



**SUBMISSION ON THE
EXPOSURE DRAFT OF THE
TAX LAWS AMENDMENT (RESEARCH AND
DEVELOPMENT) BILL 2010**

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A. The AusIMM

The Australasian Institute of Mining and Metallurgy ('The AusIMM') is the leading organisation representing minerals sector professionals in the Australasian region, primarily in the disciplines of geoscience, metallurgy, mining engineering and management. We have more than 10,000 members who work across research, academia, operations, consultancy and the minerals industry technology and services sector. Given their in-depth technical expertise and first hand practical experience of the sector, our members are uniquely placed to comment on the process of R&D in the minerals industry. In particular, they are qualified to comment on the effectiveness of the R&D tax incentive on activities that are most likely to produce net benefits for the Australian community.

B. Proposed Changes to Eligibility Criteria and Feedstock Rules

1. Augmented feedstock rule

Recommendation:

R&D outputs to be excluded from the operation of the feedstock rule.

2. Requirement to demonstrate both novelty and technical risk

Recommendation:

Definition of R&D to encompass activities that involve novelty/innovativeness or a high level of technical risk.

3. Spillover in objects clause and explanatory document

Recommendation:

The concept of spillover be removed from the objects clause and in references to applications of tests of eligibility.

C. The Economic Importance of the Australian minerals sector

The Australian minerals sector is a mainstay of the Australian economy, and has played a major role in insulating Australia from the worst effects of the global financial crisis. A better than anticipated recovery by our major trading partners, such as China and countries in South East Asia, coupled with a high demand for mineral commodities, has been the key factor underpinning Australia's economic resilience.

On the demand side, economic indicators are promising. Economic growth in China continues to rebound strongly from the slowdown in late 2008 and early 2009. In addition to increased consumption, there is the potential, outside China, for a return to inventory rebuilding. During the global economic slowdown, many consumers drew down stocks, which reinforced the sharp weakening of underlying demand. The rebuilding of stocks will provide additional support for minerals and energy commodity demand.

In the longer term, the continuing and accelerated growth of economies such as China and India, as these countries seek to match the standards of living in the OECD, is anticipated to generate an increasing demand for mineral resources. For example, China alone intends to build a staggering 50,000 skyscrapers before 2030.

On the supply side, with 74 advanced projects defined as being under construction or committed, with a value of \$112.5 billion, Australia is well placed to reap the rewards of the forecast increase in minerals demand. However, despite significant mineral endowments and the impressive committed projects, minerals related prosperity is not something we can take for granted. In a highly consolidated global industry, supply competitiveness relative to other mining jurisdictions is critical to retaining market share.

The key to maintaining supply competitiveness is being possessed of quality resources, viewed in light of current processing techniques and extraction methods. As Australian mining operations face increasing challenges of depth, grade and remoteness, sustained levels of investment in R&D is critical for retaining our prospectivity. This requires an environment that encourages business investment in R&D.

D. The nature of R&D in the minerals sector

Mining operations and minerals processing plants are large scale systems with integrated and interdependent components, which must be both technically appropriate and properly configured in order to function. Consequently achieving any of the above goals takes far more than an 'Aha!' moment in a laboratory (although such a moment may give rise to an idea that can eventually be applied in a mining or minerals processing context). The most important part of R&D in the mining industry requires in-production trials, often at a working mine or plant. That is, the 'D' part of R&D is critical:

- **Research:** proof of concept/scientific integrity of concept;
- **Development:** further investigation of concept to establish feasibility of applications at a scale that is of utility in broader production activities.

As mining and downstream processing activities produce a (relatively) homogenous product from a non-homogenous natural resource, most R&D in the industry is generally aimed at process innovation that achieves one or more of the following aims:

- More accurately predicting the location and nature of an orebody
- Extracting ore using more efficient mining methods
- Processing ore more efficiently
- Reducing the hazards to human health and safety created mining activity
- Reducing the environmental footprint of mining activity

The R&D tax concession is an iconic policy instrument in Australia, and has played a major role in stimulating R&D in the above areas that would not have otherwise occurred. For example AMIRA, a consortium of companies which contracts out pre-competitive research to public research institutions, has indicated that the deduction figures are an important consideration for its members, who conduct rigorous analysis of R&D proposals.

E. Proposed Changes to Eligibility Criteria in the Draft Bill

Following the 'Review of the National Innovation System,' a number of changes have been suggested to the incentive. The AusIMM welcomes the proposal to move from the current tax concession to an R&D tax credit. However, we oppose several elements of the *Tax Laws Amendment (Research and Development) Bill 2010* as outlined below.

1. Augmented feedstock rule

Of the various proposed changes, the proposed augmented feedstock rule has the most potential to act as a disincentive to mining and minerals processing R&D.

The current feedstock rules reduce the amount claimable by reference to the costs of materials and goods produced or acquired in processes undertaken prior to the R&D activities, and the process energy inputs into these activities unless a loss is made on these costs. The augmented feedstock rule significantly expands this rule by reducing the incentive by reference to all cases where R&D activities produce direct output, even where "the feedstock output is not in a marketable state, in which case the output's value may need to be imputed from a later production stage."

This new rule is essentially a commercial clawback. For industries such as mining, which require long term in production trials involving modification of existing plant, the amount claimable will be significantly reduced. There are few situations where the R&D will produce a useless product, as the production of the mineral resources is ongoing. Indeed, there would be little incentive for a minerals company to undertake a multi-year large scale investigation that continued to produce a useless product (up until a hypothetical moment of commercial viability).

The new rule signifies a fundamental lack of understanding of R&D in our industry. The new rule is also problematic in that it requires an imputation of value at a time in the future, introducing significant complexity and uncertainty into the amount of the incentive.

The new feedstock provisions will not only adversely affect the mining industry, but all large scale test work for transformative industries that wish to undertake process

improvements to boost competitiveness, reduce carbon, water and other environmental impacts. The unintended consequences are significant. We strenuously object to this change.

Recommendation:

R&D outputs to be excluded from the operation of any feedstock rule.

2. Requirement to demonstrate both novelty and technical risk

Previously the definition of R&D required the demonstration of innovation **or** a high level of technical risk. The new definition requires the demonstration of novelty **and** a high level of technical risk. We are concerned within our industry, where large scale innovations ‘at the margins’ which are the most risky taken as a whole will be excluded by the scheme. Testing an innovative process or concept in a highly integrated system such as a mine or processing plant – or even building an entire demonstration plant – involves massive commercial and operational risk. However, these incremental innovations in fact deliver the order of magnitude savings that have kept the Australian mining industry competitive over time.

The Explanatory Document also changes the quantum of novelty required – ‘innovation involving appreciable novelty’ becomes ‘involves considerable novelty.’ The change from “appreciable” to “considerable” is subjective and breaks the connection to understood definitions and legal precedent, especially the Unisys decision on the meaning of “appreciable” (*AAT decision N95/1263*). It is not clear whether this change is meant to be the same, a greater or a lesser test of novelty. As there is no measure of what considerable or appreciable novelty is, and no way of accurately measuring degrees of novelty, unintended consequences are likely to result.

Furthermore, novelty is already inherent in several elements in the existing definition of R&D (ie that “new” knowledge or process must be created and the activity must be “experimental”), making the suggested change redundant on this point.

The AusIMM is opposed to the proposed change in eligibility which will require both appreciable novelty **and** a high level of technical risk. This entails a fundamental lack of understanding of R&D for large industrial systems (presumably the areas we most want to develop for a robust economy), and appears overly focused on basic and applied research that can take place in a laboratory.

It could be a valuable exercise to investigate why innovation was included as a goal in its own right in the first place. It may be that the drafters of the original legislation wanted to ensure that innovation margins that might not otherwise be proven at scale was encouraged by the incentive, as it should be.

Recommendation:

Definition of R&D to encompass activities that involve novelty/innovativeness or a high level of technical risk.

3. Spillover in objects clause and explanatory document

The AusIMM is concerned with the inclusion of “spillover” in the objects clause of the proposed legislation, and the reference to spillover in both the ‘PKI’ and ‘novelty’ tests in the Explanatory Materials.

There is no precedent, either in Australia, or other countries with R&D tax incentives of spillover as a principle for determining legitimate R&D. Consequently, its inclusion generates considerable uncertainty, with no reference point as to how it will be applied in practice.

We do not believe this is not a sound concept for justifying R&D in an economic sense. That is, according to the Explanatory Memorandum, the incentive should only be available for activities “which have the potential to provide a public benefit (in the form of additional spillover of knowledge), that exceeds the cost of the subsidy.”

Spillover in a broader economic sense is a highly speculative concept. Ideally, the technological advancements delivered in will deliver greater competitiveness and profit margins that make for a more robust economy, and this is in the interest of the broader Australian community. However, requiring firms to demonstrate a concept bordering on inherent altruism in their R&D activities strays too far into the philosophical to constitute effective criteria for tax purposes.

Recommendation:

The concept of spillover be removed from the objects clause and in references to applications of tests of eligibility.