalty estimates have been rounded and standardised to facilitate comparisons between options and do not reconcile with actual royalty receipts.

### **Bentonite**

Australia is a relatively small producer of bentonite in the context of the global market. However, the quality of Australian and Queensland resources and their proximity to Asia provide a competitive advantage, particularly in regard to specialty clay products for high quality applications. In 2001–02 there were 89 350 tonnes of bentonite produced in Queensland, with a total ex-mine value of \$7.5 million.

Bentonite is assessed under schedule 4, part 2, section 1 of the *Mineral Resources Regulation 2003*. The current bentonite royalty is a specific royalty of \$1.00 per tonne. This royalty rate has not been reviewed since 1983.

### **Kaolin**

Similar to the case of bentonite above, Australia is a relatively small producer of kaolin in the global context, however Australian and Queensland resources in particular have advantages in terms of quality and proximity to Asian markets. In 2001–02, there were 18 214 tonnes of kaolin produced in Queensland, with a total ex-mine value of \$1.03 million.

Kaolin is currently assessed under schedule 4, part 2, section 1 of the *Mineral Resources Regulation 2003*. The current kaolin royalty is a specific royalty of 50 cents per tonne. This royalty rate has not been reviewed since 1983.

### **Silica**

Queensland has high purity silica sand resources and is the predominant silica sand producer in Australia, accounting for two-thirds of Australian production. The silica industry is characterised by a small number of

operators and a high degree of vertical integration. In 2001–02 there were 2.5 million tonnes of silica produced in Queensland, with a total ex-mine value of \$32.5 million.

Silica is currently assessed under schedule 4, part 2, section 9 of the *Mineral Resources Regulation 2003*. The royalty rate payable on silica is currently based on a calculation of the higher of five percent of the value of the silica (ad valorem royalty) or 50 cents per tonne (specific royalty). The previous review of Queensland’s silica royalty regime was conducted in 1987.

### **Rare earths**

There is presently no production of or exploration for rare earths in Queensland, and consequently no royalties are currently collected for rare earths.

As there are no separate royalty rates specified for rare earths, they would be assessed under section 10 “Other minerals” in part 2 of schedule 4 of the *Mineral Resources Regulation 2003* (effectively a “catch-all” category). This section sets the royalty for minerals not elsewhere specified in schedule 4, at 2 percent of the value of the mineral sold, disposed of or used, after deducting \$30 000.

### **Manganese and tantalum**

As with rare earths, there are no separate royalty rates specified for manganese and tantalum and consequently they also are assessed under section 10 “Other minerals” in part 2 of schedule 4 of the *Mineral Resources Regulation 2003*. That is, the royalty for manganese and tantalum is assessed at 2 percent of the value of the mineral sold, disposed of or used, after deducting \$30 000. Further, these arrangements currently provide no incentive for downstream processing of manganese or tantalum in Queensland.

No royalties are collected for manganese and tantalum, as there currently is no production of these minerals in Queensland.

Manganese ferroalloys such as ferromanganese and silicomanganese are essential inputs for steel making. The majority of processed manganese products are utilised in the construction, machinery, and transportation industries. Manganese is also a key component in some aluminium alloys and, in oxide form, dry cell batteries. Non-metallurgical end uses include

plant fertilizers, animal feed, and colorants for brick. Although there is no current exploration for manganese in Queensland, there is some resource potential.

The major use for tantalum, as tantalum metal powder, is in the production of electronic components. Alloyed with other metals, tantalum is also used in the aerospace, communications, energy and transportation industries as well as in medical applications. Tantalum is extremely rare and is classified by the United States as a critical and strategic resource. There is current exploration interest in tantalum in the north of Queensland, and the long-term market prospects for tantalum and the potential for Australian based developments in process technology may provide opportunities for a future tantalum based development in Queensland.

## **Authorising law**

This amendment is made pursuant to section 321 of the *Mineral Resources Act 1989*.

## **Policy objectives**

Royalties are payments to the owners of a resource for the use of that resource. The ownership of onshore mineral resources in Queensland is vested largely in the State Government.

NRM&E collects State mineral royalties under the *Mineral Resources Act 1989*. NRM&E undertakes reviews of royalty regimes for mineral commodities, examining changes in the patterns of their production, and in the prevailing and prospective market and industry conditions for these commodities.

These reviews seek to ensure that the royalty arrangements meet Government policy objectives in terms of—

- developing the State's resources;
- providing a fair return to the community for the extraction of these resources;
- maintaining low administration and compliance costs; and

- encouraging downstream processing of minerals within Queensland, where feasible and appropriate.

## **Legislative intent**

The proposed amendment seeks to balance the provision of a fair return to the community for the extraction of Queensland's mineral resources, with cost-effective arrangements for administration and compliance for both Government and industry. That is, it is not intended for royalty rates and arrangements to unduly constrain industry, and potentially discourage exploration and mining development, and in turn compromise future financial returns to the Queensland community.

The processing discounts proposed for manganese and tantalum are intended to encourage downstream processing of manganese and tantalum mined within Queensland.

## **Consistency with the authorising law**

A principal objective of the Mineral Resources Act is to “ensure an appropriate financial return to the State from mining”. To this end, section 321 allows for the making of regulations, pursuant to section 417, which may prescribe different types of royalty arrangements to apply from time to time. The proposed amendments are therefore consistent with the authorising legislation.

## **Consistency with other legislation**

The proposed amendment is not inconsistent with other legislation and, in particular, royalties on minerals (as defined) mined in Queensland are administered solely under the *Mineral Resources Act 1989*.

## **Options and alternatives**

### **Option 1—Retain existing rates and arrangements**

Under this option, the current royalty rates and arrangements that apply to bentonite, kaolin, silica, manganese, rare earths and tantalum would be maintained. In particular—

- bentonite—specific royalty of \$1.00 per tonne;
- kaolin—specific royalty of 50 cents per tonne;
- silica—royalty assessed at the higher of 5 percent of the value of the silica (ad valorem royalty) or 50 cents per tonne (specific royalty); and
- manganese, rare earths and tantalum—2 percent of the value of the mineral, after deducting the \$30 000 royalty-free threshold.

### **Option 2—One-off rate increase for bentonite, kaolin and silica, and modify existing arrangements for manganese, rare earths and tantalum**

Option 2 proposed the following changes to royalty rates and arrangements—

- bentonite—increase the specific royalty from \$1.00 to \$3.00 per tonne;
- kaolin—increase the specific royalty from 50 cents to \$1.50 per tonne;
- silica—remove the 5 percent ad valorem component and increase the specific royalty from 50 cents to \$1.50 per tonne;
- rare earths—increase the ad valorem royalty rate from 2 percent to 2.7 percent of the value of the mineral, whilst retaining the current \$30 000 royalty-free threshold; and
- manganese and tantalum—increase the ad valorem royalty rate from 2 percent of the value of the mineral to 2.7 percent. The royalty-free threshold of \$30 000 would remain and a royalty discount of 35 percent would apply to manganese and tantalum mined and processed within Queensland to at least 75 percent and 95 percent contained metal respectively.

### **Option 3—Upfront increase with ongoing mineral price indexation for bentonite, kaolin and silica, and modify existing arrangements for manganese, rare earths and tantalum**

It is proposed that the specific royalties for bentonite, kaolin and silica be increased to a new standard rate, with ongoing rates to be based on relevant mineral price movements (expressed in Australian dollars), subject to a minimum rate, based on the following formula—

$$R = \text{standard rate} \times \frac{P_{\text{curr}}}{P_{\text{base}}}$$

Where—

*R* = royalty rate per tonne;

*P<sub>curr</sub>* = average current price for the quarter for the relevant mineral, converted into Australian dollars; and

*P<sub>base</sub>* = the base price in Australian dollars.

If the calculated amount is less than the minimum rate, then the minimum rate would apply.

And using the following parameters for each mineral—

#### **Bentonite**

$$R = \$2.50 \times \frac{P_{\text{curr}}}{\$74.43}$$

Minimum rate = \$2.00 per tonne

*P<sub>curr</sub>* = average price for the quarter, converted to Australian dollars, of crude bentonite, bulk, all grades, Wyoming, ex-works (rail hopper cars), USA, published in the Industrial Minerals journal.

#### **Kaolin**

$$R = \$1.50 \times \frac{P_{\text{curr}}}{\$225.80}$$

Minimum rate = \$1.15 per tonne

$P_{curr}$  = average price for the quarter, converted to Australian dollars (and from short ton to metric tonne basis), of coating grade kaolin, bulk, ex-Georgia plant, USA, published in the Industrial Minerals journal.

## Silica

$$R = \$1.00 \times \frac{P_{curr}}{\$39.41}$$

Minimum rate = 85 cents per tonne

$P_{curr}$  = average price for the quarter, converted to Australian dollars, of foundry sand, ex-works, UK, published in the Industrial Minerals journal.

These proposed arrangements for bentonite, kaolin and silica are consistent with those already in place for phosphate.

The royalty changes proposed under Option 3 for rare earths, manganese and tantalum are the same as those proposed under Option 2. In particular—

- rare earths—increase the ad valorem royalty rate from 2 percent to 2.7 percent of the value of the mineral, whilst retaining the current \$30 000 royalty-free threshold; and
- manganese and tantalum—increase the ad valorem royalty rate from 2 percent of the value of the mineral to 2.7 percent. The royalty-free threshold of \$30 000 would remain and a royalty discount of 35 percent would apply to manganese and tantalum mined and processed within Queensland to at least 75 percent and 95 percent contained metal respectively.

The proposed changes for rare earths, manganese and tantalum under Options 2 and 3 are consistent with arrangements applicable to other comparable minerals.

## Rejected Options

### General

Previous reviews of other mineral commodities have examined a range of alternative royalty arrangements for Queensland including profit-based

royalties and various hybrids with ad valorem and profit components. These reviews concluded that these alternatives would not meet the Government's policy objectives of providing a fair return to the community and promoting downstream processing, and in some cases, would involve considerable administration and compliance costs. The Queensland Government removed any remaining profit-based royalties from the State mineral royalty regime several years ago.

Mineral royalty arrangements in Queensland basically fall within two categories—

- specific royalties, which are calculated based on a certain dollar amount per quantity of production (for example, the existing bentonite royalty of 50 cents per tonne); and
- ad valorem royalties, which are calculated based on a percentage of the value of the mineral, (for example, the royalty on coal is calculated as 7 percent of the value of the coal, after certain allowable deductions).

The Queensland Government seeks to promote increased downstream processing of minerals within Queensland, rather than exporting unprocessed minerals overseas. Under this policy, the royalty arrangements for certain minerals provide for royalty discounts where the minerals have been mined and processed within Queensland. Royalty discounts for mineral processing within Queensland are currently offered for cobalt, copper, lead, nickel and zinc.

Given this policy context and the results of previous reviews and past experience in the development and implementation of royalty arrangements for other minerals in Queensland, the 2003–04 mineral royalty review did not consider alternative royalty structures such as profit based royalties or a resource rent tax, or alternative forms of royalty incentives to promote downstream processing.

### **Bentonite and kaolin**

A preliminary analysis considered the scope for an ad valorem royalty for bentonite and kaolin, which would be more price-reflective, being based on the value of production rather than on production tonnages, as is currently the case. This option was not developed given the structure and the relatively small size of the bentonite and kaolin industries in Queensland and that the administrative costs and complexities of appropriate ad

valorem regimes for these two minerals would outweigh any potential benefits.

The scope to offer mineral processing discounts for processing of bentonite and kaolin within Queensland also was investigated. As these minerals do not involve a considerable degree of processing and such processing does not generate significant additional employment, it was concluded that any incentives would unlikely encourage any notable increase in downstream processing of bentonite and kaolin within Queensland. Further, the potential administrative and royalty costs of such incentives would likely outweigh any potential benefits. This conclusion may be re-examined in the context of the next review of the bentonite and kaolin royalties, planned to be undertaken in five years.

## **Silica**

The scope to offer mineral processing discounts for processing of silica within Queensland was investigated in the course of the current silica royalty review. Although a mechanism could theoretically be developed, the review concluded that such an approach would be costly and complex to administer and unlikely to encourage any significant increase in downstream processing of silica within Queensland. It is planned for silica and the other minerals reviewed in the current 2003–04 mineral royalty review to next be reviewed in five years, at which time this conclusion can be re-examined.

## **Cost benefit assessment**

The confidentiality provisions of the *Mineral Resources Act 1989* in relation to the disclosure of royalties preclude making available any information on the financial impacts on individual mineral producers. The royalty estimates presented are rounded, standardised estimates for the sole purpose of facilitating comparisons between options and do not directly reconcile with actual royalty receipts. However, the information contained in this document will allow potentially affected parties to assess the financial impact of the proposal.

Stakeholders affected by the proposed royalty changes include—

- existing and potential mine producers of bentonite, kaolin, silica, rare earths, manganese and tantalum, as the parties responsible

for the extraction of mineral resources and for making payments to the mineral resource owners (primarily the Queensland Government);

- mineral resource owners, principally the Queensland Government, as the owner of the majority of Queensland's mineral resources, on behalf of the community;
- The Queensland community, through State Government ownership of Queensland's mineral resources and as recipients of flow-on benefits of mining and downstream processing developments (employment, export revenues, etc.) and as users of various domestic mineral-based products; and
- Domestic and overseas mineral processors as users of Queensland minerals and mineral-based products.

It should be recognised that a mineral royalty is not government charge (such as a licensing fee) but a return to the community (or private mineral owner) for the exploitation of valuable mineral resources owned by the Queensland community.

Ownership of the majority of Queensland's mineral resources is vested in the Queensland Government and the financial estimates presented here relate to impacts on Queensland Government royalty charges.

There are a limited number of areas in Queensland where the mineral rights are privately owned. In such cases, the royalty provisions of the *Mineral Resources Act 1989* and the *Mineral Resources Regulation 2003* still apply, with the royalties on mineral production from these areas payable to the private mineral owner rather than the State. Any increases in the royalty rates prescribed in the regulation would therefore represent an increase in the royalties payable to these private mineral owners. Estimated impacts on private mineral owners are not provided, as the extent of private mineral ownership in Queensland is very limited and the amounts of royalty involved are relatively small.

Mineral royalty is effectively a “price” for the use of mineral resources. It is the responsibility of the State Government to seek a “price” for these mineral resources to achieve a fair return for the community, without unduly constraining mineral producers. When royalty rates are set too low, the community receives a smaller share of total returns from mining. As with other natural resources, pricing may encourage more responsible exploitation of mineral resources. However, when the rates are set too high,

investment may be delayed or discouraged, potentially reducing overall returns to the community over the longer term.

Mineral royalty payments and other payments made by the mining industry such as mining and exploration tenure rentals and payroll taxation are paid into the consolidated fund of the Queensland Government. This is the principal vehicle for the distribution of funding from most revenue sources across the range of State expenditure responsibilities throughout Queensland, including public services such as hospitals, schools, police, roads and welfare support. This allows a share of the financial benefits from mining development to be distributed beyond the immediate local and regional areas where mining developments are located.

Mineral royalties are a normal input cost for mining and therefore would impact on mine production costs and in turn producer profits in much the same way as changes in other mining input costs. However, in the context of overall production costs, royalty costs represent a small component, particularly relative to transport and energy costs.

Bentonite, kaolin and silica and other industrial minerals are used in the production of a variety of other downstream products (examples of key applications are noted for each mineral in the discussion of Option 1 below). The proportion of these minerals in final products can vary widely. The extent to which changes in any input costs (including mineral royalty payments) are passed through to end-users will vary considerably, depending upon level and structure of competition in end-product markets.

The following example relating to kaolin may serve to illustrate the potential impacts on downstream mineral-based products. Suppose an item of china weighing 100 grams costs \$1.60 per unit to produce. Of this \$1.60, the kaolin content may account for around one percent or less than 2 cents per unit. Assuming that the full royalty charge was passed through to this final product, then the current royalty (50 cents per tonne of kaolin) would account for 1.2 percent of the 2 cents of kaolin in each unit of production or 0.012 percent of the total unit cost. Under Option 2, the royalty cost component would increase to 2 percent of the kaolin component or 0.02 percent of the total unit cost. Under Option 3, the royalty cost component would increase to 2.7 percent of the kaolin component, or 0.027 percent of the total unit cost.

The extent to which current royalty charges (and any changes thereto) are or would be passed through to final users is not known and may vary according to the markets for the individual minerals and their related mineral-based products.

While the proposed changes would increase overall royalty costs for these minerals, it is not anticipated that they would materially impact on companies and downstream users.

In the case of vertically-integrated entities, the proposed royalty charges would impact on the internal cost structures. As transfer prices tend to be artificially low rather than being market reflective, current ad valorem royalty calculations (where applicable) may be distorted and result in lower amounts being payable. The proposed royalty changes remove a potential distortion in these royalty calculations and would increase internal production costs. The removal of this distortion would ensure that both vertically integrated and non integrated entities pay the same royalty.

Royalty collections for all minerals produced in Queensland totalled \$681.6 million in 2001–02, of which royalty collections for bentonite, kaolin and silica under the existing arrangements accounted for around \$1.7 million.

Using the 2001-02 production figures for bentonite, kaolin and silica as the basis for comparing options, it is estimated that royalty payments for these minerals would total \$3.5 million under Option 2. Under Option 3 royalty payments are estimated to total in the range of \$2.0 million to \$2.4 million. The \$2.0 million estimate under Option 3 is based on the proposed minimum royalty rate while the \$2.4 million estimate is based on the proposed standard rate, although future royalty payments would be dependent on mineral price movements, in addition to changes in production tonnages.

The financial impacts, both at the individual mine and aggregate level, would be dependent on a number of factors, including current and future quantities of production and anticipated prices and exchange rate impacts.

Option 3 is the preferred option on the basis of—

- redressing the currently low effective royalty rates that the existing royalty charges under Option 1 represent as a percentage of the ex-mine value of these minerals;
- restoring the value of the royalty rates for these minerals, which have eroded in real terms since they were last reviewed, particularly given increases in benchmark mineral prices over the same period;
- providing a mechanism for maintaining the value of the royalty, relative to prevailing prices in the case of bentonite, kaolin and silica, whereas Options 1 and 2 provide no such means;

- ensuring a more proportionate contribution to State mineral royalty revenues from these minerals than Option 1, through royalty rates that are expected to be more easily absorbed by industry than under Option 2;
- addressing concerns about the current ad valorem system for silica under Option 1, without losing a price-reflective component as would occur under Option 2;
- preventing potential material increases in current and future levels of administration and compliance costs for Government and industry, compared to Options 1 and 2; and
- allowing proposed royalty rates to remain well below those payable for other minerals such as bauxite (5 percent on domestic production and 10 percent on export production), coal (7 percent) and petroleum (10 percent).

Overall, Option 3 is expected to better achieve the State Government's policy objectives than Options 1 and 2 in terms of securing an appropriate return to the community in an equitable and efficient manner, without compromising priorities such as economic development.

The three options are summarised in the table below.

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	Royalty \$ per tonne	Effective Rate	Impacts on Stakeholder Groups			Community
			Mineral producers	Mineral processors	Queensland Government	
<b>Bentonite</b> Option 1	\$1.00	1.2% of ex-mine value	No change.	No change.	Estimated annual royalty revenue of \$90,000 to the State is low relative to the value of the mineral resource.	Low royalty return to the community relative to the value of the mineral resource.
Option 2	\$3.00	3.6% of ex-mine value	Increase of \$2.00 per tonne in royalty charges Level of up-front increase may be difficult for industry to absorb.	To the extent that royalty costs may be passed on, increased bentonite input costs.	Increase estimated annual royalty revenue to \$269,000. Additional administration costs in future years.	Increased royalty revenue. Potentially increased costs for bentonite-based products. Potential risk to production, investment, employment, etc. if increase causes difficulty for producers.
Option 3	\$2.00 (minimum rate) \$2.50 (standard rate)	2.4% (minimum rate) or 3.0% (standard rate) of ex-mine value	Increase in royalty charges of \$1.00 per tonne (minimum rate) or \$1.50 per tonne (standard rate).	To the extent that royalty costs may be passed on, increased bentonite input costs.	Increase estimated annual royalty revenue to \$179,000 (minimum rate) or \$224,000 (standard rate). Ongoing royalty rates to move in line with bentonite prices, subject to a minimum rate.	Increased royalty revenue. Potentially increased costs for bentonite-based products.
<b>Kaolin</b> Option 1	\$0.50	0.89% of ex-mine value	No change.	No change.	Estimated annual royalty revenue of \$9,000 to the State is low relative to the value of the mineral resource.	Low royalty return to the community relative to the value of the mineral resource.
Option 2	\$1.50	2.7% of ex-mine value	Increased royalty cost by \$1.00 per tonne. Level of up-front increase may be difficult for industry to absorb.	To the extent that royalty costs may be passed on, increased kaolin input costs.	Increase annual estimated royalty revenue to \$27,000. Additional administration costs in future years.	Increased royalty revenue. Potentially increased costs for kaolin-based products. Potential risk to production, investment, employment, etc. if increase causes difficulty for producers.
Option 3	\$1.15 (minimum rate) \$1.50 (standard rate)	2.0% (minimum rate) or 2.7% (standard rate) of ex-mine value	Increased royalty cost by 65 cents per tonne (minimum rate) or \$1.00 per tonne (standard rate).	To the extent that royalty costs may be passed on, increased kaolin input costs.	Increase annual estimated royalty revenue to \$21,000 (minimum rate) or \$27,000 (standard rate). Ongoing royalty rates to move in line with kaolin prices, subject to a minimum rate.	Increased royalty revenue. Potentially increased costs for kaolin-based products.

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	Royalty \$ per tonne	Effective Rate	Impacts on Stakeholder Groups			Community
			Mineral producers	Mineral processors	Queensland Government	
<b>Silica</b> Option 1	Higher of \$0.50 per tonne or 5% ad valorem (current average \$0.65)	1.1% of benchmark prices	No change.	No change.	Annual estimated royalty revenue of \$1.6 million is low relative to the value of the mineral resource. High administrative costs to validate ad valorem calculations.	Low royalty return to the community relative to the value of the mineral resource.
Option 2	\$1.50	3.4% of benchmark prices	Increased royalty cost of \$1.00 per tonne. Lower compliance costs. Level of up-front increase may be difficult for industry to absorb.	To the extent that royalty costs may be passed on, increased silica input costs.	Increased annual estimated royalty revenue to \$3.2 million. Transparency, simplicity, possible additional administration costs in future years.	Increased royalty revenue. Potentially increased costs for silica-based products. Potential risk to production, investment, employment, etc. if increase causes difficulty for producers.
Option 3	\$0.85 (minimum rate) \$1.00 (standard rate)	1.9% (minimum rate) or 2.3% (standard rate) benchmark prices	Increased royalty cost of 35 cents per tonne (minimum rate) or 50 cents per tonne (standard rate) Lower compliance costs.	To the extent that royalty costs may be passed on, increased silica input costs.	Annual estimated royalty revenue to \$1.8 million (minimum rate) or \$2.1 million (standard rate). Ongoing royalty rates to move in line with silica prices, subject to a minimum rate – similar impact to Option 1, but with improved transparency, simplicity and lower ongoing administration costs.	Increased royalty revenue. Potentially increased costs for silica-based products.
<b>Rare Earths</b> Option 1	\$193.14	2%	No current production.	No change.	In the event that production occurs, low royalty return to the State relative to the value of the mineral resource.	In the event that production occurs, low royalty return to the community relative to the value of the mineral resource.
Options 2 and 3	\$260.74	2.7%	Increased royalty cost on future production.	To the extent that royalty costs may be passed on, increased rare earths input costs.	Increased royalty revenue.	Increased royalty revenue. Potentially increased costs for bentonite-based products.

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	Royalty \$ per tonne	Effective Rate	Impacts on Stakeholder Groups			Community
			Mineral producers	Mineral processors	Queensland Government	
<u>Manganese</u> Option 1	\$7.25	2%	No current production.	No change.	In the event that production occurs, low royalty return to the State relative to the value of the mineral resource.	In the event that production occurs, low royalty return to the community relative to the value of the mineral resource.
Options 2 and 3	\$9.79 (before processing discount) \$6.36 (after processing discount)	2.7% (or 1.8% after processing discount)	Lower royalty cost (35%) if ore processed in Queensland to at least 75% contained metal.	If processed in Queensland, lower manganese input costs.	Promote Queensland manganese resources. If mined and processed in Queensland, slightly lower royalty revenue would be offset by expected local, regional and State economic benefits of investment in downstream processing in Queensland.	If mined and processed in Queensland, slightly lower royalty revenue would be offset by expected local, regional and State economic benefits of investment in downstream processing in Queensland.
<u>Tantalum</u> Option 1	\$1.00	2%	No current production.	No change.	In the event that production occurs, low royalty return to the State relative to the value of the mineral resource.	In the event that production occurs, low royalty return to the community relative to the value of the mineral resource.
Options 2 and 3	\$1.36 (before processing discount) \$0.88 (after processing discount)	2.7% (or 1.8% after processing discount)	Lower royalty cost (35%) if ore processed in Queensland to at least 95% contained metal.	If processed in Queensland, lower tantalum input costs.	Promote Queensland tantalum resources. If mined and processed in Queensland, slightly lower royalty revenue would be offset by expected local, regional and State economic benefits of investment in downstream processing in Queensland.	If mined and processed in Queensland, slightly lower royalty revenue would be offset by expected local, regional and State economic benefits of investment in downstream processing in Queensland.

The costs and benefits of the options are discussed in further detail below. This discussion is based on 2001–02 production figures, as this was the most recent year for which statistics were publicly available at the time of preparing this document. Rare earths, manganese and tantalum currently are not produced in Queensland, so the analysis is limited to a cost per tonne basis rather than a full economic and financial analysis of potential impacts.

## **Option 1—Retain existing arrangements**

### **Bentonite**

The main uses for bentonite are in foundry sand, pet waste absorbents (mainly cat litter), drilling muds and iron ore pelletising. It is also used in wine making, animal feed, sealants, absorbents, catalysts, binders, ceramics, pesticides, paints, medical and pharmaceutical products, and for purifying and decolouring oils and fats.

In 2001–02, there were 89 350 tonnes of bentonite produced in Queensland, with a total ex-mine value of \$7.5 million.

Based on these figures, the current royalty rate of \$1.00 per tonne represents an effective rate of 1.0 percent of the ex-mine value of production (that is, the value of production leaving the mine).

Royalty is assessed on production sold, disposed of or used, which totalled approximately 90 000 tonnes in 2001–02, making an estimated total of \$90 000 payable in royalty to the State.

Although the current rate is higher than the rates in New South Wales (70 cents per tonne) and Western Australia (30 cents per tonne), it is still well below Victoria (2.75 percent) and South Australia (2.5 percent).

Also, based both on average ex-mine values reported by companies and available international benchmark price data, bentonite prices have increased considerably since 1983, when the rate was last reviewed. The value of the royalty payable to the Queensland community has been eroding in real terms each year since the current regime has no mechanism for the royalty to track movements in the value of bentonite over time.

While the current bentonite royalty arrangements are simple to administer, the current rate does not provide an appropriate financial return to the State from the exploitation of Queensland's bentonite resources.

## **Kaolin**

The main uses for kaolin are in paper coating and filling, manufacture of ceramics and refractory ware, and as a filler and extender in plastics, rubber, paints, inks, cosmetics, and insecticides.

In 2001–02, there were 18 214 tonnes of kaolin produced in Queensland, with a total ex-mine value of \$1.03 million.

Based on these figures, the current royalty rate of 50 cents per tonne represents an effective rate of 1.2 percent of the ex-mine value of kaolin production.

This rate is well below that payable in the other Australian States, for example, 70 cents per tonne in New South Wales, \$1.20 per tonne in Tasmania, 2.5 percent in South Australia and 2.75 percent in Victoria.

Similar to bentonite, kaolin prices have experienced increases over the twenty years since this rate was last reviewed. The value of the royalty payable to the Queensland community has been eroding in real terms each year since the current regime has no mechanism for the royalty to track movements in the value of kaolin over time.

Kaolin production sold, disposed of or used, totalled 18 000 tonnes in 2001–02, making an estimated total of \$9 000 payable in royalty to the State.

Although the current kaolin royalty arrangements are simple to administer, the current rate does not provide an appropriate financial return to the State from the exploitation of Queensland's kaolin resources.

## **Silica**

Silica is mainly used for flat glass, container glass, foundry mouldings and chemicals. Other uses include abrasives, silicon carbide manufacture, in ceramics and ceramic glaze, as fused silica in optical and laboratory instrument glassware, cement manufacture, water filtration, and as a fracturing sand to increase the permeability of oil and gas-bearing rock formations. Most of Queensland's silica production (approximately 90 percent) is exported overseas.

In 2001–02, there were 2.5 million tonnes of silica produced in Queensland, with a total value of \$32.5 million.

Some indicative estimates of royalty payable per tonne of silica mined have been prepared, based on Queensland averages for 2001–02.

Under existing arrangements, the average rate of royalty paid by Queensland silica producers in 2001–02 equated to approximately 63 cents per tonne.

Queensland silica production sold, disposed of or used totalled 2.1 million tonnes in 2001–02. As the actual royalty payable by each producer is based on the higher of 50 cents or 5 percent of the value of the silica sold, disposed of or used, different producers have been paying different amounts. However, to provide an indication of the overall value of annual silica royalty payments, the amount payable to the State in respect of 2001–02 sales under the current regime totals an estimated \$1.6 million.

The ad valorem component by its nature generally would ensure the royalty is price-reflective, that is, higher prices give rise to higher royalties and lower prices mean lower royalties.

However, the silica industry is highly vertically integrated. That is, most silica transactions involve related parties or represent the use of silica by producers as an input into another process, raising issues as to whether the values reported by producers reflect what could be received in arms-length sales. On this basis, there is a concern about whether an ad valorem system in such an environment would continue to achieve an appropriate return to the Queensland community for the exploitation of its high quality silica resources. This is reflected in the relatively low estimated average of 63 cents paid by producers in 2001–02 per tonne of production, despite industry benchmark prices for various silica sand products indicating that higher amounts could be payable.

Although the current silica royalty arrangements are relatively simple to administer, the high degree of vertical integration in the silica industry means there is insufficient transparency in the pricing of mined silica within Queensland for the purposes of royalty assessment. This raises implications for the effectiveness of the ad valorem component of the silica royalty. Additional administrative arrangements for example, mechanisms to regularly verify reported market values for silica sold in Queensland, would involve additional administrative costs that would likely outweigh any potential benefit.

Further, the current specific royalty of 50 cents per tonne, where it has applied, is out of step with current silica prices. This rate is well below that payable in most of the other Australian States, with rates ranging from 50 cents in Western Australia (same as existing Queensland rate) to 2.5 percent in South Australia, 2.75 percent in Victoria, 4 percent in New South Wales and the higher of \$1.20 per tonne or 5 percent in Tasmania.

The silica royalty was last reviewed in 1987, when the minimum royalty rate was set at 50 cents per tonne. The value of this minimum rate has eroded in real terms over time and requires revision.

On this basis, the current rate and arrangements for silica royalty in Queensland do not provide an appropriate return to the State.

### **Rare earths**

Given there is no current production of rare earths in Queensland, the proposed changes to the rare earths royalty regime would not have an impact on the current level of mineral royalties paid to the Government.

However, for the purposes of assessing the potential impact, indicative estimates of royalty payable based on current average prices, exchange rates and recoveries have been prepared.

It is estimated that the royalty payable would be in the order of \$193.14 per tonne of rare earth ore.

The review concluded that if Queensland's rare earths deposits were to be developed at some stage, the current ad valorem royalty rate of 2 percent would not provide an appropriate financial return to the State from the exploitation of its rare earths resources. The current rate is well below the rates payable in other States, which range from 2.5 percent in South Australia to 5 to 7.5 percent in Western Australia.

### **Manganese and tantalum**

Given there is no current production of manganese or tantalum in Queensland, the proposed changes to their respective royalty regimes will not have an impact on the current level of mineral royalties paid to the Government.

However, for the purposes of assessing potential costs and benefits, indicative estimates of royalty payable per tonne of ore mined based on current average prices, exchange rates and recoveries have been prepared.

Under Queensland's existing royalty arrangements, that is, 2 percent of the value of the mineral, after deducting \$30 000, the royalty payable would approximately be \$7.25 per tonne of manganese ore and \$1.00 per tonne of tantalum ore.

The review concluded that the current royalty rate applying to manganese and tantalum would not provide an appropriate financial return to the State from the exploitation of these resources, in the event that such future development were to occur.

Further, although the current arrangements are simple to administer, they provide no incentive for producers to add value through downstream processing of manganese and tantalum mined in Queensland.

## **Option 2—One-off rate increase for bentonite, kaolin and silica, and modify existing arrangements for manganese, rare earths and tantalum**

### **Bentonite**

Implementation of this proposal would involve retaining the existing form of specific royalty for bentonite and increasing the rate from \$1.00 to \$3.00 per tonne. This would increase the royalty payable by bentonite producers to the Queensland Government by \$2.00 per tonne.

Downstream producers or users of bentonite may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for bentonite.

A royalty rate of \$3.00 per tonne would equate to an effective rate of 3.6 percent, as a percent of ex-mine value, compared to the existing effective rate of 1.0 percent.

This rate would represent an increase of 200 percent over the current rate.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral processors and other users, the increase in royalty under this option would represent a bentonite price increase of 2.7 percent, from \$74.43 per tonne to \$76.43 per tonne.

Based on total Queensland bentonite production sold, disposed of or used, which totalled 90 000 tonnes in 2001-02, royalty payable to the State under this option is estimated to total \$269 000.

Implementation of this approach would initially be simple, transparent and cost-effective in terms of Government administration and industry compliance costs, and would provide a better return to the community than Option 1. However, the Queensland Government would incur additional

administrative costs in future years to implement further regulatory amendments to adjust royalty rates as they become out of date.

This approach would involve a relatively large one-off increase in the specific royalty rate, which may be difficult for industry to absorb. This may have implications such as possible scaling back of operations or discouraging further investment, with impacts on production, employment, royalty revenues to the State, economic growth, regional development and exports. A smaller one-off increase would not be adequately reflective of the value of the State's bentonite resources and would rapidly erode in value between mineral royalty reviews as the current royalty structure provides no mechanism to track movements in bentonite prices.

## **Kaolin**

Implementation of this proposal would involve retaining the existing form of specific royalty for kaolin and increasing the rate from 50 cents to \$1.50 per tonne. This would increase the royalty payable by kaolin producers to the Queensland Government by \$1.00 per tonne.

Downstream producers or users of kaolin may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for kaolin.

As a percent of average ex-mine value, a kaolin royalty rate of \$1.50 per tonne would equate to an effective rate of 2.7 percent, compared to 1.2 percent under the existing regime.

A royalty rate of \$1.50 per tonne would represent an increase of 200 percent over the current rate.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral processors and other users, the increase in royalty under this option would represent a kaolin price increase of 0.4 percent, from \$225.80 per tonne to \$226.80 per tonne.

Based on a total of 18 000 tonnes for Queensland kaolin production sold, disposed of or used in 2001-02, it is estimated that a total royalty of \$27 000 would be payable to the State under this option.

Implementation of this approach would initially be simple, transparent and cost-effective in terms of Government administration and industry compliance costs, and would provide a better return to the community than Option 1. However, the Queensland Government would incur additional

administrative costs in future years to implement further regulatory amendments to adjust royalty rates as they become out of date.

Further, as with bentonite, this approach would involve a relatively large one-off increase in the specific royalty rate, which may be difficult for industry to absorb. This may have implications such as possible scaling back of operations or discouraging further investment, with impacts on production, employment, royalty revenues to the State, economic growth, regional development and exports. A smaller one-off increase would not be adequately reflective of the value of the State's kaolin resources and would rapidly erode in value between mineral royalty reviews as the current royalty structure provides no mechanism to track movements in kaolin prices.

## **Silica**

A royalty rate of \$1.50 per tonne for silica would represent an increase of 200 percent over the 50 cents per tonne specific royalty and an increase of 139 percent over the average of 63 cents per tonne paid by Queensland producers in 2001–02.

This would increase the royalty payable by silica producers to the Queensland Government by around \$1.00 per tonne on average.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral processors and other users, the increase in royalty under this option would represent a silica price increase of 2.6 percent, from \$38.20 per tonne to \$39.20 per tonne.

Downstream producers or users of silica may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for silica.

Based on Queensland silica production sold, disposed of or used totalling 2.1 million tonnes in 2001-02, the total royalty payable to the State is estimated at \$3.2 million under this option.

The majority of Queensland's silica sand trade is undertaken via long-term contracts and/or transfer-pricing arrangements within vertically integrated entities. Accordingly, actual market prices received for silica sand are not easily determined. This makes ongoing verification of values reported by producers, particularly those that are vertically integrated, difficult for the purposes of royalty assessment under an ad valorem system.

This differs from the situation for a number of other minerals that are subject to an ad valorem royalty and for which price and market information are readily available, notably base and precious metals.

On this basis, an increased specific royalty for silica without an ad valorem component represents the most cost efficient and effective approach. Tonnages produced and sold are easily verifiable for royalty assessment purposes.

Implementation of this proposal would involve amending the existing regulatory provisions that currently apply to silica to remove the ad valorem component and to increase the specific royalty rate from 50 cents to \$1.50 per tonne.

This approach would initially meet the Government's policy objectives, in terms of providing a better return to the community than Option 1, and ensuring cost effectiveness in administration and compliance. However, the Queensland Government would incur additional administrative costs in future years to implement further regulatory amendments to adjust royalty rates as they become out of date.

In addition, as with bentonite and kaolin, this approach would involve a relatively large one-off increase in the specific royalty rate, which may be difficult for industry to absorb. This may have implications such as possible scaling back of operations or discouraging further investment, with impacts on production, employment, royalty revenues to the State, economic growth, regional development and exports. A smaller one-off increase would not be adequately reflective of the value of the State's silica resources and would rapidly erode in value between mineral royalty reviews as the current royalty structure provides no mechanism to track movements in silica prices.

### **Rare earths**

Under the proposed increased rate of 2.7 percent for rare earths, taking into account the \$30 000 royalty-free threshold, it is estimated that the royalty payable would be in the order of \$260.74 per tonne of rare earth ore, compared to \$193.14 per tonne under the current rate. This proposed change would represent an increase of 35 percent.

It is considered that increasing the ad valorem royalty rate would provide a fair return to the community, should there be any production undertaken at some future time. Other aspects of the existing royalty arrangements

applying to rare earths require no change as they meet the policy objectives of cost effectiveness in administration and compliance.

No processing discounts are proposed for rare earths as the expected costs associated with offering royalty-related incentives to mine and process rare earths in Queensland would outweigh any potential benefits that might be derived.

### **Manganese and tantalum**

Under the proposed increased royalty rate of 2.7 percent, taking into account the \$30 000 royalty free threshold and the processing discount, the royalty payable on processed manganese and tantalum is estimated at \$6.36 per tonne of ore and \$0.88 per tonne of ore respectively. If producers were not eligible for a processing discount, then the royalty payable is estimated at \$9.79 per tonne of manganese ore and \$1.36 per tonne of tantalum ore.

The proposed new royalty rate for manganese and tantalum represents an increase of 35 percent. The net impact of the higher rate and offering the mineral processing royalty discount would be a net reduction in the royalty payable of 12.3 percent, compared to the amount payable under Option 1, which provides no incentive for downstream processing.

To the extent that the proposed royalty discounts for manganese and tantalum contribute to the attractiveness of Queensland for the location of mineral processing capacity within Queensland, the royalty discounts may contribute to regional development and employment.

In the event that manganese or tantalum production and processing were to occur in Queensland, the nominal cost to royalty revenue in offering the respective processing discounts would be outweighed by the significant economic benefits which would be derived from the establishment of a manganese or tantalum processing industry.

The proposed new regime for manganese and tantalum is considered to better deliver the policy objectives of promoting downstream processing and providing a fair return to the community. The proposal would also meet requirements for cost effectiveness in terms of administration and compliance.

The potential benefits that would accrue to the State from encouraging downstream processing through the proposed processing discounts include, employment creation, regional development and increased export revenues.

### **Option 3—Upfront increase with ongoing mineral price indexation for bentonite, kaolin and silica, and modify existing arrangements for manganese, rare earths and tantalum**

#### **Bentonite**

Implementation of this proposal would involve increasing the specific royalty for bentonite to a new standard rate of \$2.50 per tonne, with ongoing rates to be based on Australian dollar bentonite price movements, subject to a minimum royalty rate of \$2.00 per tonne.

This would increase the royalty payable by bentonite producers to the Queensland Government by \$1.00 per tonne (based on the minimum rate) or \$1.50 (based on the standard rate).

Downstream producers or users of bentonite may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for bentonite.

The proposed standard rate of \$2.50 per tonne would equate to an effective rate of 3.0 percent, as a percentage of ex-mine value, compared to the existing effective rate of 1.0 percent. The proposed minimum rate of \$2.50 per tonne would equate to an effective rate of 2.4 percent.

The proposed minimum and standard royalty rates represent increases of 200 percent and 230 percent over the current rate.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral processors and other users, the increase in royalty under Option 3 would represent a bentonite price increase of 1.3 percent, from \$74.43 per tonne to \$75.43 per tonne at the minimum rate, or an increase of 2.0 percent to \$75.43 per tonne at the standard rate.

Under this option, based on total Queensland bentonite production sold, disposed of or used, of 90 000 tonnes in 2001–02, the royalty payable to the State is estimated to total \$179 000 at the minimum rate, or \$224 000 at the standard rate.

Using the proposed indexation formula and current bentonite prices, the minimum royalty rate would be payable by mineral producers.

Implementation of this approach would be simple, transparent and cost-effective in terms of Government administration and industry compliance costs.

Option 3 provides a better return to the State than Option 1. Although this return to the State would be less than under Option 2, the increase proposed under Option 3 would be more easily absorbed by industry than the higher upfront increase proposed under Option 2. There would be less potential impacts on production, investment, employment, downstream users and regional development than under Option 2.

Option 3 would provide a better return to the community in the longer term as the proposed formula provides a mechanism for the royalty to reflect movements in bentonite values, similar to an ad valorem royalty, whilst retaining the simplicity of a specific royalty.

## **Kaolin**

Implementation of this proposal would involve increasing the specific royalty for kaolin to a new standard rate of \$1.50 per tonne, with ongoing rates to be based on Australian dollar kaolin price movements, subject to a minimum royalty rate of \$1.15 per tonne.

This would increase the royalty payable by kaolin producers to the Queensland Government by 65 cents per tonne (based on the minimum rate) or \$1.00 (based on the standard rate).

Downstream producers or users of kaolin may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for kaolin.

The proposed standard rate of \$1.50 per tonne would equate to an effective rate of 2.7 percent, as a percentage of ex-mine value, compared to the existing effective rate of 1.2 percent. The proposed minimum rate of \$1.15 per tonne would equate to an effective rate of 2.0 percent.

The proposed minimum and standard royalty rates represent increases of 230 percent and 300 percent over the current rate.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral processors and other users, the increase in royalty under Option 3 would represent a kaolin price increase of 0.3 percent, from \$225.80 per tonne to \$226.45 per tonne at the minimum rate, or an increase of 0.4 percent to \$226.80 per tonne at the standard rate.

Based on a total of 18,000 tonnes for Queensland kaolin production sold, disposed of or used in 2001–02, the total royalty payable to the State under

this option is estimated to be \$21 000 at the minimum rate or \$27 000 at the standard rate.

Using the proposed indexation formula and current kaolin prices, the minimum royalty rate would be payable by mineral producers.

Implementation of this approach would be simple, transparent and cost-effective in terms of Government administration and industry compliance costs.

Option 3 provides a better return to the State than Option 1. While it would provide a lower return than under Option 2, the increase proposed under Option 3 would be more easily absorbed by industry than the higher upfront increase proposed under Option 2. There would be less potential impacts on production, investment, employment, downstream users and regional development than under Option 2.

Option 3 would provide a better return to the community in the longer term as the proposed formula provides a mechanism for the royalty to reflect movements in kaolin values, similar to an ad valorem royalty, whilst retaining the simplicity of a specific royalty.

## **Silica**

Implementation of this proposal would involve increasing the current minimum specific royalty for silica to a new minimum rate of 85 cents per tonne. The current ad valorem royalty of 5 percent would be replaced by a standard royalty rate of \$1.00, which would be indexed using Australian dollar silica price movements, subject to the proposed minimum royalty rate.

This would increase the minimum royalty payable by silica producers to the Queensland Government by 35 cents per tonne (based on the minimum rate) or 50 cents (based on the standard rate).

Downstream producers or users of silica may also face increased costs, depending upon the extent to which this increased royalty charge is absorbed by mineral producers or passed on in higher prices for silica.

The proposed minimum silica royalty rate of 85 cents and standard royalty rate of \$1.00 represent increases of 70 percent and 100 percent respectively, over the current specific rate of 50 cents.

Based on December quarter 2003 average prices in Australian dollars and assuming that the royalty costs are fully passed on in prices paid by mineral

processors and other users, the increase in royalty under Option 3 would represent a silica price increase of 0.9 percent, from \$38.20 per tonne to \$38.55 per tonne at the minimum rate, or an increase of 1.3 percent to \$38.70 per tonne at the standard rate.

Under this option, based on Queensland silica production sold, disposed of or used totalling 2.1 million tonnes in 2001–02, the total royalty payable to the State is estimated at \$1.8 million at the minimum rate and \$2.1 million at the standard rate.

Using the proposed indexation formula and current silica prices, the minimum royalty rate would be payable by mineral producers.

In terms of the prices received for silica, it is estimated that the royalty would equate to an effective rate of around 1.9 percent (minimum rate) to 2.3 percent (standard rate), compared to around 1.3 percent (existing specific royalty).

A relatively small proportion of Queensland's silica production is used locally. Most of Queensland's silica production (90 percent or more) is exported overseas for use in the manufacture of glass, in the foundry industry and for chemical applications. However, the proposed royalty increase is small in the context of market prices for silica, and is not expected to have a material impact on the overall international competitiveness of Queensland silica.

Implementation of Option 3 would be simple, transparent and cost-effective in terms of Government administration and industry compliance costs. That is, it would not involve any material increase in administration and compliance costs, relative to the other options.

Option 3 provides a better return to the State than Option 1. Although this return to the State would be less than under Option 2, the increase proposed under Option 3 would be more easily absorbed by industry than the higher upfront increase proposed under Option 2. There would be less potential impacts on production, investment, employment, downstream users and regional development than under Option 2.

Option 3 would provide a better return to the community in the longer term as the proposed formula would allow the silica royalty regime to retain the price-reflective advantages of an ad valorem royalty, whilst avoiding the potential administrative issues concerning the ongoing use of the current ad valorem silica royalty.

## **Rare earths, manganese and tantalum**

Refer to discussion on page 20 as the same changes are proposed under both Options 2 and 3.

## **Fundamental legislative principles**

The proposed amendments are consistent with fundamental legislative principles.

## **National competition policy**

National competition policy (NCP) principles seek to ensure, to the maximum practical extent possible, that a level playing field exists in order to foster competition.

The proposed amendments are consistent with NCP principles.

## **Risk assessment**

There are several variables involved in the determination of expected future mineral royalty payments. Significant changes to these variables could inevitably result in actual financial impacts varying from those anticipated.

In terms of the ongoing appropriateness of the proposed new rates and arrangements for bentonite, kaolin, silica, manganese, rare earths and tantalum, NRM&E maintains a watching brief on Queensland's mineral commodity royalty regimes. The royalty regimes for these, and other mineral commodities will be reviewed on a rolling five-year basis to ensure that the rates are still appropriate and continue to reflect an appropriate financial return to the community. It is envisaged that a further Regulatory Impact Statement would be released for comment, should future reviews conclude that further changes to royalty arrangements for these mineral commodities are justified.

## **Bentonite and kaolin**

Specific royalties are seen as regressive, as they are not price-reflective, therefore representing a higher percentage of input costs to producers during periods of low prices. By the same token, in periods of high prices, a specific royalty limits overall costs to the producers.

The indexation approach proposed under Option 3 would allow the royalty payable for bentonite and kaolin production to track movements in the value of these minerals.

The outlook for bentonite and kaolin prices is positive and in the context of overall input costs, the proposed higher royalty would still represent a relatively small component. The proposed indexation component of the bentonite and kaolin royalty provides for growth in the royalty payable per tonne of production over time. However, the prices for industrial minerals such as bentonite and kaolin are generally characterised by relative stability over the longer term, unlike the day-to-day volatility of prices for metals such as copper, gold and aluminium.

## **Silica**

The proposed indexation calculation differs slightly from the existing ad valorem calculation, but is intended to have a similar impact, and the only other difference is the proposed increase in the minimum royalty. In this regard, it is expected that the risks associated with Option 3 for all stakeholders are not much different from the existing arrangements.

Silica remains an important industrial mineral and is expected to remain so for the foreseeable future. On this basis, the outlook for the overall price environment is expected to remain positive and stable, with the proposed higher royalty representing a relatively small input cost to producers.

The general comments above in the bentonite and kaolin section regarding the proposed royalty changes also apply.

The removal of the ad valorem component from the silica royalty, without incorporating another price-reflective component, would have created a risk in terms of potential Government revenue foregone if silica prices were to rise considerably over the next five years. The proposed indexation arrangements would address this by providing an alternative mechanism for the royalty to track movements in silica prices.

### **Rare earths, manganese and tantalum**

The risks of potential impacts on stakeholders from the proposed changes to rare earths, manganese and tantalum are difficult to assess, given the global context within which these minerals are traded.

The key factors will be actual prices and exchanges rates, producer cost structures and whether downstream processing of domestic manganese or tantalum does occur.

The proposed processing discounts for manganese and tantalum are consistent with those already being offered for cobalt, copper, lead, nickel and zinc, which have been in place for some years and are well-accepted by industry.

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#### ENDNOTES

- 1 Laid before the Legislative Assembly on . . .
- 2 The administering agency is the Department of Natural Resources and Mines.