Australian Government

Geoscience Australia

Submission by Geoscience Australia
to the

Productivity Commission
Mineral and Energy Resource Exploration
Inquiry into
Non-financial barriers to mineral and energy exploration
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Introduction

The Productivity Commission invited stakeholders to comment on the non-financial barriers to mineral and energy resource exploration in Australia. The commission has been asked to determine and to recommend how to overcome any unnecessary regulatory burdens. The commission has also been asked to assess the impact of non-financial barriers on the international competitiveness and economic performance of Australia's exploration sector.

The submission provides an overview of Geoscience Australia and a discussion on government provision of geological information.

Geoscience Australia (GA)

GA is Australia's national geoscience research and geospatial information agency. It undertakes geoscientific research and develops, maintains and disseminates a wide range of geoscientific and geospatial information.

GA provides geoscientific information and knowledge to enable the government and the community to make informed decisions on the economic, social and environmental management and exploitation of the nation's natural resources, including mineral and energy resources. Other responsibilities of the agency include providing expert geoscience support to natural resources and climate change policies, providing key services to assist preparation and response to natural disasters, and the definition of Australia's land and marine jurisdictions.

GA is focused on key issues such as the global attractiveness of Australia for mineral and energy exploration and improved resource management and environmental protection. GA provides pre-competitive geoscience information for mineral and energy exploration with a focus on frontier (greenfield) areas, both onshore and offshore. This is achieved through integrated programs of data gathering, interpretation and assessment, frequently in collaboration with state and territory geoscience agencies. These programs assist in reducing geological uncertainty, enhancing the opportunities for resource discovery and are aimed at attracting exploration investment for a sustainable resources sector.

Government provision of geological information

Issue 6: Other issues impacting on the performance and efficiency of resource exploration in Australia

Mineral exploration and development differ from most other economic activities in three important respects: the location is constrained by geology, the long timeframe and the high risk. Pre-competitive geoscience assists in mitigating these exploration challenges and attracting exploration investment by allowing industry to identify areas of favourable mineral potential. Pre-competitive geoscience increases exploration efficiency by making it unnecessary for companies to duplicate common information or spend money on non-prospective ground and assists with risk-based decision making (Duke, 2010).

The Policy Transition Group (PTG) established in July 2010 by the Australian Government considered the best way to promote future exploration and ensure a stream of new resources projects for future generations. The current resources boom and high commodity prices have contributed to a focus on brownfields exploration. For sustainable resources development in the longer term, the PTG stated that maintaining greenfields exploration will be important. The PTG noted it is widely viewed that private industry would not conduct broad regional surveys on its own and that GA, in collaboration with states and territories geological surveys, captures operational efficiencies and economies of scale in undertaking regional onshore pre-competitive surveys and providing pre-competitive geoscience information (PTG, 2010).

In 2009, a Productivity Commission Review finding stated that GA, and State and Northern Territory counterparts play a valuable role in attracting private sector exploration investment in frontier areas by providing pre-competitive data. By reducing exploration costs and risk, pre-competitive geoscience not only improves returns on private investment but also increases revenues accruing to governments as royalties and taxes (Productivity Commission, 2009).

Exploration success will require the ability to 'see' beneath the cover to discover new economically viable ore deposits. This 21st century pre-competitive geoscience will provide a competitive advantage for Australia in attracting mineral exploration investment to greenfield areas. The COAG Standing Council on

Energy and Resources (SCER) has responded to this challenge with the National Mineral Exploration Strategy, which is a five-year work programme focussed on greenfield and undercover regions of Australia (SCER, 2012). GA has responded to the SCER strategy by developing a new work programme in collaboration with the state and Northern Territory geological surveys and the DETCRC to collect pre-competitive data, including drilling, in prospective but under-explored regions of Australia. GA will also work closely with the UNCOVER network, which aims to bring universities, industry and government together to improve the rate of successful discovery in Australia.

Australia is unique in being both a continent and a sovereign nation. This fact positions Australia differently to all over resource-rich nations, which may 'share' prospective geology across transnational borders. As the national geoscience agency, GA is able to operate across the entire continent and thereby acquire pre-competitive data in a consistent and standardised manner. Australia has national/continental-scale geoscientific databases that are unparalleled on the planet. These data are also delivered for free (or cost of transfer).

Concluding comments

Pre-competitive geoscience is a public good which is non-rivalrous and non-excludable to some extent. It plays a significant role in improving Australia's international competitiveness by reducing risk for the resources industry, assisting companies make informed decisions on exploration projects as well as supporting governments in maximising the future value of resources that it owned on behalf of society. Governments may also use pre-competitive geoscience for other applications, such as natural resources management, groundwater assessment and Carbon Capture and Storage studies.

Greenfields exploration is a high cost, high risk activity with a low probability of a commercial discovery. The provision of pre-competitive geoscience assists companies make informed decisions on selecting leases in greenfield areas and reducing the cost and risk of exploration.

A 2003 ABARE report on public geological surveys in Australia, found that basic geoscientific information is a public intermediate good that reduces private mineral exploration costs and risks and increases industry economic rent. The report notes that in 1999–2000, the exploration budgets of public geological surveys in Australia were around $75 million, compared with mineral and petroleum royalty payments of about $2.4 billion (ABARE, 2003).

The ABARE report states that public geological surveys provide direct economic benefits to the resources industry and governments, as well as to other users of the information. The geological surveys were seen as being an important source of Australia's competitive advantage in the resources sector in a highly competitive global market for resources exploration funds.

Growth in Australia's resources sector depends critically on investment in exploration. The strength of the mineral resource sector is important to Australia's, the state's and the local community's economies. The longer term sustainable contribution of the resources sector to the state's economic performance will require new deposits in greenfield areas to be discovered and developed.

References

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