



Energy White Paper 2014 – Issues Paper submission template

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Issues for comment are listed against each of the Chapter Headings. In making your submission, you are welcome to make comment against some or all of issues in the fields provided. A field for general comments is provided at the end of the template.

1. The Security of Energy Supplies

The Government seeks comment on:

- ways community expectations can be better understood and reflected in reliability standards;
- the value of developing fuel reserves to meet Australia's international oil security obligations, and augment domestic security;
- ways to increase new gas sources to meet demand and measures to enhance transparency in market conditions; and
- issues relating to the regulation of energy infrastructure.

Please provide any comments on The Security of Energy Supplies below:

Introductory statements

Rio Tinto welcomes the opportunity to comment on the Energy White Paper Issues Paper, and the Government's goal of developing an integrated and coherent position on energy policy. Rio Tinto is one of the largest end users of energy in Australia. Mining operations use significant quantities of diesel and electricity. Aluminium smelters and alumina refineries are electricity intensive. All our operations are trade exposed. Rio Tinto is also a large generator of electricity for its operations having interests in both coal and gas fired generation on both the East and West Coasts. We operate remote electricity generation facilities with the capacity to sell electricity to third parties, and are a significant producer of energy products, including coal and uranium, effectively all of which is exported. This puts Rio Tinto in a somewhat unique position in commenting on energy policy development and why we argue a key to the Government's long term vision is a need to balance the different interests across the energy supply chain including both supply-side and demand-side issues.

The world energy landscape is changing significantly – falling electricity demand changing the traditional utility model, a move away from a carbon dominated energy policy to one more attuned to the needs of industry to remain competitive in a global market and the US shale gas revolution. Australia is having its own transformation with many similar influences domestically. However being an open economy with an historical energy intensive industrial base which is a price taker in international markets, means its industries are very vulnerable to these global impacts.

Historically the electricity industry business model was one of stable returns reflecting low risk. Capital was available at relatively low cost. Now this model is crumbling as grid demand falls and distributed generation increases. As industry participants struggle to find a new model the debate is around who will bear the costs of the transition, particularly around stranded asset risk. So far it has been a mixture of the industry (for generators) and consumers (for networks). Regulators are having difficulty keeping up with the changes. Governance structures are often inherently slow to act and sometimes end up finding solutions to problems that no longer exist rather than the problems that are expected in the near future. Governments are having difficulty in reconciling different community expectations about access to new energy sources like coal seam gas.

These developments show the importance of developing a national energy policy in Australia. What we have now is a country with huge energy resources, but lack of a clear national policy framework. We have a fragmented energy policy across the Commonwealth and the States that is generally more driven by the demands of carbon policy and sectional interests than the needs of energy producers and consumers. We have a complex web of Federal and State regulations that add costs rather than facilitating development of efficient energy supply chains to deliver on customer needs. We have an electricity and gas law that enshrines the importance of the "long term interests of consumers" and yet has very little end use consumer representation in the governance structure or influence on policy development. We have an industrial structure that was built on internationally competitive energy that is no longer internationally competitive.

For Rio Tinto operations this has meant significant increases in energy prices which we are not able to pass on to our customers given we operate in international markets. This has occurred simultaneously with falling world prices for commodities and a strong Australian dollar which places the mining

industry under considerable margin pressure. Combine this with concern about the availability and price of gas in the short term for our Queensland operations, and it makes for a challenging and unsustainable environment for industry in general. A key example of the impacts of high electricity pricing is the recent announcement by Boyne Smelters in Gladstone of a production cut back in 1Q 2014 due to high electricity prices in Queensland at a time when there is mothballed generation capacity.

Reliability standards

The historical development of reliability standards across NEM jurisdictions is indicative of the problems inherent in the governance structure discussed further below. A mixture of probabilistic and deterministic standards reflects the varying influence of political and economic factors in policy development. Reliability standards have been a major factor in recent electricity price rises as networks have expanded to meet the forecast peak demand that has not eventuated. Yet consumers have little influence on setting these standards and have little knowledge of the cost of reliability to make informed decisions on how much they want to pay for.

Rio Tinto supports the development of a nationally consistent framework for reliability standards that enable consumers to have a say in the value they place on reliability. Estimates of the value of reliability used by networks in the past have had many methodological problems that suggest they are higher than actual values. Use of these high numbers was perhaps more directed at justifying the networks' higher investment agenda than in providing an efficient level of reliability to different consumer classes. The lack of peak load pricing meant that consumers were not faced with the costs of reliability decisions made on their behalf. This is commented on further below. The current work by AEMO seeking more detailed data on the value of reliability is a welcome step in the direction of more robust reliability measures.

Liquid Petroleum Fuels

Rio Tinto appreciates that significant work has been done by the Government and independents to review critical market elements on domestic liquid fuels security (as summarised in the Australian Institute of Petroleum's September 2013 publication). With recent Australian refinery closures due to cost and scale pressures, and increased domestic reliance on imports of refined products, Rio Tinto supports a continued focus on this increasingly important area e.g. through a regular independent assessment on the domestic liquid fuels security landscape. Such an assessment would include a consideration of the global refining sector (surplus stocks, fuel standards), availability of cost competitive and reliable import infrastructure and the impact to end users.

Gas Markets

The development of a profitable and productive LNG export industry has the potential to be a great asset to Australia but it is presenting significant challenges to all domestic gas and electricity consumers. Gas is a critical input to alumina refining. Cogeneration and fuel-switching to gas are important opportunities for carbon emission reductions and cost minimisation. In 2010, Rio Tinto Alcan commissioned a 160 MW gas-fired cogeneration at its Yarwun refinery in Gladstone. The cogeneration unit, which has reduced greenhouse gas intensity by 26 per cent, exports about 80MW to the national grid.

Yarwun requires a small amount of natural gas from 1 January 2015, in the order of 1 PJ/a. Rio Tinto Alcan has formally approached the market for gas supply offers, however, we are not seeing the traditional liquidity in the gas supply market and have received only a small number of responses to our calls. No LNG proponent has to date offered gas supply. The Queensland market is dominated by the four LNG projects, which control approximately 85 percent of gas reserves and have significant ownership by international end user customers committed to LNG offtake. We do not see the response to our market engagement for gas as representative of a competitive market.

The DOI/BREE's own Eastern Australian Domestic Gas Market Study acknowledges the difficulties in the market transition and the risk around the market overshooting export parity. The reality is the domestic gas market is not operating with any appropriate liquidity and participants are realising premiums to export price parity.

The Energy White Paper needs to consider the policy and regulatory settings to support a robust and properly functioning domestic gas market with increasing supply and more upstream participants to

stimulate an active market. This is critical in all jurisdictions especially those of the East and West coast faced with competition between the demands of LNG and domestic customers. Only a balanced market will produce competitive price outcomes and support domestic industrial utilisation. Key challenges include the need to:

- Stimulate more supply;
- Stimulate more market participants and new entrants;
- Further develop open and transparent markets;
- Develop supportive infrastructure regulation and frameworks to delivery efficient market supply;
- Achieve cross jurisdictional policy consistency.

There is a range of views among gas consumers about how to achieve these outcomes, and in particular whether to implement some form of gas reservation. While Rio Tinto does not support a reservation policy, policy makers should turn their attention to the issue of reserves not offered to the domestic market in times of illiquidity. Rio Tinto contends that market prices greater than international or export parity indicate a domestic market not functioning efficiently. More needs to be done to ensure a properly functioning market with appropriate levels of liquidity and pricing. Rio Tinto supports the development of the Eastern Australian Gas Supply Strategy to 2020 in conjunction with the Energy White Paper process.

Energy Transport Infrastructure

The efficient exploitation of Australia's fossil energy resources, particularly coal, requires access to infrastructure to transport to markets in locations where the infrastructure cannot be economically duplicated, such as the east coast of Australia. Australia's Energy Policy should articulate policy objectives and strategies to ensure the availability and operation of transport infrastructure in a manner that supports energy product exports and investment.

Rio Tinto does not oppose the privatisation of existing government owned port and rail infrastructure. However, privatisation of monopoly port and rail assets that cannot be economically duplicated has the potential to impede new entry and may ultimately inhibit growth and investment in energy product exports. As private entities generally seek higher commercial rates of return vis-à-vis government, the privatisation of critical export infrastructure that cannot be duplicated economically, must be accompanied by an effective regulatory framework that offers certainty of access and prevents excessive pricing. Significant long-term investments have been made in mines on the assumption that the existing government ownership structure will continue based on this regulatory framework, or that certainty with regard to pricing and service will be delivered through regulation in the event of asset privatisation. There is a clear risk that privatisation without appropriate protection of the existing infrastructure users interests may alter these fundamental assumptions and destroy the value of long-term investments creating a significant disincentive for investment in new production.

It may be argued that the behaviour of corporatized, publically owned infrastructure assets demonstrates that regulatory safeguards against such behaviour are effective and thus the risk associated with full privatisation can be effectively managed. This view is flawed and ignores recent events following the privatisation of critical export infrastructure in Queensland. For example, following the privatisation of QR National (now Aurizon Network) industry raised numerous matters of concern with the Australia Competition and Consumer Commission and the Queensland Competition Authority regarding the behaviour of Aurizon as a monopoly asset owner. In addition, following the privatisation of a coal export port in Queensland, the new owner proposed to significantly increase port charges immediately after privatisation.

It is clear that the motivations of a private corporate entity that derives its revenue from tolls and access charges for the use of infrastructure can be very different to a government corporation, which has broader economic and public interest objectives, such as the creation of jobs and deriving revenue from taxation and royalties. For this reason, Rio Tinto believes it is critical that the privatisation of the existing government owned energy product transport and export infrastructure that cannot be economically duplicated be combined with effective regulation in order to promote continued growth and investment across the sector.

2. Regulatory Reform and Role of Government

The Government seeks comment on:

- priority issues, barriers or gaps within the COAG energy market reform agenda;
- possible approaches and impacts of review of tariff structures including fixed network costs, further time-of-use based electricity tariffs and the use of smart meters;
- possible measures to promote greater price transparency in gas markets; and
- areas where further privatisation of government-owned assets would contribute to more effective regulatory frameworks and better outcomes for consumers.

Please provide any comments on Regulatory Reform and Role of Government below:

COAG energy market reform agenda

Integration and consolidation of energy policy with climate policy is vital to ensure synergistic, effective, efficient and clear national objectives are established. The current mix of greenhouse and energy Commonwealth and State policy/legislation is excessive, duplicative, inefficient and damaging to Australia's international competitiveness. National Energy and Climate Policy objectives should be developed to protect and enhance energy security at lowest total cost to the energy consumer whilst managing emissions, in concert with our international competitors and without damaging Australia's competitiveness.

The Australian energy system needs to be viewed in its entirety, with the national electricity market, gas, liquids, coal and renewables all playing their part in a national energy market. To understand the interaction of each part of the national energy market, and ensure continued energy security as well as movement towards reduced GHG emissions, consideration should be given to appointing a single properly resourced regulatory body tasked to provide transparent and long term oversight in meeting energy policy objectives. Importantly a single national regulator would remove the fragmented Federal/State management of the energy system and the distortions which occur between Federal and State policies. This new regulator should streamline rather than add to existing regulatory burden.

In the case of the National Electricity Market, Rio Tinto believes there is a case for a review of the NEM governance, institutions and processes to ensure existing arrangements are delivering the most robust framework for energy users and market participants. We endorse the recommendations made by the Productivity Commission in its recent report on Energy Network Regulatory Frameworks on the need to reform this governance structure – SCER, AER, AEMC and the role of State and Territory Governments. As the commission says, the key prerequisite to reform is more timely action by SCER.

We cite one example to illustrate the issue – the AEMC Power of Choice review into demand side management came with a background of considerable concern about the ability of the NEM to meet rising demand efficiently. The AEMC produced an issues paper in July 2011 and a final report to SCER in November 2012. SCER is yet to make any decision on the recommendations but demand has been falling rapidly for the last few years and AEMO continues to revise down its demand forecasts. The value of the review is now very limited compared to what would have been the case 5-7 years ago. The Commission also highlighted the weak voice consumers have in most regulatory processes, notwithstanding that their interests are ostensibly the essential plank on which regulation of the NEM is based. Rio Tinto welcomes recent moves at the national level to get more consumer involvement in the regulatory process eg the AER Customer Reference Group and Consumer Challenge Panel.

Consumer engagement processes need to be efficient and effective. Rio Tinto looks forward to the proposed National Energy Consumer Advocacy Body, being an effective advocate for all consumers that is appropriately funded and resourced with a governance structure reflecting knowledge of, and experience in, issues of relevance to consumers.

Electricity tariff structures

The perverse impacts of a lack of efficient, time based cost reflective electricity pricing, particularly for small consumers, are well documented eg large users with relatively flat loads subsidising consumers with peaky loads. Network investment to meet peak demand that has not eventuated due to the large prices rises this network investment has caused. Networks are finding themselves with stranded assets with the regulatory rules allowing this risk to be passed to consumers in ever increasing prices in the

“death spiral”.

Rio Tinto believes the following principles offer the sound basis for pricing decisions:

- new users should face the marginal costs of their locational decision;
- existing users should have property rights reflecting the historical payments they have made for asset access;
- asset owners should bear stranded asset risk; and
- customers with highly variable peak load requirements should pay for assets that are installed to serve peak demands.

It is recognised that moving to cost reflective pricing will take time as different classes of consumers will have to adjust. We support the Productivity Commission’s approach in the Networks review to a staged introduction. This should be a core part of the Government’s energy policy.

Promotion of great price transparency in gas markets

See comments on gas markets in the previous section.

Privatisation of government owned electricity assets

Rio Tinto supports moves towards full privatisation of State-owned electricity assets – both generation and network. This is an important step to addressing conflicts of interests that arise through State ownership and facilitating the reforms needed to reduce overall electricity costs to consumers. In the case of networks, State Governments as the owner of the network assets have a significant input to its regulation, and through policy levers, have put stranded asset value risk on consumers in order to maintain asset value and total return to the State Government. A State Government’s desire to maximise the income from its network ownership can conflict with its broader objectives of ensuring competitive electricity supply.

In the past the arguments for retention of public ownership were twofold – ensure excessive prices were not extracted and use public ownership as a means of fostering broader economic objectives. Indeed it was State Government ownership of the whole electricity supply chain that facilitated the large investments in energy intensive minerals processing industries from the 1960s to the 1990s in a number of States.

It could be argued today that public ownership of networks has not prevented State Governments from extracting excessive prices through the AER revenue cap processes – expanding the capital base, higher rates of return and debt risk premiums, tax equivalence payments, use of selective appeals to the Australian Competition Tribunal, and pushing stranded asset risk onto consumers. This is perhaps an inevitable consequence of the difficulties State Governments face in balancing its revenue requirements and providing the lowest power prices to consumers.

After some delay and increasing pressure from energy users, the AER has attempted to redress the situation with its recent changes in the guidelines for the networks revenue determination process. However this still falls well short of what is needed to ensure energy network service providers act in the interests of their customers.

In the absence of full privatisation of State-owned network assets, there is still significant scope for the Federal Government to exercise its power in achieving change in the governance structure that will lead to more efficient investment decisions and lower prices to all consumers, going some way to resolve conflicts of interest that arise through ownership.

In the case of generation, the State Government has had to bear the stranded asset risk itself and the assets continue to lose value in an over-supplied market. Private investors in the generation sector remain concerned with the risk that Government owned generation businesses’ operational strategies and investment decisions are not always commercial with consequent financial implications for the private sector. However there is still the issue of whether Governments should pursue policies that encourage economic growth by supporting mining and industrial development and through higher demand, positively influence the generation sector.

3. Growth and Investment

The Government seeks comment on:

- commercial or market initiatives that could enhance growth and investment in the energy and resources sectors;
- areas where approvals processes could be further streamlined while maintaining proper environmental and social safeguards;
- further ways that regulatory burdens could be reduced while maintaining appropriate levels of disclosure and transparency in energy markets; and
- the impacts of variable land access policy and ways the community could be better informed and engaged on development in the energy sector.

Please provide any comments on Growth and Investment below:

Environmental assessment processes

Rio Tinto supports the creation of a stable and predictable regulatory regime that delivers environmental benefits at least cost. In particular, a single process which meets both Commonwealth and State environmental requirements to remove duplication and simplify and shorten environmental assessment processes is critical.

The recent Productivity Commission report on major project development assessment processes highlighted the inefficiencies in existing environmental regulation and policies that are contributing to rising costs for business and constraining investment and development opportunities in Australia. The continued development of necessary energy infrastructure and assets in part relies on the existence of a robust, transparent and streamlined project approval processes. In particular, lack of confidence in the project approvals process can lead to an uncertain regulatory environment as Governments review and change regulatory controls, which can form a major constraint to energy project development. This has the potential to lead to significant energy cost impacts should supply be unable to meet demand. Energy resource developments such as coal mines are complex, require multi-billion dollar investments, and have long lives (decades) over which the return on the original investment is delivered. The complexity, duration, and cost of project approval processes and the number, complexity and cost of conditions attached to project approvals have increased alarmingly in Australia to the point where they are now a significant disincentive to develop Australian energy resources. The recent decision of the NSW Land and Environment Court to set aside the approval of the Warkworth extension after it had been through a 3 year assessment process, was supported by every NSW government department, and was approved by the Planning Assessment Commission (PAC), raises very serious sovereign risk concerns for project developers.

The increased risk of vexatious third party legal challenges is a growing concern for energy resource projects seeking environmental approvals. There have been some notable examples of legal challenges aimed at delaying, limiting or stopping major resource projects including mines, rail and ports infrastructure that have already undergone exhaustive approvals processes. Government needs to ensure that environmental assessment processes are robust and cannot be compromised by vexatious legal challenges.

Approval processes also lack the flexibility required to efficiently regulate dynamic developments such as resource developments (as opposed to static developments such as housing developments). These approvals can prevent brownfield and greenfield mine expansions from responding to market movements in a timely manner.

Rio Tinto recognises the efforts to date of government and the many agencies involved who are continuing to progress this important reform agenda. However more work is needed to develop a policy and process to support effective cooperation between Federal and State and Territory Governments to deliver efficient, effective, flexible and legally robust approvals processes for the 21st century. They need to deliver certainty to the project developer and all other stakeholders whilst maintaining a high level of environmental performance.

Streamlining existing energy regulatory programs

While Rio Tinto recognises recent efforts to streamline reporting requirements under the National

Greenhouse and Energy Reporting scheme (NGER), there are still substantial opportunities to reduce the reporting burden on business while continuing to meet the objectives of the scheme. In particular, Rio Tinto has previously highlighted opportunities to reduce the reporting burden of small emission sources which would significantly reduce reporting burden without impacting on legislative objectives or inventory outcomes. Streamlining efforts should continue and further opportunities to reduce reporting burden associated with greenhouse and energy reporting implemented.

4. Trade and International Relations

The Government seeks comment on:

- how to grow the export of value-added energy products and services;
- ways to remove unnecessary barriers to continued foreign investment in Australia's energy sector;
- ways to strengthen support for access to export markets; and
- ways to support business to maximise export opportunities for Australia's energy commodities, products, technologies and services, including the value of Australia's participation in the variety of international forums.

Please provide any comments on Trade and International Relations below:

No comment

5. Workforce Productivity

The Government seeks comment on:

- the nature of any current skills shortages being experienced and how these could be addressed by and with industry;
- the capacity of industry and education sector-led programs to meet long-term training and skills development needs of the energy and resources sectors; and
- specific long-term training and skills development needs for alternative transport fuel, renewable energy, energy management and other clean energy industries.

Please provide any comments on Workforce Productivity below:

Industrial relations law has a major impact on workforce productivity. Rio Tinto notes that the Government announced a review of Australia's industrial relations system by the Productivity Commission as part of its election platform. Rio Tinto strongly supports such a review and looks forward to making a submission on workforce productivity and industrial relations as part of that process.

6. Driving Energy Productivity

The Government seeks comment on:

- the current suite of energy efficiency measures, ways these could be enhanced to provide greater energy efficiency or possible new measures that would enhance energy productivity;
- the use of demand-side participation measures to encourage energy productivity and reduce peak energy use; and
- measures to increase energy use efficiency in the transport sector.

Please provide any comments on Driving Energy Productivity below:

Energy Efficiency

Rio Tinto does not support the continuation of the Energy Efficiency Opportunities (EEO) program. EEO was introduced on the premise that large energy users did not understand their energy use and regulation was required to drive the identification of previously unknown improvements in energy efficiency. However experience has shown that EEO is highly prescriptive and therefore costly to implement, with improvements delivered only at the margins given that large industrial energy users already have strong commercial incentives to design, construct and operate facilities as efficiently as possible. The prevailing idea that there is significant 'low-hanging energy efficiency fruit' waiting to be picked given the right regulatory driver is false, especially in the current environment of rising energy costs, the need for continued cost control by business, and the fact that EEO has been in place for over seven years. There has also been an opportunity cost associated with deploying scarce resources to ensure regulatory compliance with EEO that would otherwise have been utilised for other value creating activities.

Improvements in energy efficiency, both in electricity generation and energy end-use, has the potential to reduce environmental impacts of the energy sector as well as improving energy security and reducing energy costs. Ongoing improvement by large industrial energy users is best supported by a more streamlined and targeted regulatory approach to energy efficiency, together with stable industry, climate and energy policy frameworks that facilitate business confidence in sustaining capital investments over the longer term. Regulation should be confined to addressing specific market failures and the plethora of existing Commonwealth and State programs around energy efficiency and energy savings should be rationalised, starting with the repeal of EEO as stated above.

Demand side participation

This issue has been subject to extensive discussion in recent years, particularly in the context of rising average and peak demand. It has been very limited because of a combination of factors eg the absence of cost reflective pricing and the barriers to large users who want to trade their interruptibility into the market. Rio Tinto's energy intensive operations have a very strong incentive to reduce energy intensity independently of any regulatory requirements that may be introduced. However in the case of demand management and exploring the options of shifting demand and selling interruptibility, there have been a

range of market and institutional constraints on Rio Tinto's ability to get full value for these reductions. As noted above the AEMC Power of Choice study examined these constraints making a variety of recommendations about how to improve the attractiveness of DSM to all parties. However it is probably too late to have any impact. The DSM objective of shifting demand from peak to off-peak has been replaced by the permanent decrease in demand as consumers and industry adjust to significant price rises. Large general price rises have provided a very blunt and inefficient form of demand side management.

For these reasons, Rio Tinto questions whether a focus on removing the barriers to demand side management would be worth the effort. A better return would come from a focus on more efficient cost reflective pricing and allocation of stranded asset risk.

7. Alternative and Emerging Energy Sources and Technology

The Government seeks comment on:

- ways to encourage a lower emissions energy supply that avoids market distortion or causes increased energy prices;
- the need to review existing network tariff structures in the face of rapidly growing deployment of grid-backed-up distributed energy systems, to ensure proper distribution of costs;
- additional cost-effective means, beyond current mandatory targets and grants, to encourage further development of renewable and other alternative energy sources and their effective integration within the wider energy market;
- how the uptake of high efficiency low emissions intensity electricity generation can be progressed;
- any barriers to increased uptake of LPG in private and commercial vehicles and CNG and LNG in the heavy vehicle fleet; and
- any barriers to the increased uptake of electric vehicles and advanced biofuels.

Please provide any comments on Alternative and Emerging Energy Sources and Technology below:

Renewable Energy Target (RET)

Rio Tinto welcomes the upcoming review of the Renewable Energy Target (RET), and it will be critical that review outcomes are integrated into the Energy White Paper process. The costs of deploying renewable energy technologies have resulted in a significant increase in power prices to all consumers. The carbon abatement cost/tonne of carbon reduced is considerably above many other more efficient options available to the Government. The various State Government subsidies for roof top solar have produced great distortions and inefficient cross subsidies in the power system.

While it is recognised that the deployment of renewable generation technologies will be required in order to reduce the emissions intensity of electricity generation over time, the RET results in expensive abatement with flow on cost implications for electricity users and, in particular, energy intensive trade exposed (EITE) industries. And while there is now provision for partial exemption from these costs (by way of the Partial Exemption Certificates or PECs), this represents inadequate shielding from unreasonable flow-on electricity price increases.

Rio Tinto looks forward to engaging further with government on these issues, as part of the RET review process.

Energy Technology

Energy Technology is central to energy policy, and Australia's energy policy should address energy technology explicitly through the development of a National Energy Technology Strategy. A resilient energy policy should be technology agnostic. Every energy technology should be available for selection and deployment in order to develop the energy mix best able to support the objectives of the national energy policy. In particular, nuclear energy should not be summarily precluded from consideration.

Australia is a taker in energy technology, and energy policy should foster a level of energy technology innovation consistent with the size of our economy and our national competencies. Australia has no generation of energy original equipment manufacturers (OEMs), and spends less than one per cent of the total global spend on energy technology (which is around \$15bn annually). Australia's interests are therefore best served by partnering with global best RD&D programs, investing domestically to adopt, adapt and demonstrate prospective technologies under local conditions, and ensuring that required infrastructure will be available for the deployment of prospective technologies.

Given Australia's endowment of coal and gas, and the fact that still around three quarters of Australia's

electricity is sourced from coal, CCS is clearly a family of technologies which is relevant and should be supported. To be clear, Rio Tinto is not advocating for a subsidy designed to achieve broad deployment of CCS before it is competitive (as per the RET). Rio Tinto is advocating for support necessary to accelerate commercialisation of CCS. For Australia, this may include a small number of demonstration projects at various scales together with pre-competitive exploration necessary to identify suitable geology for geosequestration, supported by targeted R&D linked to the larger global effort. The market is the best possible means of determining which energy technologies deploy most cost-effectively while meeting policy constraints.

General Comments

Any further comments?

Please contact Mark Grenning on (07) 3625 3990 or mark.grenning@riotinto.com if you have any queries in respect to this submission.