NAIF: Inadequate Project Assessment and Failure of Public Interest Test

Submission to the Senate Inquiry into the Governance and Operation of the Northern Australia Infrastructure Facility

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Executive Summary

"Coal is dead. That's not to say all the coal plants are going to shut tomorrow. But anyone who's looking to take beyond a 10-year view on coal is gambling very significantly" **— Jim Barry, global head of infrastructure investment, BlackRock (the world's largest investor).**

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts research and analyses on financial and economic issues related to energy. IEEFA has closely followed and reported on Adani's proposed Carmichael mine for the Galilee Basin, which has implications for the seaborne coal trade as well as for the Indian electricity market. Our research in the context of Adani calls into question the project assessment and approval process of the Northern Australia Infrastructure Facility (NAIF) as it relates to a A$900 million loan request as well as the adequacy of the NAIF's tests for risk appetite and for whether a project is in the public interest.

This submission is structured around the first two Terms of Reference of the Senate Inquiry:

a. The adequacy and transparency of the NAIF's governance framework, including its project assessment and approval processes

A growing list of global financial institutions are moving away from coal investments. Major institutions that have stated such intentions or taken action recently include BlackRock (the world's largest investor), Deutsche Bank, Westpac, Schroders, Swiss Re, AXA, JPMorgan Chase, Bank of America, Citi and Morgan Stanley. In addition to concerns over financial losses and reputational risks that surround coal projects, major financiers and regulatory authorities have been taking climate change risk itself increasingly into account when making financial decisions. This became especially evident following a landmark speech on the topic by the governor of the Bank of England in 2015.

The trend among major financial institutions toward moving away from thermal coal financing places considerable doubt on the ability of a coal project developer to pay back or refinance loans. The Carmichael proposal in question here—which seeks support by way of a NAIF loan to finance a rail line for the project—comes with additional specific risks that bring its bankability into question and that help explain why the proponent continues to struggle to find private financers.

Adani Power is the stated off-taker of the majority of the coal that would be mined at Carmichael, yet Adani Power cannot be considered a credible counterparty to the project. Adani Power has been a loss-making enterprise for the past seven years and its debt is already rated well below investment grade and the company is in clear financial distress.

Further, Adani Power has recently stated that its Mundra power station is an increasingly unviable concern based on its reliance on imported coal. As Adani Power's largest power station by far, it is clear that Mundra is the station that would consume the majority of Carmichael coal shipped to India. With Adani Power now seeking to sell a majority stake in what is now the stranded Mundra plant, the "pit-to-plug" strategy that would have protected Carmichael from the structural decline in the global coal market is no longer viable.

The extreme risk this imposes on the Carmichael rail proposal ought to preclude NAIF investment in the project, and the fact that the project is reportedly on NAIF's short list of investments raises concerns about NAIF's project risk assessment process.

Across the corporate world, company directors are coming to the conclusion that climate change risks must be a major focus of any board's agenda.

In February 2017, Geoff Summerhayes, executive board member of the Australian Prudential Regulation Authority (APRA), distilled this growing awareness in a speech in which he said this:

> *"If entities' internal risk management processes are not starting to include climate risk as something that has to be considered even if risks are ultimately judged to be minimal or manageable—that seems a pretty reasonable indicator there might be something wrong with the process."*

To be in line with best governance practices—and before it agrees to invest in a project—NAIF is obligated by its Investment Mandate to require full public disclosure of a company's decision-making relating to climate change risk.

The explanatory notes to the Investment Mandate also make clear that NAIF must maintain a commercial reputation. While NAIF has no targeted rate of return (unlike other federal government investment vehicles such as the Clean Energy Finance Corporation), it is required nonetheless to fully recover all money lent to a project's proponents. That said, this standard is inadequate. The absence of a targeted rate of return undermines the commercial reputation of NAIF, creating the overt appearance that the Facility is in fact not run on a commercial basis at all.

Recommendations:

NAIF should disclose its risk assessment for any project that has applied for funding before any loan amounts are distributed. Such policy would serve to make clear how NAIF has done its due diligence into whether loans indeed can be repaid or refinanced. Transparency over such decision-making would also allow the public to see how and whether climate change has factored into the NAIF Board's assessment of project risk, as is increasingly a global best practice.

Any financial modelling used by the NAIF Board to assess the viability of projects applying for a NAIF loan should be disclosed and made available for public scrutiny ahead of any loan amounts being distributed. The capital structure of any project should be demonstrated to have been factored into NAIF's assessment of any given project.

NAIF should adequately disclose how potential reputational risk to the Commonwealth was considered in its decision-making and how it concluded that no reputational damage would ensue in the event that NAIF loan to a project.

In the case of the Carmichael rail project that NAIF would be financing, the mounting risk factors that decrease the likelihood of repayment should preclude the offer of a loan.

NAIF cannot maintain credibility and commercial reputation without there being full transparency over its corporate governance practice. Full public disclosure over the Board's decision-making relating to climate change risk is required for NAIF to be seen to be in line with best practice. Further, NAIF should have a targeted rate of return on its lending activities. Without such a standard in place, NAIF falls short of other government-owned financial operations such as the CEFC and will consequently fail to maintain a commercial reputation.

b. The adequacy of the NAIF's Investment Mandate, risk appetite statement, and public interest test in guiding decisions of the NAIF Board

The NAIF Investment Mandate requires a project proposal to be in the public interest for it to qualify for a loan. There are numerous aspects of the Carmichael rail project that don't meet this public interest test, aspects that call into question the application assessment procedures of NAIF.

A recent report by the respected global resource analysis firm Wood Mackenzie has found that the opening up of the Galilee Basin to new coal projects would have significant negative impacts on existing coal mining operations in New South Wales. Wood Mackenzie's analysis found that the development of the Galilee would reduce the thermal coal output of the Hunter Valley by 35% by 2035. The quality of Hunter Valley thermal coal sets the global benchmark and is significantly higher than that of the Carmichael mine proposal. Proceeding with the Carmichael project would mean replacing high quality thermal exports (which attract a higher price) with lower quality exports. The NSW government would consequently see a major reduction in mining royalties.

The Carmichael rail project is owned privately by the Adani family via an entity called Atulya Resources Ltd located in the tax haven of the Cayman Islands (refer to Annexure IV). An approval of a NAIF loan for Adani would be an endorsement of the use of tax havens at a time when the government is supposedly taking action on tax avoidance and as the federal government has been cracking down on multinational companies avoiding paying taxes in Australia. In April 2017, Treasurer Scott Morrison stated that new tax avoidance laws, which he said would be among the toughest in the world, were already producing benefits in terms of Australian taxes paid.

It would not be in the public interest to lend taxpayer money to a project whose ownership is structured in a way to move profits offshore and avoid paying tax in Australia. The NAIF Board must be seen to be taking such considerations into account in its decision-making in order to assure taxpayers that lending decisions are being made in their best interests.

The Board is also required to preference multiple-user infrastructure that benefits the broader economy. However, it is clear that Adani's proposed Carmichael rail line would benefit one user and one user only. Aside from Adani's Carmichael mine proposal, other Galilee Basin mine proposals remain stalled (refer Annexure II), and in IEEFA's view it is highly unlikely that any of those proposals will ever get off the ground, underscoring the likelihood that the Carmichael Rail infrastructure would be used only by the Carmichael proponent.

Even if further Galilee coal export projects were to proceed, they would be entirely contingent on the construction of a new coal terminal port facility. Although an expansion of Abbot Point Coal Terminal was part of the original Carmichael vision, it is becoming increasingly clear that Adani has neither the desire nor the funding to take on such an expansion.

Furthermore, the Carmichael Rail proposal is for a rail line that is entirely separate from the existing Queensland rail network, which means it would fail to optimize existing state infrastructure. It would not allow freight of coal to any port other than Abbot Point, a coal terminal ultimately owned by the same proponent as the one behind the Carmichael mine and rail proposals.

Any loan from NAIF to support the Carmichael rail proposal would only finance an Adani-owned rail link between the Carmichael mine and Abbot Point, both of which are also ultimately owned by the Adani family through Adani Enterprises and reportedly Adani Ports, respectively. As such, a NAIF loan would serve to lock in a monopoly mine, rail and port operation for Adani and Adani alone.

Recommendations:

As an entity of federal government, NAIF should not make lending decisions that will negatively impact parts of Australia that are outside its Northern Australia remit. Nor should NAIF ignore the government's campaign against companies taking profits offshore and avoiding Australian tax. Assessment of the group/tax structure of a project, and disclosure of such assessments, is required in order to confirm whether a funding decision for a project has considered the public interest.

The preference for multi-user infrastructure should be reflected in NAIF's prioritization of projects for financing as well. Projects such as the Carmichael rail proposal, which are clearly single-user, should be deprioritized.

Introduction

On 14 June 2017, the Senate determined that an inquiry into the governance and operation of the Northern Australia Infrastructure Facility (NAIF) should report by 7 December 2017. The inquiry has particular reference[1] to:

a. the adequacy and transparency of the NAIF's governance framework, including its project assessment and approval processes;
b. the adequacy of the NAIF's Investment Mandate, risk appetite statement, and public interest test in guiding decisions of the NAIF Board;
c. processes used to appoint NAIF Board members, including assessment of potential conflicts of interest;
d. the transparency of the NAIF's policies in managing perceived, actual or potential conflicts of interest of its Board members;
e. the adequacy of the Northern Australia Infrastructure Facility Act 2016 and Investment Mandate to provide for and maintain the independence of decisions of the Board;
f. the status and role of state and territory governments under the NAIF, including any agreements between states and territories and the Federal Government; and
g. any other related matters.

This report constitutes IEEFA's submission to the Senate Economics References Committee conducting the inquiry.

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts research and analyses on financial and economic issues related to energy[2]. Our Australian branch has a focus on Asian electricity markets, particularly in China and India. IEEFA also closely tracks the Asian seaborne thermal coal market. As part of its ongoing work, IEEFA has closely researched and reported on Adani's proposed Carmichael mine, which has implications for the seaborne coal trade as well as the Indian electricity market. Our most recent update on this increasingly unviable proposal was published in April 2017.[3]

The Carmichael mine rail link is reported to be one of five project proposals currently undergoing due diligence with a view to receiving NAIF funding[4], which has been confirmed by the former responsible minister[5]. This submission to the inquiry is based on the outcomes of our continuing financial analysis of the Carmichael proposal. In particular, our findings call into question the project assessment and approval process of NAIF as well as the adequacy of the NAIF's risk appetite and public interest test.

As a result, this submission mainly addresses parts a. and b. of the Terms of Reference outlined above. However, IEEFA also considers transparency of governance to be vital for any financial institution, hence our submission also touches on areas relevant to part c. as well.

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[1] http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/NAIF/Terms_of_Reference
[2] http://ieefa.org/
[3] http://ieefa.org/ieefa-press-release-adanis-carmichael-mine-project-unbankable-ever/
[4] http://www.afr.com/news/politics/5b-naif-consdering-toll-roads-and-energy-projects-in-the-far-north-20170713-gxa8qs
[5] https://www.theguardian.com/environment/2017/apr/01/need-for-transparency-as-slush-fund-allegations-get-bandied-about

a. The adequacy and transparency of the NAIF's governance framework, including its project assessment and approval processes

"…the Board must be satisfied that when making an Investment Decision there is an expectation that the Commonwealth will be repaid, or the investment can be refinanced."[6]

Adani's 'Pit-to-Plug' Strategy Is Broken

The key risk now casting a shadow over the future of the Carmichael mine and related rail proposals is the fate of Adani's Mundra import coal-fired power plant in India (Refer to Annexure I). Despite its significance, little detail around the financial distress of this power plant has been reported in Australia. The NAIF Board should nonetheless place assessment of the situation as a high priority given the risk it places on the Carmichael proposal and the ability of the proponent to repay any associated loans.

Adani has long maintained that the Carmichael mine is part of a "pit-to-plug" strategy[7]—coal from Carmichael will be transported on Adani's own rail line to its Abbot Point coal terminal and then shipped to import coal-fired power plants owned by Adani Power.

Of Adani Power plants that use imported coal, Mundra plant, in the state of Gujarat, is by far the largest and most significant. It is clear that this is the plant that would import most of the coal mined at Carmichael. Yet Adani has admitted recently that the plant is increasingly unviable.[8]

Furthermore, it has been widely reported in India that Adani, like Tata Power, is seeking to sell its stake in the Mundra plant and has approached the Gujarat state government with an offer to sell it a majority stake for 1 rupee.[9]

If Mundra is not viable based on imported coal, or if it is sold, its fate destroys the "pit-to-plug" strategy and ends the rationale for the Carmichael mine and rail projects. IEEFA would suggest that, without this rationale, the risk is too high for investment in Carmichael and that any decision by the NAIF Board to invest despite this would represent an inadequate assessment of the chances of taxpayers getting their money back.

A potential purchaser of Adani's 4.6GW Mundra plant (such as the Gujarat state government) would undoubtedly seek to replace imported coal use with Indian domestic

[6] Explanatory Statement, Northern Australia Infrastructure Facility Investment Mandate Direction 2016
[7] http://www.livemint.com/Companies/0v3GPxrwuJA6gebfOMy7iN/We-aspire-to-be-world-leaders-with-our-integrated-pittoplu.html
[8] http://energy.economictimes.indiatimes.com/news/power/gujarat-writes-to-centre-over-electricity-crisis-as-adani-says-mundra-project-becoming-unviable/58603194
[9] http://www.thehindubusinessline.com/companies/gujarat-govt-to-meet-lenders-this-week-on-tata-adani-power-projects/article9756502.ece

coal to cut costs in an effort to make the plant viable. In the event that no sale is achieved, then Mundra looks increasingly like a stranded asset. Given the role Mundra was to play in offtaking Carmichael coal, IEEFA would suggest that if Mundra is stranded, then the Carmichael proposal is unbankable and is therefore a stranded asset as well.

Adani Power Is in Financial Distress

Even before the troubles at Mundra became public, Adani Power was not a credible counterparty to the Carmichael project. Adani Power has been a loss-making enterprise for the past seven years. Its debt is already rated well below investment grade and the company is in clear financial distress. Its latest full-year financial disclosures show that Adani power has net debt of US$7.6bn, a huge net debt-to-equity ratio of over 16 times and a worrying net interest cover of 0.63 times (refer Figure 1 below).

Morgan Stanley recently downgraded Adani Power whilst noting that a number of Indian stocks are not pricing in the disruption that will be caused by the rise of ever-cheaper renewable energy.[10] Without credible and viable offtake of Carmichael coal by Adani Power's Mundra power plant, Adani would be forced to sell Carmichael coal on the open (and structurally declining) seaborne coal market[11].

Figure 1: Adani Power – Financial Leverage is Unsustainable

Adani Power Ltd	**31-Mar-17**	
Shareholders Funds (Book Value)	30,000	Rs million
Shareholders Funds (Book Value)	464	US$ million
Net debt	7,597	US$ million
Net debt to equity	16.4	times
Net interest cover (EBIT)	0.63	times

Source: Adani Power FY2016-17 Financial Results, IEEFA Estimates

Global Financial Institutions Are Distancing Themselves From Coal

Further questions concerning how the NAIF Board can conclude that a loan of the sort proposed for Adani can be repaid or refinanced at maturity arise from the fact that global financial institutions are increasingly ruling out any new thermal coal mine and infrastructure investments.

Jim Barry, the global head of infrastructure investment at BlackRock, a hugely influential presence as the world's largest investment group, made headlines recently by saying:

> *"Coal is dead. That's not to say all the coal plants are going to shut tomorrow. But anyone who's looking to take beyond a 10-year view on coal is gambling very*

[10] http://www.thehindubusinessline.com/economy/morgan-stanley-downgrades-view-on-indias-power-utilities/article9755145.ece

[11] http://www.reuters.com/article/us-coal-prices-analysis-idUSKBN1A91IJ

significantly."[12]

Barry added that he did not think there was any long-term potential in Adani's Carmichael project and that, more broadly, no board of directors in the U.S. would make a 30-year financial commitment to coal.

This follows a wave of decisions by global financial institutions to move away from coal investments. JPMorgan Chase's 2016 announcement that it would no longer finance new coal-fired power plants in developed countries followed similar statements from Bank of America, Citi and Morgan Stanley.[13] Since pulling out of a deal to finance the expansion of Abbot Point, Deutsche Bank has committed to cease financing coal projects anywhere.[14]

Australia's big four banks have been increasingly distancing themselves from the Carmichael project and from coal in general. In April 2017, Westpac released a new climate risk policy that effectively rules out investment in the Carmichael projects[15]. In February 2017, the Queensland Investment Corporation (QIC) released a Red Paper on the impacts of climate change on infrastructure, noting that the long duration of such assets makes consideration of climate change risk particularly important.[16] Global investment bank Citi recently stated:

> *"Many banks have significantly reduced financing activities related to coal because of changes in market fundamentals and their own policies, a sharp contrast versus the pre-2015 period."*[17]

More recently, Swiss Re, the world's second-largest reinsurer, confirmed it is moving its entire US$130 billion of liquid asset holdings into ethical indices. The company stated that taking environmental, social and governance (ESG) considerations into account reduces investment risk, particularly for long-term investors.[18] Swiss Re specifically excludes companies with substantial revenues from, or usage of thermal coal, from its investments.[19] AXA announced in April 2017 that AXA Investment Management would divest from companies that derive more than 50% of their revenues from coal-related activities.[20]

These moves by major global financial institutions are coming with increasing frequency. Such actions have been made for a variety of reasons, including concerns over financial losses from stranded fossil fuel investments and concerns over reputation risk. Concerns directly emanating from climate change are increasingly being cited and acted on by significant financial players.

A major landmark in this trend was a speech by the Governor of the Bank of England in 2015

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[12] http://www.afr.com/business/mining/coal/blackrock-says-coal-is-dead-as-it-eyes-renewable-power-splurge-20170524-gwbuu6

[13] https://www.nytimes.com/2016/03/21/business/dealbook/as-coals-future-grows-murkier-banks-pull-financing.html

[14] https://www.theguardian.com/business/2017/feb/01/deutsche-bank-pulls-out-of-coal-projects-to-meet-paris-climate-pledge

[15] http://www.abc.net.au/news/2017-04-28/westpac-adds-coal-to-its-lending-black-list/8479600

[16] QIC Red Paper, Climate change: building resilience in infrastructure assets, February 2017

[17] https://www.platts.com/latest-news/coal/singapore/citi-lowers-2017-newcastle-thermal-coal-price-27855335?hootpostid=ceabe1c2cb7535c4690bfdc67eaf514d

[18] https://www.reuters.com/article/us-swissre-ethical-idUSKBN19R22Y

[19] http://www.swissre.com/about_us/about_our_business/asset_management/responsible_investing_in_practice.html

[20] https://www.axa-im.com/en/media-centre/-/news/axa-investment-managers-divests-from-companies-most-exposed-to-coal/maximized/R9Y2LxVHwWFf

at Lloyd's of London.[21] In that speech, Mark Carney outlined the rising physical, liability and transition risk from climate change and the spreading policies designed to minimise such risk. In July 2017, Schroders, the U.K.'s largest asset manager, voiced a blunt warning about the impacts of climate change on industries, finance and the global economy. Schroders' head of sustainable research stated:

> *"Whether it's through policies to limit how far temperatures rise or through the physical effects of temperatures rising, investors won't be able to ignore the impact of climate change."*[22]

Exactly how the NAIF Board takes these risks into account is not clear. NAIF's Investment Mandate requires that a Risk Appetite Statement (RAS) be developed by NAIF. Unfortunately the RAS is not a public document, a circumstance that makes it impossible to assess how particular risks to any project under consideration have been approached.[23] Given that NAIF provides loans using taxpayers' money, this absence of transparency into risk management decisions at NAIF is disturbing and odd.

The growing trend of global financiers away from thermal coal and toward renewable energy, and the increasing consideration of climate change in major financier's risk assessments, can and should be reflected in NAIF's own project evaluations.

Whatever rationale that existed to begin with for the Carmichael mine and rail projects is being badly undermined now by the increasingly unviable status of Adani's Mundra power plant and Adani Power itself. The NAIF Board cannot persuasively conclude that any loan for Carmichael can be repaid or refinanced without proper consideration of the status of the Mundra plant and offtaker risk.

Recommendation:

Before any loan amounts are distributed, NAIF should disclose its risk assessment for projects that have applied for funding. Such a policy would make clear how NAIF has reached any conclusion that loan amounts can be repaid or refinanced. Taxpayer transparency into such decision-making would also allow the public to see how—and whether climate change risk has factored into the Board's assessment of project risk, as is the increasingly global best practice. In the case of the Carmichael rail project, the mounting risk factors that further decrease the likelihood of repayment should preclude the offer of a loan from NAIF.

[21] http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx
[22] https://www.ft.com/content/ba3bb744-688a-11e7-9a66-93fb352ba1fe?segmentid=acee4131-99c2-09d3-a635-873e61754ec6
[23] http://www.naif.gov.au/risk-management-framework/

The Global Seaborne Coal Trade Is in Structural Decline

"The Project Proponent must present comprehensive financial modelling to demonstrate the ability of the Project to repay the debt in full and on time, or refinance, based on assumptions acceptable to the board."[24]

With the long-term outlook for thermal coal prices negative, the NAIF Board should be highly sceptical of any financial modelling that suggests the Carmichael coal project can be profitable. An unprofitable mine obviously makes the proposed associated rail link unviable given that there is no evidence that the development of any other Galilee Basin mines will proceed and benefit from such a rail line. Adani has previously claimed that it's "pit-to-plug" strategy would protect the mine project from declining global seaborne coal prices. The fact that this strategy is dead after Adani's admission that the Mundra power station is increasingly unviable removes this protection and leaves the project exposed to declining global coal prices.

Global investment bank Citi recently lowered its 2017 forecast price for Newcastle 6,000kcal/kg NAR thermal coal to US$76/t and forecasts a price of just US$60/t for the 2018 to 2020 period stating that:

> *"… it is unlikely for prices to average above $80/mt for months or years because coal demand should fall structurally."*[25]

Importantly, Carmichael coal can't and won't achieve the benchmark Newcastle price due to its lower quality. The low value of Carmichael coal is a major financial headwind. IEEFA estimates Carmichael coal would be valued at a 30% discount to the Newcastle thermal coal benchmark based on a thermal energy content averaging only 4,950kcal and a high ash content of 26%.

Respected global resources analyst Wood Mackenzie concludes that Carmichael's initial operations would need a real minimum benchmark Newcastle coal price of at least US$82/t to break even.[26]

With the thermal coal futures market indicating prices well below US$82/t out to 2022, IEEFA sees the Carmichael mine project losing money on every ton of coal produced. IEEFA questions any modelling that suggests otherwise and encourages the NAIF Board to do likewise.

Recommendation:

Any financial modelling used by the NAIF Board to assess the viability of projects applying for a NAIF loan should be disclosed and available for public scrutiny ahead of any loan distributions.

[24] NAIF Investment Mandate 2016, Schedule 1: Eligibility for Financial Assistance – Mandatory.

[25] https://www.platts.com/latest-news/coal/singapore/citi-lowers-2017-newcastle-thermal-coal-price-27855335?hootpostid=ceabe1c2cb7535c4690bfdc67eaf514d

[26] https://www.worldcoal.com/mining/07062017/wood-mackenzie-responds-to-adani-announcement/

High Leverage Like That Proposed for Carmichael Increases Project Risk

"The Project proponent must show that the finance (provided by way of a Financing Mechanism from the Facility) will not exceed 50 percent of total debt for the proposed Project."[27]

According to its Investment Mandate, NAIF may not provide more than 50% of the total debt funding of any one project. It has been widely disclosed by Adani that the Carmichael rail link will cost around A$2.5 billion.[28]

Using a conservative capital split of 60% debt to 40% equity, the rail project would need around A$1.5 of total debt. A loan from NAIF of A$900 million, as has reportedly been proposed, would clearly be in excess of 50% of the total debt for this project.

This suggests that the capital split of the Carmichael Rail proposal will be far more heavily weighted toward debt. This ratio of leverage only adds to the risk of the project (whilst reducing any potential profits to tax, reducing the public interest further still).

Assuming the reported application for a NAIF loan of A$900 million is correct, total debt funding of the project would be at least A$1.8 billion, meaning the project would be at least 72% funded by debt.

Recommendation:

The capital structure of any project should be demonstrated to have been factored into NAIF's assessment of projects.

Reputational Risk Is Being Ignored

"… the Facility has a responsibility to act in a way that is not likely to cause reputational damage to the Commonwealth …[29]***"***

The recent global reaction to the announcement by the U.S. that it would withdraw from the Paris climate agreement was telling. Major nations criticised the move and doubled down on their own commitments, a strong indication of how governments would respond diplomatically toward any other nation seen to be either reneging on their Paris commitments or failing to live up to the stated aim of attempting to limit global warming to 1.5 degrees.

There is significant reputational risk to any nation that professes to meet Paris commitments domestically whilst continuing to promote and subsidise coal use overseas. Australia is not alone in running this risk; Japan, China and South Korea are major promoters of coal technology in developing countries such as Indonesia, Bangladesh, Pakistan and several across Africa.

[27] NAIF Investment Mandate 2016, Schedule 1: Eligibility for Financial Assistance – Mandatory.
[28] http://www.couriermail.com.au/news/queensland/adani-says-carmichael-mine-to-be-executed-this-year-despite-not-yet-being-approved-by-its-board/news-story/4f3136b1c8dd84901bb03adbff1204f5
[29] NAIF Investment Mandate 2016, Clause 16.

As per the Investment Mandate (clause 16), the NAIF must not act in a way that is likely to cause reputational risk to the Commonwealth. Informed reviews suggest that any loan made to Adani breaches clause 16 and may even be contestable in court in the event a loan is granted.[30] The Clean Energy Finance Corporation (CEFC) has an almost identical clause in its own investment mandate, and the former head of the CEFC has unequivocally stated that the Carmichael rail proposal does not pass the reputation test.[31]

Pressure is growing on boards of directors everywhere to consider climate change risks, and how such considerations affect reputational risk. Barrister Noel Hutley SC stated notably in his 2016 paper "Climate Change and Directors Duties" that directors themselves are at risk in climate change considerations:

> *"It is likely to be only a matter of time before we see litigation against a director who has failed to perceive, disclose or take steps in relation to a foreseeable climate-related risk that can be demonstrated to have caused harm to a company (including, perhaps, reputational harm)."*[32]

Recommendation:

NAIF should adequately disclose how potential reputational risk to the Commonwealth was considered in its decision-making and how it has concluded that no reputational damage would ensue in the event that NAIF decides to loan to the project.

Compliance With Australian Best Practices Is Being Ignored

"…the Facility must act consistent with, and establish policies in relation to, Australian best practice corporate governance. This is so the Facility has credibility in financial markets and maintains a positive commercial reputation."[33]

There is now a growing understanding by company directors worldwide that climate change risks must be a major focus of any board's agenda. In February 2017, Geoff Summerhayes, executive board member of the Australian Prudential Regulation Authority (APRA), said in a speech that:

> *"If entities' internal risk management processes are not starting to include climate risk as something that has to be considered – even if risks are ultimately judged to be minimal or manageable – that seems a pretty reasonable indicator there might be something wrong with the process".*[34]

Increasingly, it is becoming established practice for boards to fully consider climate risks. In order to comply with this best practice and remain credible, the NAIF Board can and should demonstrate clearly that it is doing the same.

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30 http://reneweconomy.com.au/reputation-clause-may-scupper-government-loan-deal-for-adani-77287/
31 https://www.theguardian.com/environment/2017/jul/06/loan-to-adani-by-infrastructure-fund-could-be-unlawful-says-former-clean-energy-head
32 http://reneweconomy.com.au/getting-climate-risk-on-the-company-board-agenda-95976/
33 Explanatory Statement, Northern Australia Infrastructure Facility Investment Mandate Direction 2016
34 http://reneweconomy.com.au/getting-climate-risk-on-the-company-board-agenda-95976/

In addition, in order to maintain a positive commercial reputation, the NAIF can and should have a requirement to deliver a targeted rate of return on loans of taxpayers' money. The Clean Energy Finance Corporation (CEFC) has such a requirement, which helps it maintain its commercial credibility. The CEFC's commercial approach to lending has allowed it to lock in $2 of private investment for every $1 of public money lent to projects.[35] A NAIF loan to the Carmichael rail project would not be able to match this return given that a $900 million loan would make up a high percentage of the overall debt funding required by Adani.

The apparent lack of a commercial remit is enhanced by the fact that most NAIF Board members have strong links to one particular industry (mining). Northern Australia has other important industries that include tourism, pastoralism and aquaculture yet these industries have no representation on the Board.[36] In fact, the NAIF legislation specifically and wrongly precludes scientists, pastoralists and representatives of the tourism industry from taking a seat on the NAIF Board.

In order to comply with the Investment Mandate, NAIF must be seen to be making commercial decisions whilst considering the public interest. Its absence of a targeted rate of return on investments undermines the commercial reputation of NAIF and gives the appearance that the Facility is not run on a commercial basis at all.

Recommendation:

NAIF cannot maintain its credibility and commercial reputation without allowing full transparency into its corporate governance practice. Full public disclosure over the Board's decision making relating to climate change risk is required for NAIF to be seen to be in line with best practice. In addition, NAIF should have a targeted rate of return on its lending activities. Without this NAIF falls well short of other government-owned financial operations such as the CEFC and will fail to maintain a commercial reputation as a consequence.

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[35] http://www.cefc.com.au/media/files/acceleration-in-investment-as-cefc-commitments-exceed-$2-billion-in-2016-2017.aspx

[36] https://independentaustralia.net/politics/politics-display/northern-australia-infrastructure-fund-set-up-to-funnel-money-to-adani,10504 - .WWoRVDSa9QI.twitter

b. The adequacy of the NAIF's Investment Mandate, risk appetite statement, and public interest test in guiding decisions of the NAIF Board

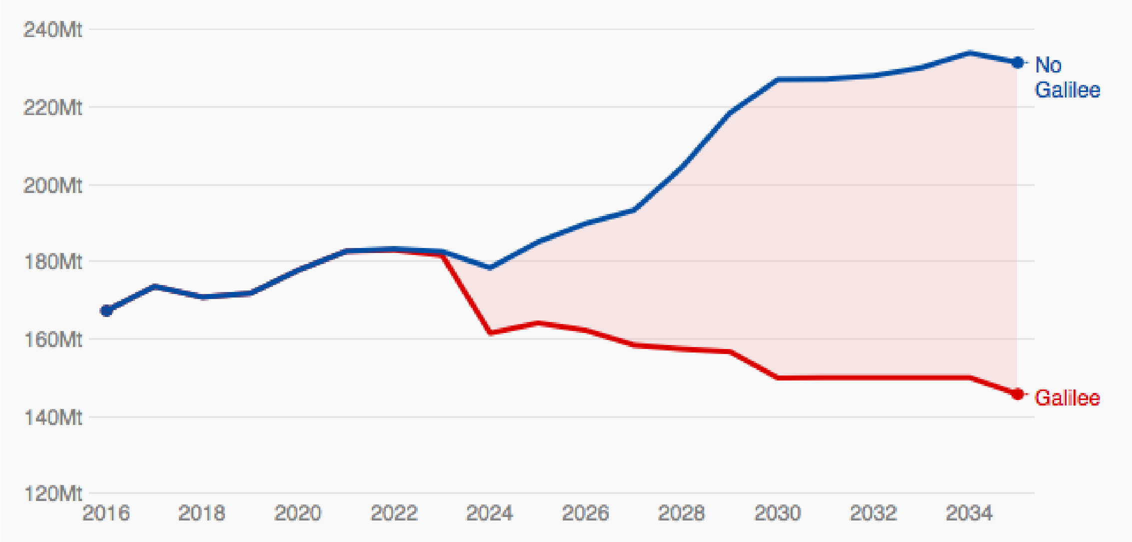
"The proposed Project will be of public benefit."[37]

While there is much discussion in the media about the benefits, particularly in terms of jobs, that the Carmichael project would bring to the Queensland public, the Federal government and its agencies have a duty to the public of the entire nation.

A recent report by the respected global resource analyst Wood Mackenzie has found that the opening up of the Galilee Basin would have highly significant negative impacts on existing coal mining operations in New South Wales. That report was commissioned by the Infrastructure Fund, which owns 50% of the NSW coal terminal, the Port of Newcastle.

Wood Mackenzie's analysis found that the development of the Galilee would reduce the thermal coal output of the Hunter Valley by 35% by 2035[38] (see Figure 2 below). The quality of Hunter Valley thermal coal sets the global benchmark and is significantly higher than that of the coal that would be mined at Carmichael. Australia would be replacing high quality exports (which attract a higher price) with lower quality exports. The NSW government would consequently see a major reduction in mining royalties, estimated at a cumulative A$10bn.

Figure 2: Impact of Galilee Exploitation on Hunter Valley Coal Output



Source: Wood Mackenzie, ABC

[37] NAIF Investment Mandate 2016, Schedule 1: Eligibility for Financial Assistance – Mandatory.
[38] http://www.abc.net.au/news/2017-07-06/galilee-basin-mining-project-will-reduce-coal-output:-research/8682164?WT.ac=statenews_qld

Jonathan van Rooyen, general manager of investments at the Infrastructure Fund, has crystalized this issue in a few words:

> "… *It seems a perverse outcome when you are taking jobs in one part of the country and promoting them there and displacing them or destroying them in other parts of the country."*[39]

NAIF Implicit Endorsement of Tax Havens

Another area in which NAIF decision-making seems misaligned with Australia's best interests is in its consideration of tax havens. Due to NAIF's lack of transparency, it is not clear what considerations NAIF takes on board regarding the use of tax havens by loan applicants. However, the federal government has been cracking down on multinational companies avoiding paying tax in Australia. In April 2017, Treasurer Scott Morrison stated that new tax avoidance laws, which he said were among the toughest in the world, were already producing benefits in terms of Australian taxes paid.[40]

If the NAIF were to approve a loan to Adani for its rail project it would suggest that such NAIF considerations are inconsistent with the Treasury.

In December 2016, Adani Enterprises Limited confirmed to the Bombay Stock Exchange that the *"rail project [North Galilee Basin Rail Project] is not part of the Adani Enterprises Limited Group."*[41] Instead the rail project is ultimately owned privately by the Adani family via an entity called Atulya Resources Ltd located in the tax haven of the Cayman Islands (refer to Annexure IV). An approval of a NAIF loan to Adani would be an implicit endorsement of the use of tax havens at a time when the government is said to be cracking down on tax avoidance.

By contrast, concerns about the tax status of Adani's asset owners appears to have been taken seriously by State Bank of India (SBI). Adani had intended to transfer ownership of Abbot Point from BSE-listed Adani Ports and SEZ Ltd to a private family company in the Cayman Islands. SBI concerns about the increased risk of this structure, a major lender to Adani, were reported to have put a stop to this plan.

Recommendation:

As an entity of federal government, NAIF should not make lending decisions that negatively impact parts of Australia that are outside its Northern Australia remit. Further, the government's willingness to hold to account companies taking profits offshore and avoiding tax should be reflected in the decision-making of NAIF. Assessment of the group/tax structure

[39] http://www.abc.net.au/news/2017-07-06/galilee-basin-mining-project-will-reduce-coal-output:-research/8682164?WT.ac=statenews_qld
[40] http://www.news.com.au/national/breaking-news/tough-tax-avoidance-laws-working-morrison/news-story/03eac66c2cc30cccc5f465a3d61e083b
[41] Adani Enterprises disclosure to the BSE, 8th December 2016

of a project, and disclosure of such assessments, is central to knowing whether a funding decision for a project has considered the public interest.

Failure to Meet Multi-User Preference Criteria

"The Board will preference multiple user infrastructure that benefits the broader economy."[42]

The NAIF investment mandate outlines a clear preference for investment infrastructure projects that will have multiple users. The proposed loan to the Adani Carmichael rail project would fail to meet this preference.

The exceptionally long-duration taxpayer-subsidized loan in question is being promoted on the grounds that it will enable a multi-user rail facility to open up multiple new mine developments. However, other Galilee Basin mine proposals have stalled (refer Annexure II). For instance, GVK's three Galilee proposals are unable to proceed due to the fact that the proponent is all but bankrupt in India[43], a fact that is underreported in Australia. In all likelihood, these other Galilee mining proposals are stalled permanently. Further, most are located up to 100km from Carmichael. In IEEFA's view, it is highly unlikely that any other Galilee Basin mining proposals will ever get off the ground, meaning the Carmichael Rail infrastructure proposal would benefit only the Carmichael proponent.

In addition to depending on a proposed new 388-km greenfield railway line from the Galilee to Abbot Point, any additional Galilee export project would require construction of a new coal terminal port facility. Although an expansion of Abbot Point Coal Terminal was part of the original Carmichael vision, it is becoming increasingly clear that Adani has neither the desire or the funding to take on such an expansion. The financial distress of the A$4bn Wiggins Island Coal Export Terminal (WICET) and the associated bankruptcy of three of the eight coal companies involved (Cockatoo Coal, Bandanna and GRAM Caledon) highlight the huge capital risks involved in building new coal port facilities.[44]

The current Carmichael coal mine and rail proposal have done away with the original proposal of an associated new 50-70Mtpa coal terminal at Abbot Point (T0). With the existing T1 port running at 50-55% utilisation, there is only around 25Mtpa of unutilized export capacity at Abbot Point. This capacity would be filled by the Carmichael mine project in the unlikely event it is able to secure funding, leaving no capacity available for other mine proposals.

Furthermore, the Carmichael Rail proposal is for a rail line that is entirely separate and incompatible with the existing Queensland rail network, failing to optimize existing state infrastructure. It would not allow freight of coal to any port other than Abbot Point, a coal terminal ultimately owned by the same proponent as the Carmichael mine and rail proposals. In addition, the use of a different rail gauge to the existing Queensland network would mean that the existing rolling stock would not be able to use the Carmichael railway, blocking the chance of existing operators providing competition.

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[42] Explanatory Statement, Northern Australia Infrastructure Facility Investment Mandate Direction 2016

[43] http://economictimes.indiatimes.com/industry/indl-goods/svs/construction/auction-looms-large-over-debt-ridden-gvk-group/articleshow/57564981.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

[44] http://www.afr.com/business/mining/coal/wicet-deeper-in-the-red-as-net-liabilities-blow-out-to-over-1b-20161130-gt1eu3

Coal terminals at Hay Point and Dalrymple Bay have been operating much closer to capacity than Abbot Point, so would be unable to service further Galilee projects even if a rail link were established (refer Annexure III).

As such, absent a dramatic improvement in thermal coal market dynamics, there is little scope for any other project beyond Carmichael to proceed. To say this loan is providing a multi-user rail facility is misleading. Even in the highly unlikely event that any other Galilee mining projects were able to proceed, there would be no port capacity to export such product within the next decade at least. More likely, with the global seaborne market for thermal coal in structural decline due to accelerating technology change and the risks of investing in the industry ever higher, it is IEEFA's view that there will never be any port capacity in Queensland through which further Galilee mining proposals could export their coal.

The Carmichael Rail proposal will not fulfill the preference for multi-user infrastructure investments. Instead, any loan from NAIF to the proposal be for an Adani-owned rail link between the Carmichael mine and Abbot Point, both of which are also ultimately owned by the Adani family through Adani Enterprises and Adani Ports, respectively.

With the optionality of railing to other North Queensland ports removed and competition inhibited by use of a different rail gauge, which would make it incompatible with the existing Queensland network, any NAIF loan to the Carmichael Rail proposal would lock in a monopoly mine, rail and port operation for Adani, a private company based overseas.

Recommendation:

The preference for multi-user infrastructure should be reflected in NAIF's prioritization of projects for financing. Projects such as the Carmichael rail proposal, which are clearly single-user, should be deprioritized and held to a greater net public benefit scrutiny.

Annexure I

Adani's "Pit-to-Plug" Strategy Is Fraying at Both Ends

Adani has long argued that the Carmichael coal proposal in the Galilee is a key part of its "integrated pit-to-plug strategy."[45] The logic Adani has provided is that the traded seaborne thermal coal price is irrelevant to the commercial viability of Carmichael because the coal would be used within the Adani family group of companies, so the venture needs to be viewed in the context of the overall profitability of the pit-to-plug strategy and of the group as a whole.

With the forward price of thermal coal back down at US$67/t,[46] IEEFA estimates Carmichael is both unviable[47] and (absent NAIF) unbankable, so this integrated strategy becomes even more important. However, Adani Power has reported that its core asset, the US$5bn 4.6GW 100% import coal fired power plant at Mundra, is no long viable.[48] In IEEFA's view, any decision to walk away from Carmichael would require a A$1.4bn write-off for Adani Enterprises (AEL), a very unpalatable outcome for Adani Group bankers owed a collective US$15bn, particularly if Adani Power (APL) were forced to also take a US$1-2bn write-down on Mundra, coming on the back of the large net loss just reported.

Adani Power's 2016/17 net loss was US$954m, reflecting the implications of the India Supreme Court ruling that the Mundra power plant's contracts to supply electricity were valid, notwithstanding the entirely predictable rising cost of imported coal. APL's result briefing included the statement that APL would undertake negotiations with the government over allocation linkages that "will allow us (APL Mundra) to access domestic coal." Nomura[49] has confirmed this Shakti auction proposal could involve domestic coal linkages for Mundra.

Also telling is that APL's average tariff realisation was Rs3.85/kWh, well above the cost of new solar down 30% year-on-year (yoy) to the recent record low of Rs2.44/kWh. Huge financial leverage adds to significant downward electricity tariff pressures.

The Indian press has reported that a corporate restructuring is the prelude to the potential sale of a 51% stake in Adani Power (Mundra) Ltd to the Gujarat government.[50] It is hard to see a scenario where the Gujarat government would not then seek a domestic coal supply deal with Coal India Ltd to lower fuel costs and restore profitability. Adani Mundra has Rs201bn (US$3.1bn) debt attached to it. Costing US$5bn to build, APL reports the plant is just covering its financing costs, and as such IEEFA estimates a US$2bn write-down is justified, but that this would be problematic as it would more than wipe out APL's US$464m book value of equity.

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[45] http://www.livemint.com/Companies/0v3GPxrwuJA6gebfOMy7iN/We-aspire-to-be-world-leaders-with-our-integrated-pittoplu.html
[46] https://www.barchart.com/futures/quotes/LQ*0/all-futures
[47] http://ieefa.org/ieefa-update-increasingly-cursed-australian-coal-project/
[48] http://energy.economictimes.indiatimes.com/news/power/gujarat-writes-to-centre-over-electricity-crisis-as-adani-says-mundra-project-becoming-unviable/58603194
[49] http://www.financialexpress.com/industry/adani-power-rated-reduce-by-nomura-says-compensatory-tariff-write-off-hits-net-worth-in-q4/701372/
[50] http://economictimes.indiatimes.com/industry/energy/power/adani-power-urges-gujarat-government-to-bail-out-mundra-power-plant/articleshow/59008598.cms

India Energy Minister Piyush Goyal has repeatedly reiterated his target for India to cease thermal coal imports this decade. NTPC Ltd has reduced its coal imports from 16Mtpa in FY2015 to just 1Mtpa in FY2017. Goyal targets for Public Sector Undertakings or PSUs to cut imports to zero in FY2018.[51] And following the peak of coal imports at 212Mt in FY2015, a steady decline has continued. The month of May 2017 saw imports fall 6% year-on-year to 18.15Mt.[52]

The Indian government's clear policy drive to diversify the electricity grid into less emissions intensive generation combines with the rapid renewable energy deflation to materially undermine the viability of coal fired power generation. Reports highlight $15bn of coal power plants for sale with no buyers[53]. Thermal power sector financial distress in the Indian banking sector is a major obstacle to sustainable growth in India. This pressure was clearly evident in the 95% year-on-year decline in State Bank of India (SBI)'s 2016/17 consolidated results due to a trebling of bad debt provisions. This further undermines the Adani group's ability to get SBI to stump up its 2013 announcement of a $1bn Adani Australia loan commitment.

Adani has continued to push out the timetable, repeatedly giving one excuse after another to delay a decision. First coal was due 2014/5, but now first coal is due at the earliest by 2021, if ever. It was only last December 2016 that Adani said a "Financial Investment Decision" (FID) was due March 2017.[54] Two months overdue on its latest timetable, in May 2017 Adani then announced it would delay its FID because the Queensland Government was refusing to grant a five year royalty holiday, a taxpayer subsidy estimated at $370m.In June 2017 AEL announced it had "green lighted" its FID, but in India AEL reported this decision just related to "*certain internal budget approvals for pre-construction activities relating to Carmichael ...*"[55]

AEL then said that with a funding shortfall, progress was now dependent on the $1bn NAIF subsidy and the timeline for the Financial Close had been pushed out to March 2018[56], citing delays on the NAIF decision till the end of 2017, possibly arising due to the reputational risk issues that have emerged[57]. As recently as May 2017 Adani had talked about financing being in place by June 2017.

IEEFA suggests Financial Close will be very difficult to secure given the financial leverage-on-leverage nature of the Adani Family group, with margin loans on the promoter's shareholdings in each of the four listed entities, which in turn all have significant financial leverage. Additionally, the off-balance sheet Adani Abbot Point Coal Terminal has extensive borrowings. Financial Close is also likely to prove elusive while coal import invoice fraud allegations[58] by the Indian Government's CBI remain outstanding. Billion dollar write-downs concurrently at both AEL and APL would also be problematic for Adani bankers.

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[51] http://www.livemint.com/Industry/vwT7Kru9jsF0dUEDtLKOrL/Govt-plans-to-cut-coal-imports-for-power-PSUs-to-zero-in-FY1.html

[52] http://energy.economictimes.indiatimes.com/news/coal/coal-imports-dip-6-in-may-on-weak-demand-from-power-sector/59062686

[53] https://qz.com/1000602/15-billion-worth-of-coal-power-plants-are-on-sale-in-india-but-nobody-wants-to-buy-them/

[54] http://www.livemint.com/Companies/0v3GPxrwuJA6gebfOMy7iN/We-aspire-to-be-world-leaders-with-our-integrated-pittoplu.html

[55] Adani Enterprises disclosure to BSE Stock Exchange, 24th May 2017

[56] https://www.bloomberg.com/news/articles/2017-06-06/india-s-adani-approves-controversial-coal-project-in-australia

[57] http://reneweconomy.com.au/reputation-clause-may-scupper-government-loan-deal-for-adani-77287/

[58] https://thewire.in/144999/modi-cbi-adani-ambani-ndtv/

Annexure II

Going Nowhere: Status of Galilee Basin Proposals

The Adani Carmichael Mine and Rail project has been said to be a potential enabler for the development of up to 320Mtpa of new thermal export coal capacity, a long-term prospect that would expand global export supply by 30% and dramatically depress the global price received for Australia's third largest export source.

However, it is very telling that the only proponent even remotely talking about progressing their Galilee tenement is Adani Mining.

Owner	Project	EIS Status	Orignial targeted output (Mtpa)	Status update
Adani Group (India)	Carmichael Coal (1)	Approved with conditions	60	In need of finance, viable rail link and port capacity
GVK Coal (India)	Alpha Alpha West Kevin's Corner	Approved with conditions Pre EIS Approved with conditions	30 24 30	Having defaulted on debt repayments, GVK faces threat of assets being auctioned off. Aurizon has written-off associated rail costs
Waratah Coal	China First	Approved with conditions	40	Attempt to offload to Adani in January 2016 failed
(Clive Palmer)	Alpha North	Pre EIS	40	Timing of EIS preparation not indicated
AMCI Group & Bandanna Energy (2)	South Galilee Coal	Approved with conditions	14	Dependent on rail and port developments. Bandanna now in administration
Macmines Austasia (3)	China Stone	Additional information for the EIS being prepared by proponent	45	3/2/17: new project declaration lapse date of 10 July 2017
Vale	Degulla	Pre EIS	30	For sale since June 2013
Resolve Coal Ltd	Hyde Park Coal	Pre EIS	7	Pre-feasability study due by Q1 2017
Total for Galilee Basin			**320**	

(1) Initially targetted as 60Mtpa, now likely to initially be 25Mtpa

(2) An initial phase, Epsilon, is a small scale open cut mine (3 Mtpa) which would utilise the existing Port of Gladstone via the existing Aurizon railway network

(3) Owned by the private Chinese family business, the Meijin Energy Group

Alpha, Alpha West and Kevin's Corner: GVK is the proponent behind these three major Galilee proposals. However, GVK remains mired in financial distress in India, with ongoing losses being reported since 2012 and a bank syndicate undertaking a forced auction of its core assets after repayment defaults[59]. Aurizon wrote off its investment in a rail link for GVK's mines in the last financial year.[60]

In its most recent annual financial results the company reported a net loss for the year of US$209 million after a crippling interest expense of US$293 million. The company managed to reduce its net debt to US$1.9 billion during the year partially because it has begun to sell off

[59] http://economictimes.indiatimes.com/industry/indl-goods/svs/construction/auction-looms-large-over-debt-ridden-gvk-group/articleshow/57564981.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

[60] Aurizon Limited (2016) Half year report for the period ending 31st December 2015. Available from: http://www.aurizon.com.au/investors/asx-announcements#

assets in order to pay down debt. However, GVK's net debt to equity ratio is still 11:1 times (extremely high, highlighting that the company is still battling with massive debts).

GVK's auditors were not impressed. As well as qualifying their audit opinion, they draw attention to GVK's losses, the fact that current liabilities exceed current assets and that GVK has defaulted on loan and interest payments. They concluded that these conditions "cast significant doubt about the [GVK] Groups ability to continue as a going concern".

With a share price of Rs 7.55, the market value of the company is just US$185 million (down more than 50% over the last three years).

As a result, in IEEFA's view GVK has zero capacity to invest in long dated greenfield, speculative coal mine developments and these projects remain stranded.

Waratah Coal: A wholly owned subsidiary of Mineralogy Pty Ltd, Waratah Coal has made little noticeable advance in the last decade. Waratah Coal was subject to a very ambitious and high profile initial public offering proposal for a US$3.6bn Hong Kong listing, but this was pulled in mid-2011. The Environmental Impact Statement (EIS) was lodged in 2011 and approved in 2013, but with no subsequent development evident following the collapse in thermal coal prices.

In the last year the proponent of this proposal has otherwise focused on a range of issues, including: the liquidation of Queensland Nickel in April 2016; the April 2017 announcement of the disbanding of the Palmer United Party (PUP) and cancellation of its registration as a federal political party with the Australian Electoral Commission[61]; the extreme volatility / generally downward trend in iron ore prices; and royalty disputes and legal battles with its West Australian iron ore project partner CITIC.[62] While a Supplementary Environmental Impact Statement (SEIS) was released in April 2013 and a draft Environmental Authority for the Galilee Coal Project was awarded at the end of 2015, IEEFA has seen little if any material progress on this project.

Degulla: Vale SA of Brazil's Degulla deposit (to the north of Waratah Coal and Carmichael) was reported as being put on the market in 2013, with no market interest disclosed since. The project is not listed by the Queensland Government's Department of State Development.

Hyde Park: Resolve Coal Pty Ltd (Managing Director and Principal Geologist, Gordon Saul) has proposed a 7Mtpa coal project at Hyde Park in the north of the Galilee. The corporate website[63] references a rail and port Memorandum of Understanding with Adani Mining, and an application to the NAIF in September 2016 for infrastructure funding assistance, and had previously reported a plan to lodge a pre-feasibility study by June 2014, then deferred to 1Q2017. However, as of July 2017 this appears to be still in preparation. IEEFA would note the Hyde Park resource is reported to have a materially higher energy and lower ash content (at 5,600kcal NAR, 11% ash) and lower strip ratio than the Carmichael proposal. However, with Adani's downsized project removing any medium term plans for T0, this project would appear to be entirely contingent on Adani undertaking a stage II expansion at some future date.

[61] http://www.abc.net.au/news/2017-04-19/clive-palmer-disbands-palmer-united-party/8452760
[62] http://www.theaustralian.com.au/business/companies/billionaire-clive-palmer-down-to-his-last-2m/news-story/6c89cec79c8a22f8d434280b00fa9044
[63] https://www.hydeparkcoal.com.au/project

South Galilee Coal Project: The AMCI Group was founded in 1986 by Hans J. Mende and Fritz R. Kundrun, who equally share 100% of AMCI's equity.[64] Initially a coal and metals sourcing and trading company, AMCI has expanded to embrace a wide range of natural resources and service offerings to secure the raw material needs of global steel and power industries, including a strategic 12% stake in ASX-listed Whitehaven Coal Ltd. AMCI has long held a stake in the South Galilee Coal Project (SGCP).

AMCI's joint venture partner in the SGCP proposal was previously ASX listed Bandanna Energy Ltd, which went into administration and then liquidation in September 2014.

In July 2015, the SGCP received Commonwealth approval under the Environmental Protection and Biodiversity Act 1999 approval following the approval of its EIS in December 2014. The SGCP corporate website reports that an initial phase (Epsilon - a small scale open cut mine (3 Mtpa)) could utilise the existing Port of Gladstone via the existing small scale Aurizon railway network, but that the full development plan will be undertaken if and when infrastructure is clarified.[65] SGCP is located more than 150km south of Carmichael. Absent a strong and sustained thermal coal price recovery and development of the GVK or Waratah tenements near the town of Alpha, this proposal is most likely to remain stranded.

China Stone: MacMines Austasia Pty Ltd was registered and established in Queensland, in July 1999 and holds the potentially huge 38Mtpa China Stone coal proposal in the north of the Galilee basin.[66] In July 2011 MacMines announced a long term coal offtake agreement for 30Mtpa with China Huaneng Group (one of largest Chinese state owned enterprises operating in the power generation sector). MacMines submitted a draft EIS in September 2015, but the corporate website provides no subsequent updates. First coal was expected by 2014, but progress appears to have been stalled for almost a decade. In February 2017 the Queensland Coordinator-General (CG) stated a new project declaration lapse date of 10 July 2017 (albeit this is the third lapse date announced by the Queensland CG).[67]

MacMines was acquired in 2007 by Meijin Energy Group of Shanxi Province, China – a business that reportedly owned by Chinese billionaire Yao Junliang.[68] Founded in 1984, Meijin reports coking coal capacity of 6Mtpa.[69] Little has been reported on this private Chinese company, although ASIC reports Australia Meijin Energy Group P/L was voluntarily deregistered.[70]

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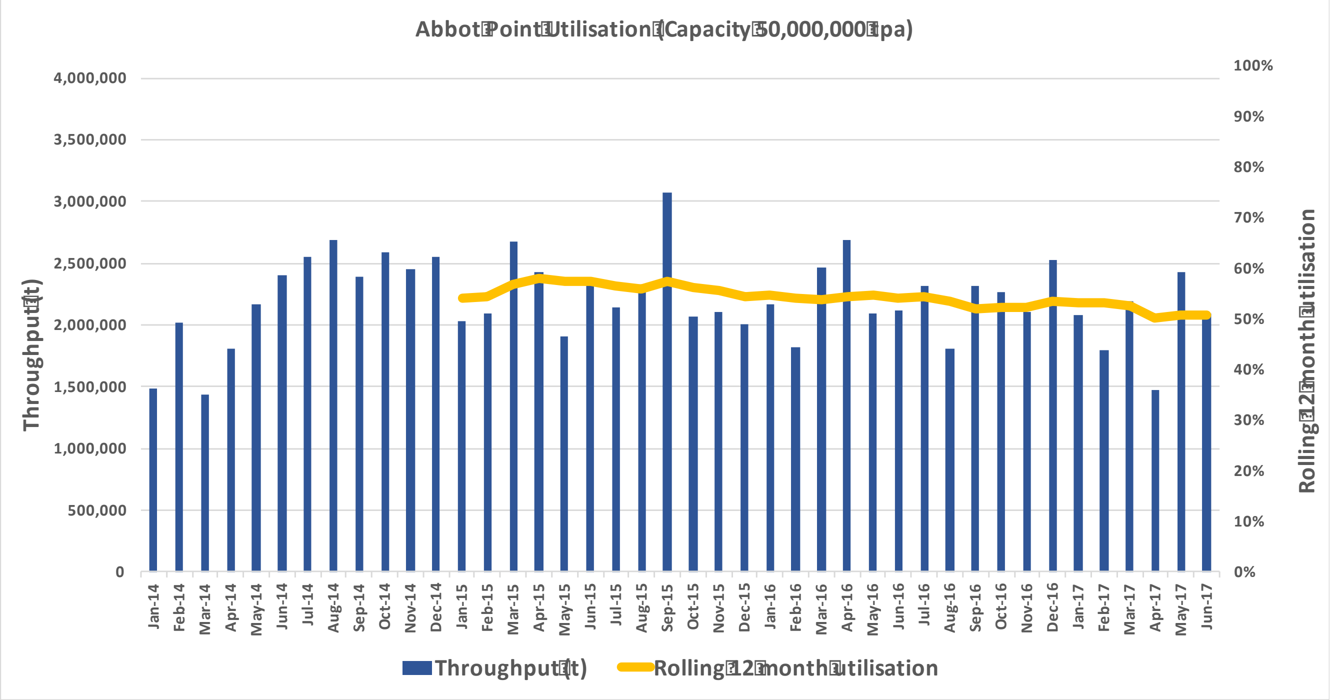
64 http://amcigroup.com
65 http://www.southgalilee.com.au/ProjectUpdates.aspx
66 http://www.macmines.com/
67 http://www.statedevelopment.qld.gov.au/assessments-and-approvals/china-stone-coal-project.html
68 http://www.macmines.com/english/news/Shownews.asp?ID=651
69 http://www.macmines.com/english/overview/overview.asp?ID=637
70 https://insolvencynotices.asic.gov.au/browsesearch-notices/notice-details/AUSTRALIA-MEIJIN-ENERGY-GROUP-PTY-LTD-152816432/42d2a9bb-9e92-485e-b7c7-5c3527285206

Annexure III

Queensland Coal Terminal Capacity

Utilisation of Abbot Point Coal Terminal has been gradually dropping and now averages just over 50%. With a capacity of 50 million tonnes per annum (Mtpa), this leaves spare capacity of around 25Mtpa available which could potentially be used to export coal from the Carmichael project. However, with it abundantly clear that Adani is struggling to find finance for its coal and rail projects, the prospect of Abbot Point capacity being expanded to serve further stages of Carmichael or any other Galilee Basin mining proposals seems increasingly remote.

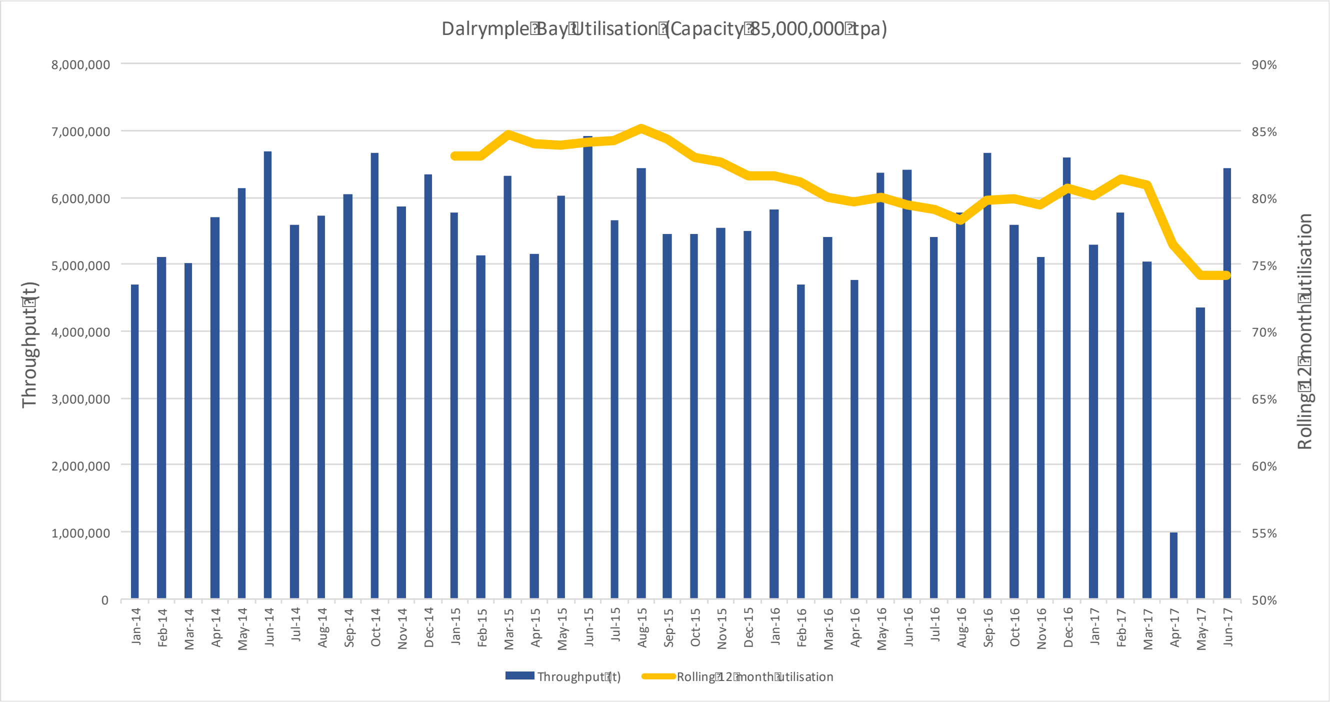
Abbot Point Capacity Utilisation



Source: North Queensland Bulk Ports Corporation

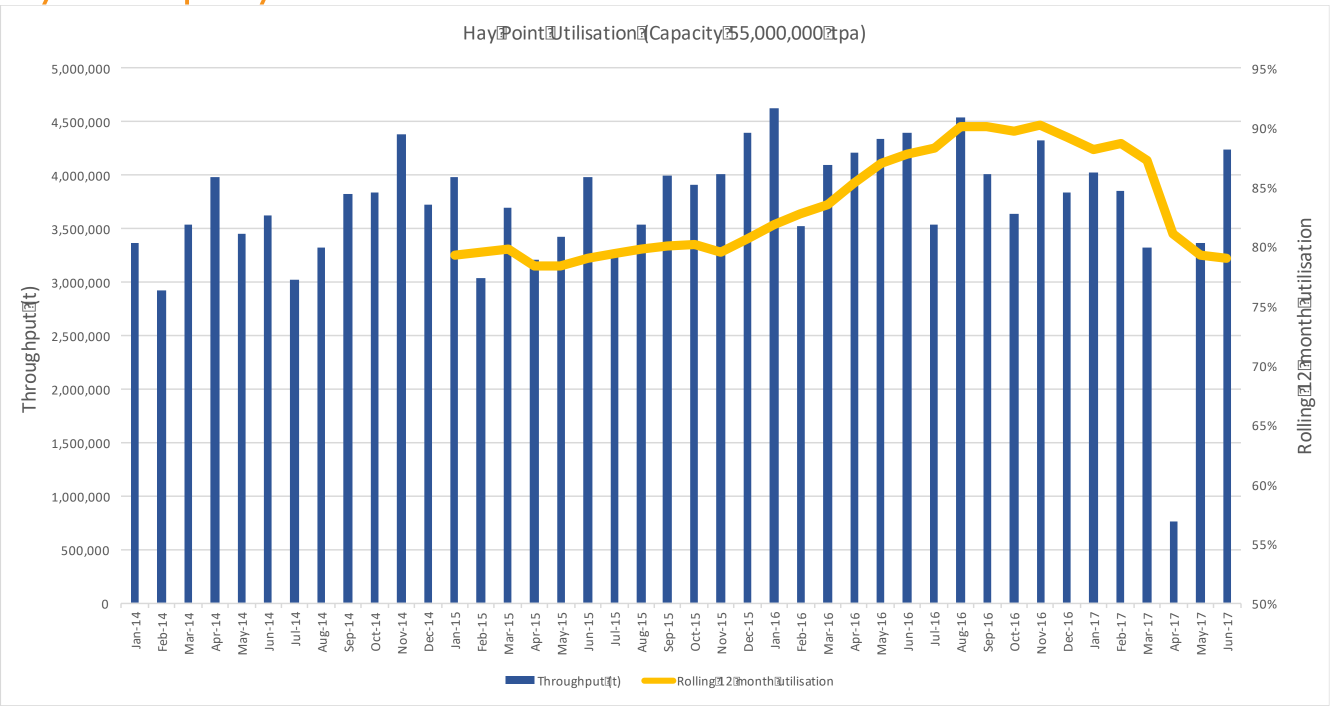
The other North Queensland coal terminals have been running at much higher utilisation rates (Dalrymple Bay 80-85%, Hay Point 85-90%) until the impact of Cyclone Debbie pulled down the rolling 12-month average down in April of this year. This is only a temporary impact however and utilisations rates had recovered by June. This means that there will be little or no spare capacity at Hay Point and Dalrymple Bay, nor rail connectivity proposed, to service the output of further Galilee Basin mining projects.

Dalrymple Bay Capacity Utilisation



Source: North Queensland Bulk Ports Corporation

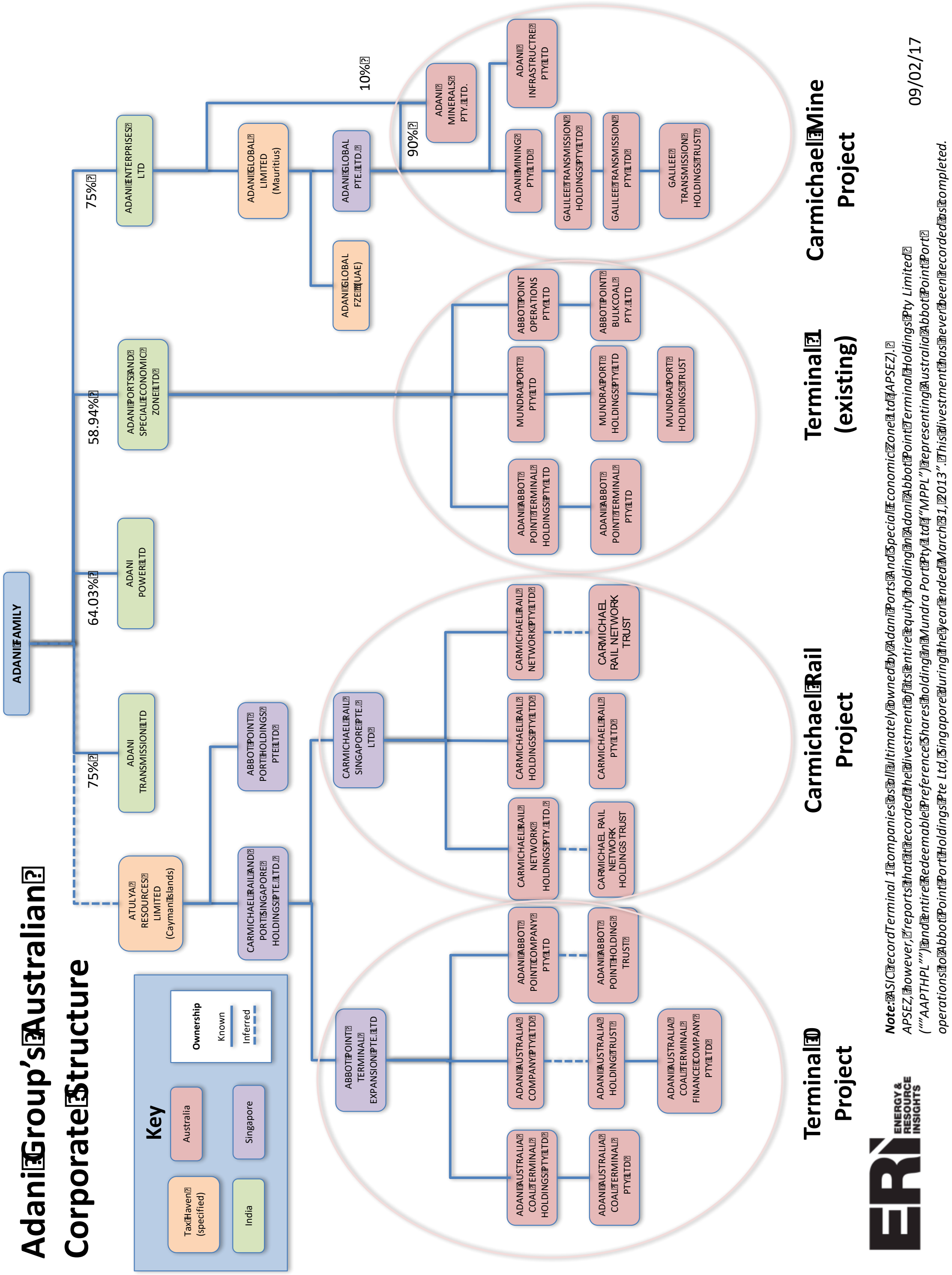
Hay Point Capacity Utilisation



Source: North Queensland Bulk Ports Corporation

Annexure IV

Adani's Australian Group Structure



Institute for Energy Economics and Financial Analysis

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

More can be found at www.ieefa.org.

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