MAGNET
MAGNETITE NETWORK

Emissions Reduction Fund Submissions
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Magnetite Network (MagNet) - Submission to the Emissions Reduction Fund Consultation

Overview

The Magnetite Network has supported the repeal of the current carbon laws (submission dated 4 November 2013) and supports an emissions reduction model framework that will:

- balance the need to preserve the trade competitiveness of the emerging magnetite industry given that magnetite iron ore exists in many other countries;
- encourage investment in new magnetite projects by providing some commercial certainty;
- provide for the equitable treatment of new producers entering the sector, especially when setting baselines and or penalties to enable them to work towards global reductions; and
- enable a fresh evaluation of the existing baseline for the production of magnetite concentrate and/or magnetite pellets.

MagNet considers that increased use of magnetite ore in global steelmaking will be a significant contributor to emissions reduction, when compared with hematite or direct shipping ore (DSO). The use of magnetite ore in the production of steel has a lower overall carbon emissions footprint (over the whole of life cycle from mining through to production of steel).

Overall MagNet would welcome an outcome where a majority of relevant countries participate in a global mandated emissions reduction scheme and notes that the Coalition Government is planning a review of such progress in other countries during 2015.

The ERF Scheme should be funded until global agreement is in place. The Emissions Reduction Fund (ERF) should be viewed as Australia's long term response to reducing emissions before switching to a Global Carbon Trading Market, once this is established.

Contact Details
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Thank-you for this opportunity to lodge a submission.

Since its formation in 2009, MagNet has endeavored to work constructively with all policy-makers and legislators to develop an emissions reduction solution that balances the need to preserve the trade competitiveness of the emerging magnetite industry, provide for equity for new projects when setting baselines and or penalties, and generally work towards global carbon emissions reductions.

MagNet and its members look forward to continuing this work with the Department of Environment, its Carbon Repeal and Direct Action Taskforces, the new Government and all legislators. It is confident that constructive solutions to reduce emissions while encouraging industries that play a role in global emissions reduction can be found.

Background to the magnetite sector in Western Australia
Currently at least 24 projects based on mining and processing magnetite iron ore are proposed, approved, under construction or currently producing in Western Australia.

MagNet represents five of the emerging magnetite companies with two of its members achieving first production during 2013. It has had up to eleven members from four States in the past. Current members are:
Atlas Iron Ltd;
CITIC Pacific Mining Ltd;
Extension Hill Pty Ltd;
Gindalbie Metals Ltd; and
Iron Ore Holdings Ltd.

Gindalbie Metals – AnSteel Joint Venture – Karara Iron Ore Project located in the MidWest region (about AUS$3 billion Capex) has been exporting shipments of magnetite concentrate since January, 2013. The official opening of the project occurred on 9 April, 2013.

CITIC Pacific Mining's Sino Iron project located south west of Karratha in the Pilbara region (US$ 10 billion Capex) recently announced that Production Line 1 of its planned 6 Production Lines has moved from Commissioning into a Production Phase, with Production Line 2 currently in Load Commissioning. First shipment is planned for 2014.

For the purposes of this submission these two projects will be referred to as the new West Australian producers. These very large-scale emerging magnetite projects result in start-up periods that require extra energy intensity, and therefore emissions increase as projects ramp-up ahead of achieving greater efficiency at full production. It is important to note that there are significant technical, ore,

regional and geological differentials resulting in variation of emissions of all magnetite producers when compared to each other.

Due to the beneficiation processes required to treat magnetite iron ore, when compared to DSO (hematite iron ore) this downstream processing results in increased greenhouse emissions in Australia. However due to the exothermic characteristics of magnetite ore compared to hematite ore, magnetite ore generates lower carbon emissions when it is used in steel making. Over the whole life cycle from mining to production of steel, the use of magnetite iron ore generates a lower overall carbon emissions footprint. This is the value adding industry successive governments have sought to encourage onshore.

Submission Response

The Emissions Reduction Fund will be designed on the basis that it is to commence operation on 1 July 2014, after the repeal of the carbon tax. While MagNet supports this timetable it notes that there is some doubt around the willingness of existing and new Senators from non-Coalition parties to support change which could mean that the operation of any new scheme is delayed. Should there be a delay in these repeal bills passing the Federal Parliament then there may be some issues and the sector would welcome further dialogue with Government as to how best to manage these transitional issues.

MagNet supports the continuation of industry assistance provided under the Jobs & Competitiveness Program (JCP) and the Energy Security Fund to continue in the financial year 2013-14 for the purpose of meeting carbon tax liabilities.

General Principles

MagNet supports an emissions reduction model framework that will:

- balance the need to preserve the trade competitiveness of the emerging magnetite industry given that magnetite ore is mined and processed in many other countries;
- encourage investment for new projects by providing some commercial certainty;
- provide for the equitable treatment of new producers entering the sector, especially when setting baselines and or penalties and generally work towards global reductions; and
- enable a fresh evaluation of the baseline for magnetite concentrate and pellets production activities, and other relevant activities that are assessed as eligible for inclusion in determining such a baseline.

The policy should be funded until global agreement from a significant number of other countries is in place. The Emissions Reduction Fund should be viewed as Australia's long -term response to reducing emissions before switching to a Global Carbon Trading Market, once this is established.

Transparency of process is always desirable and MagNet welcomes the clear timeline that has been set out in the creation of an ERF. MagNet is keen to see transparency and commercial certainty as a result of the repeal of the existing scheme and in its transitional period in order to maximise investment attraction opportunities as well as to assist the existing producers.

Where possible the avoidance of significant new reporting regimes that will require the establishment of totally new reporting and compliance architecture is preferred.

In this way, compliance obligations will not result in excessive new costs to industry. There is the potential one-off cost of creating new systems as well as annual recurrent costs of maintaining records and reporting.

The likely sources of low cost, large scale abatement to come forward under the Emissions Reduction Fund;

Flexibility will be required in the design of the funding component of the scheme so as to attract the widest possible range of emissions reduction opportunities, so as to identify the lowest cost emissions reduction opportunities across the economy.

MagNet repeats that given the geographical remoteness of its projects there should be an ability to consider some special purpose funding on a sector by sector basis or, for example, by geographic area.

One example of this is the MidWest region of Western Australia, a drought prone largely agricultural based economy with a growing minerals sector.

Most member companies have considered opportunities for investment and partnerships with the renewable energy sector as well as developing fuel sources other than coal or natural gas, opportunities to reduce diesel consumption grants for energy cost reduction and participation in technology and research.

Given the planned annual processes for evaluation of abatement proposals and award of successful bidders it will be important to ensure transparency in assessment and awarding of lowest cost abatement measures if assessed purely on alleged emissions reduction levels and cost may lead to failure to obtain the best results if there is not a clear accountability and evaluation of benefit.

How the Emissions Reduction Fund can facilitate the development of abatement projects, including through expanding the Carbon Farming Initiative and drawing on the National Greenhouse and Energy Reporting Scheme

The Emissions Reduction Fund should support carbon emissions reductions across the economy by providing a practical financial incentive to those seeking to reduce emissions.

It is important to note that many projects have already or are entering into environmental offset and other measures with various State and Federal Governments and Agencies as a part of the environmental approvals process or agreements negotiated with local stakeholders. This will be more important to consider given the Coalition Government's policy commitment to delegate increased powers to the States for the approval of projects.

The potential of these stringent requirements to maximise the possibility of measures that will enhance emissions reductions as well as satisfy regulators to enhance and preserve the environment including biodiversity and rehabilitation and protection of flora and fauna should not be underestimated. An example of these existing offsets can be found with the Asia Iron Extension Hill Project.

The Magnetite Project at Extension Hill is located in a very diverse biological region being situated at the conjunction of three bioregions of the Sate. The fact that two of the project neighbours are pastoral properties managed as private Conservation Reserves gives an indication on the ecological value of the region. The two reserves are Mt Gibson Station Sanctuary managed by Australian Wildlife Conservancy and Charles Darwin Reserve managed by Bush Heritage Australia.

Asia Iron has funded research projects into two Declared Rare Flora that are found on the Mt Gibson Ranges and has also developed a Mallee Fowl Management Plan to ensure that these species are protected and that steps are taken to ensure their continued survival in the area. The research projects for the rare flora were undertaken by scientists from the Kings Park Botanic Gardens. Source www.asiairon.com.au

Discussions with MidWest regional stakeholders indicate a strong willingness to explore mutual opportunities for abatement. MagNet looks forward to exploring these opportunities.

The details of auction arrangements to deliver cost effective outcomes

Refer to earlier comment around processes that will ensure equity and transparency with an emphasis on evidence based outcomes that are appropriately assessed for efficiency.

The design and operation of a mechanism applying to emissions above the business as usual baseline

The West Australian magnetite industry starts from a point of disadvantage under the existing laws and it is crucial that existing baselines related to the production of magnetite concentrate are not carried forward under new laws to define the business as usual measure.

This inequity was created because of an unintended consequence of penalising emerging industries in general due to the rigid setting of activity definitions and allocative baselines, with no real mechanism for assessing new entrants other than the cumbersome ad-hoc review process that involved the Productivity Commission. Only actual producers were eligible to have emissions data considered so that the two new WA producers were only eligible for assistance on the basis of data provided by the lower emissions "existing" producers in Tasmania and South Australia. Under current laws the Department of Climate Change as it then was assessed emissions data from **existing producers** only -

- These were – Savage River project in Tasmania (Grange Resources Ltd) and the integrated magnetite mining and steel production activities carried out by Arrium (formerly OneSteel) in South Australia – neither is a very large producer either in tonnage or export terms when compared with the two new West Australian producers. There are also significant differences in the mineralogy of the magnetite ore used in these projects, in comparison to the magnetite ore mined by the two new West Australian producers. The existing magnetite concentrate activity definitions were formalised in October, 2010.
- After this the allocative baseline was set based exclusively on the two existing producers at that time. Grange Resources Savage River in Tasmania and Arrium (formerly OneSteel) in South Australia.
- Each has small tonnages total (about 4 million tonnes per annum combined) when compared with the new West Australian projects (about 40 million tonnes per annum combined when Stage One targets achieved). The new wave of magnetite producers are planning production on a much larger scale and have vastly different technical specifications, and in many cases different magnetite ore mineralogy, so the current benchmarking does not reflect the data of new projects.

Also only the actual producers' technical plant and production methods were considered in setting activity definitions. Some processes were not used by current producers and therefore precluded from consideration e.g. the large 51 Gigalitre desalination plant that CITIC Pacific Mining has installed. This was inequitable as water is a fundamental part of the production process.

The two West Australian producers did qualify for assistance under the existing legislation on the basis of a moderately intensive emissions industry. This assistance when viewed as actual assistance resulted in a much lower amount than was the case for the companies already in production as at 2010. This was because their emissions are larger than for the existing – this is for a range of reasons.

Normal variations in emissions should be allowable. Flexibility will also be required in the compliance component of the scheme to allow for normal variability in the emissions from individual facilities, to allow for growth in output and to encourage investment in new in new production.
A "light touch" compliance mechanism so that companies do not ignore emissions management in the operation of their facilities (i.e. to identify and discourage any "rogue" operators) is suggested.

Greater flexibility on a project by project basis is needed.

This could have a minimum threshold in place to ensure that it is workable across large projects only.

To allow for natural variations in emissions the Regulator should set the baseline at one standard deviation above the 5-year historical mean for a facility.

Averaging the historical reported emissions data for the Sino Iron Project will mean that when it is operating "normally" would exceed an average baseline for a significant amount of the time. And this is not consistent with the stated principle in the Direct Action Plan policy of not imposing additional costs on operators of facilities operating under business as usual.

A baseline should not be set for an individual facility where there has been additional investment by that company in a more energy efficient plant when compared to other industry standards – effectively the result is that the company that makes this investment is "penalised" with a lower baseline than industry average (and therefore that company is more likely to be subjected to penalties, as compared to other companies that will have a baseline that is lower). If an 'Industry average' is used it should not be defined as an arbitrary emissions intensity or based on the use of technology that is untried in the context of a similar plant with similar operational or commercial attributes. It is important not to discourage companies from making significant investment around best practice plant or energy alternatives.

The methodology to establish an emissions baseline should reflect the approvals under which a project 'Licence to Operate' was agreed, as well as geological, ore-grade and operational attributes of a facility.

A clear process for any new projects where companies can demonstrate significant deviation of emissions is needed. The existing process is unnecessarily cumbersome and slow. It is suggested that the Productivity Commission may not be the most appropriate agency to evaluate on a project by project basis.

The methodology to establish an emissions baseline should reflect the commercial, geological and operational attributes of a facility. The baseline for large new entrants should be reflective of their actual emissions profile. Given that it will take new projects several months to ramp up to a target tonnage output during commissioning phase it is helpful to remember that until this commercial target is reached there will likely be a spike in emissions data i.e. a higher amount than will be the case at the time of full commercial production.

More detail as to differential emissions on a project by project basis

Key causes of the low effective assistance rates are due to the differentials in projected emissions of emerging projects when compared with existing producers. Specifically emerging projects when compared to existing projects:

- Require more effort to grind a substantially harder material.
- Require the ore to be ground much finer to extract smaller grain size magnetite, resulting in a substantially finer concentrate product (~28 micron particle size for the Sino Iron project compared to ~45 micron for Savage River).
- Requires more ore to be ground for each tonne of concentrate because of an average 20-30% iron content compared to approximately 30-40% at Savage River.
- Have a diversity of primary energy source that are driving overall emissions; and
- The very large-scale emerging magnetite projects result in start-up periods that require extra energy intensity, and therefore emissions as projects ramp-up ahead of achieving greater efficiency at full production.

Penalties for Emissions that Exceed the Business As Usual (BAU) baseline

MagNet seeks further detail of the intentions around this.

At an early date a minimum cost such as the yearly average of the European Union base price per tonne of carbon could be identified to enable businesses to factor in a cost for emissions penalty.

It is noted that this may occur with the release of a Green Paper in December.

The ability for a company that is emitting above BAU to offset liabilities from one year to the next is sought.

For example, a project may commit to reduce emissions in a following year rather than incur a penalty for the existing year, effectively delaying liability or carrying it forward. The mechanism could include an option for companies to purchase or utilise carbon offsets to stay within the BAU baseline.

Further Background

Carbon Emissions and the Magnetite Industry

- The production of magnetite concentrate and pellets in Australia is energy and emissions intensive as well as trade exposed.
- While some other countries do have carbon reduction legislation many other countries that produce magnetite concentrate or have significant greenfields magnetite resources do not.
- The use of magnetite in global steel making results in lower overall carbon emissions when compared to the use of traditional Direct Shipping Ore (DSO) or hematite iron ore. This is when compared from a mine to steel making life cycle.
- The Crucible Group (in research commissioned by MagNet) identified a total system benefits (from ground to steel) of magnetite when compared to DSO fines as net savings of greenhouse gas emissions of 108 kg CO2 emissions per tonne of magnetite concentrate. See its report dated June 2011 at: http://www.magnetitenetwork.com.au
- Magnetite (Fe3O4) and DSO (Fe2O3) iron ores have different chemical compositions.
- In addition to the two new West Australian major magnetite projects in production (in the Pilbara and MidWest) with total estimated capital expenditure of about $11 billion many more are either planned or seeking capital investment or in advanced pre-construction stages across

regional Western Australia. Our 5 members have Stage One projects with a proposed Capex in excess of $16 billion.

- Magnetite is a value adding, long term, jobs intensive industry with massive regional development benefits.
- MagNet does not support any emissions reduction model that fails to recognise the direct contribution made to global carbon emission reduction by magnetite production and therefore would put this new industry at a competitive disadvantage with producers in other countries that do not have legislated carbon pollution reduction regimes.
- A further objection in failing to recognise the contribution to global emissions reduction is that it will create a competitive disadvantage with domestic DSO producers given their low domestic emissions.
- It is against the national interest to penalise an emerging industry that cuts global emissions while delivering new long term jobs in regional Australia and substantial on shore value adding.

Some of these issues will need to be resolved in any consideration of emissions outputs under the ERF.

Further detail can be found at **www.magnetitenetwork.com.au**

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