



**INDUSTRY  
SCIENCE  
RESOURCES**

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**Mr Paul McMahan  
Committee Secretary  
House of Representatives Standing Committee  
on Industry, Science and Resources  
Parliament House  
CANBERRA ACT 2600**

Dear Mr McMahan

### **Inquiry into increasing value-adding to Australian raw materials**

When the Department appeared at the House of Representatives Standing Committee on Industry, Science and Resources' hearings into increasing value-adding to Australian raw materials on 8 March 2001, the Committee asked a number of questions which the Department took on notice. Please find enclosed our responses to the issues raised, including:

- Dr Washer's question concerning the Cooperative Research Centre intellectual property arrangements (Hansard pages 322-323);
- Mr Zahra raised concerns regarding the possibility of generating capacity in the National Electricity Market becoming an impediment to new value adding investment in minerals processing plants in Australia (Hansard page 325);
- Mr Zahra's request for more information on the Hazelwood Magnesium project (Hansard page 326) and Mr Morris' request for clarification on the expected size of the Hazelwood project (Hansard page 327);
- Ms McDonald's offer to provide the Committee with Senator Minchin's media release on the \$50 million to be provided towards the further development of the Australian Magnesium process technology (Hansard page 329);
- Mr Lloyd's question concerning magnesium tariffs in other countries (Hansard page 333); and
- Mr Jones' offer to provide material on how the titanium industry can benefit from the measures announced in *Backing Australia's Ability* (Hansard page 336).

We are still preparing our reply to Mr Morris' question on the R&D tax concession (Hansard pages 330-31) and will provide this response to you as soon as possible.

I hope the attached information assists the Committee in its deliberations.

Yours sincerely

Paul Bellchambers  
Manager  
Industry Outlook Section  
12 April 2001

**Dr Washer's question concerning the Cooperative Research Centre (CRC) intellectual property arrangements and, in particular, whether there is evidence companies are using CRCs to bypass private sector investment, while retaining the intellectual property rights (Hansard pages 322-323).**

### *ISR Response*

The stated objectives of the Cooperative Research Centres (CRC) Program are:

- To enhance the contribution of long-term scientific and technological research and innovation to Australia's sustainable economic and social development;
- To enhance the transfer of research outputs into commercial or other outcomes of economic, environmental or social benefit to Australia;
- To enhance the value to Australia of graduate researchers; and
- To enhance long-term collaboration among researchers, between researchers and industry or other users, and to improve efficiency in the use of intellectual and other research resources.

The last point is most relevant to Dr Washer's question.

The Government continues to support this program, recognising its success in bringing together in long term cooperative relationships, researchers and research groups from universities, government research laboratories and the private sector. The program is a most effective way of accessing, for industry and the national benefit, the scientific and technological expertise generated by the public investment in universities and public sector agencies. In financial terms, Commonwealth funding for the CRC Program has succeeded in leveraging almost three times that amount from industry, universities and other participants.

The active involvement of industry and other research users is a crucial aspect of the program. Industry and users are expected to be engaged in all key aspects of a centre's operation including CRC management; research program design, monitoring and evaluation; commercialisation and utilisation of research outputs; and education and training.

When established, each centre puts in place a Commonwealth-approved Centre Agreement which includes arrangements for management of intellectual property. While Agreements may differ in detail from centre to centre, most state that the IP developed within the CRC will be held for the participants as tenants in common, in proportion to their participating shares.

CRCs are entitled to conduct contract research and do so in the competitive business environment. However, the Commonwealth agreement with each centre stipulates that Commonwealth dollars are not able to be used for contract research by a CRC.

The Department is not aware of any anecdotal or quantitative information suggesting that large companies are choosing to participate in CRCs or use CRCs for contract research rather than business enterprises in order to reap unwarranted benefits. Participants benefit from their considerable investment in the program in various ways. Industry benefits from collaborating with leading public sector researchers in cutting-edge research and in the opportunity to commercialise joint research outcomes. Commercialisation of outcomes is a major focus of the program and the generation and use of intellectual property in these centres is an integral part of the life of each centre.

**Mr Zahra raised concerns regarding the possibility of unsatisfactory returns and a lack of generating capacity in the National Electricity Market becoming an impediment to the increased supply of electricity and in turn to new value adding investment in minerals processing plants in Australia. (Hansard page 325).**

### *ISR Response*

Supply capacity in the National Electricity Market (NEM) is currently sufficient to meet demand in all but extreme summer peak periods in Victoria and South Australia. The competitive wholesale market relies on price signals to stimulate new generating investment. Recent evidence suggests that these signals are working.

- Queensland generation capacity was boosted by 840MW in early 2001 with the Callide C generator becoming operational. Queensland has a further 1700MW of committed generation projects to become operational over the next two years;
- The 478MW gas-fired Pelican Point power station commenced operation in South Australia late last year and is now operating at full capacity;
- On 28 February 2001, AGL announced its intention to construct a 150MW gas peaking plant at Somerton, Victoria. It is planned for completion in time for the 2001/2002 summer; and
- Edison Mission is actively considering the construction of a 300MW gas peaking plant in the La Trobe Valley.

In addition innovative financial instruments are beginning to emerge, including demand side initiatives which helped moderate demand peaks in Victoria during the 2000-01 summer. Interconnection is also important because it allows more efficient utilisation of existing generating capacity to meet growing demand throughout the NEM. A significant amount of investment in network interconnection is either committed or planned in the NEM. Several new interconnectors including Basslink (Tasmania to Victoria), Murraylink (Victoria to South Australia) and Southernlink (Victoria to South Australia) are proceeding or planned.

Electricity market reform has also resulted in significant productivity gains. The Australian Bureau of Agricultural and Resource Economics, for example, recently estimated aggregate economy-wide benefits from electricity reform at around \$15.8 billion between 1995 and 2010 (in 2001 dollars). This represents an annual benefit of around \$1.5 billion per annum in 2000, increasing to around \$2.4 billion per annum by 2010 (equivalent to a 0.26% increase in GDP in 2010), which will have significantly strengthened international competitiveness and investment in Australia.

The unsatisfactory returns experienced by some generators reflect the premium prices paid for generating assets rather than any structural weakness in the wholesale market.

Wholesale spot prices were lower than some investors may have anticipated immediately after the NEM commenced in December 1998. However, it should be noted that few, if any, generators were substantially exposed to spot prices. Generators' returns were largely determined by prices set in contracting and vesting arrangements.

Wholesale spot prices have risen considerably over the last 12 months, reflecting the growing sophistication of generators and the progressive opening of retail markets to competition. Removal of vesting contracts has contributed to price increases. This market environment is likely to strengthen generator returns.

**Mr Zahra's request for more information on the Hazelwood Magnesium project (Hansard page 326) and Mr Morris' request for clarification on the expected size of the Hazelwood project (Hansard page 327).**

*ISR Response*

Public information available on the Hazelwood magnesium project includes the following articles:

- WA Chamber of Commerce and Industry Resource and Energy Projects Service Newsletter dated 16 August 2000, "Hazelwood Magnesium Project". This article advises that Europacific Corporation had been tasked with project management and the attraction of a project sponsor to take the opportunity to a bankable document stage, within 12 months. The pre-feasibility and feasibility studies were expected to cost \$20m;
- WA Chamber of Commerce and Industry Resource and Energy Projects Service Newsletter dated 10 March 2000, "Hazelwood Magnesium Project". The article states that the plant would most likely have a minimum capacity of 60 thousand tonnes per annum and cost \$300m;
- Dr Warren Thorpe, CSIRO Manufacturing Science and Technology, "A Bright Future for Australian Magnesium" which appeared in Automotive Light Metals, Volume 1, Issue 2, page 56. This article lists the Hazelwood magnesium project as having a projected plant capacity of 30 thousand tonnes. The article also notes that there is enough fly-ash available over the next 40 years to feed a 30 thousand tonne per annum smelter;
- Robert Brown reporting in the Australian Journal of Mining August 1999 on the first Inaugural Australian Magnesium Conference noted that the Hazelwood magnesium project could produce 34 thousand tonnes of magnesium per annum;
- The Mining Journal, London, November 12 1999 issue included mention of the Hazelwood magnesium project. A project costing \$270m and producing 34 thousand tonnes of magnesium was envisaged;
- The Queensland Government Mining Journal of November 1999 includes a table of magnesium projects including the Hazelwood magnesium project with a projected capital cost of \$270m and planned capacity of 34 thousand tonnes; and
- The Australian Journal of Mining November 1999 also includes a table of projects with the Hazelwood magnesium project having a projected capacity of 34 thousand tonnes.

**Ms McDonald's offer to provide the Committee with Senator Minchin's media release on the \$50 million to be provided towards the further development of the Australian Magnesium process technology (Hansard page 329).**

*ISR Response*



# **MEDIA RELEASE**

**SENATOR NICK MINCHIN**

Minister for Industry, Science and Resources

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14 November 2000

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## **\$50 MILLION BOOST FOR AUSTRALIAN MAGNESIUM TECHNOLOGY**

The Commonwealth Government has committed \$50 million towards further development of the Australian Magnesium process technology, the Minister for Industry, Science and Resources, Senator Nick Minchin, said today.

“This funding, to be provided to the CSIRO, will enable the commercialisation of this unique Australian technology, which is used to produce magnesium metal,” Senator Minchin said.

The Australian Magnesium process technology is jointly owned by the CSIRO and the Australian Magnesium Corporation (AMC). The Commonwealth Government, CSIRO, Queensland Government and AMC have already made significant investment in the development of the technology since the Australian Magnesium Research and Development Project began in 1992.

The CSIRO will enter into a commercial agreement with AMC, which has the licence to exploit the technology. This agreement will build on CSIRO's existing royalty arrangement for the technology.

AMC is proposing to develop a \$1.2 billion magnesium facility at Stanwell, near Rockhampton in Queensland. The AMC project is based on its extensive magnesite resources at Kunwarara and would initially produce 97,000 tonnes per annum of magnesium metal. AMC is aiming to commission the plant in 2003 and previously received all environmental and planning approvals.

The Federal Government welcomes the Queensland Government's decision to provide \$50 million for multi-user infrastructure for the magnesium industry at Stanwell.

“The development of the proposed magnesium facility would provide major advantages in terms of enabling Australia's participation in the technologically innovative light metals industry, downstream processing, and in broadening our technological base,” Senator Minchin said.

“The AMC project is expected to create 1,350 jobs during the engineering and construction phase and 350 permanent jobs once the plant is operational.”

A new emerging light metals industry in Australia has the potential to generate additional capital investment of \$3.5 billion and create a further 7,000 direct and indirect jobs in the downstream and value-adding sectors over the longer term.

“With magnesium use growing, particularly in the automotive sector, industry development opportunities are expected to include die-casting, tooling and die-making and automotive component manufacture as well as support industries,” Senator Minchin said.

The development of a light metals industry would build on existing capabilities in the CSIRO and research institutions such as the Cooperative Research Centre for Casting and Solidification Technology (CAST), the University of Queensland and the University of Central Queensland.

In order to ensure Australia is in the best position to capture the potential benefits of the emerging light metals industry, Senator Minchin recently launched the Light Metals Action Agenda.

The Agenda will provide a vision for the future growth and development of the light metals industry in Australia. It will be developed in consultation with industry and key research agencies. The light metals industry includes the aluminium, titanium and magnesium sectors.

Contact: Jennifer Eddy, Senator Minchin’s office 08 8237 7190  
Murray Fearn, Invest Australia, 02 6213 7560  
CMR609-00

**Mr Lloyd's question concerning magnesium tariffs in the United States (Hansard page 333).**

***ISR Response***

The Department of Industry, Science and Resources raised the magnesium tariffs issue with the Department of Foreign Affairs and Trade (DFAT) in November 1999. This followed approaches to DFAT by the Queensland Government. We understand that DFAT officials subsequently raised this matter bi-laterally with United States Officials and that the Queensland Premier did likewise. However, an assessment of our relative negotiating strength suggests that it may be unrealistic to expect the United States to withdraw tariff protection for its domestic magnesium industry on the basis of our request.

Recently, there have been some discussions with the United States over a possible free trade agreement. Should such an agreement come to fruition, it may provide a solution to the magnesium tariff issue in the longer term.

**Mr Jones' offer to provide material on how the titanium industry can benefit from the measures announced in *Backing Australia's Ability* (Hansard page 336).**

***ISR Response***

The initiatives announced as part of *Backing Australia's Ability* are generic in nature and do not have a specific industry or sector focus. They have been designed to identify and support the most promising research, development and innovation projects where ever they arise. It is clear, however, that innovative and research focussed companies in industries such as titanium can benefit from the package.

*Backing Australia's Ability* is a national, integrated strategy to encourage and support innovation and enhance Australia's international competitiveness, economic prosperity and social well-being. It focuses on three key steps in the innovation process:

- Strengthening our ability to generate ideas and undertake research;
- Developing and retaining Australian skills; and
- Accelerating the commercial application of ideas.

*Backing Australia's Ability* is a whole-of-Government initiative which caps off the Government's work on innovation and science since the last election. It complements the \$1.9 billion *Investing for Growth* initiative.

The additional Government investment of \$2.9 billion over five years will fund major initiatives to stimulate innovation. Companies in research intensive industries stand to most directly benefit from initiatives to increase R&D activity, which include:

- Continuing the R&D Start Program with funding of \$535 million over five years;
- Reforming the R&D tax concession including the provision of a premium rate of 175 per cent for additional R&D activity;
- Improved treatment of R&D plant enabling life depreciation deductions at 125 per cent while plant is used for R&D; and
- Expanding the Cooperative Research Centres Program with an additional \$227 million and encouraging greater access by small and medium enterprises.

Companies may also indirectly benefit through other research enhancing initiatives, such as:

- Increased Australian Research Council and university funding;
- Committing an additional \$176 million for world class centres of excellence in the key enabling technologies of Information and Communications Technologies (ICT) and biotechnology; and
- Providing \$155 million to support investments in major national research facilities.