GEODYNAMICS
LIMITED

ABN 55 095 006 090

15 October 2008

The Infrastructure Coordinator
Infrastructure Australia
GPO Box 594
Canberra ACT 2601
AUSTRALIA

Dear Infrastructure Coordinator,

RE: Infrastructure Australia Call for Submissions

Geodynamics welcomes the opportunity to provide input to help inform the tasks and agenda of Infrastructure Australia.

Geodynamics is the largest ASX-listed company in Australia whose sole focus is on developing hot fractured rock geothermal energy. The company has been developing its geothermal resource position in the Cooper Basin in South Australia for the past 7 years.

The company is focusing on a technique known as Enhanced Geothermal Systems ('EGS') to tap into and extract the heat contained within granites buried 4 to 5km below the surface of the earth. Geodynamics believes there is in the order of 10,000MW of long term, emission free, baseload generation capacity that can be economically extracted from the company's tenements in the Cooper Basin. Further explanation of the technology and its potential can be provided if required.

Because of this resource potential and the nations desire to reduce its 'carbon footprint', Geodynamics believe it is of 'national significance' for this resource to be developed. A significant impediment to the development of this resource is the lack of transmission infrastructure in the Cooper Basin region to connect this resource to the National Electricity Market ('NEM') and ultimate end users. This issue is likely to be exacerbated by increased congestion in existing transmission networks resulting from the expected development of additional renewable generation, especially in the South West of the NEM.

Geodynamics and the Australian Geothermal Energy Association ('AGEA') are working with various bodies in the private and public sectors at both a state and federal level to develop an optimal solution to this matter.

Please find Geodynamics submission attached.

Regards

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GEODYNAMICS – INFRASTRUCTURE AUSTRALIA SUBMISSION

This submission addresses the issues for discussion as outlined in '*Discussion Paper 1: Australia's Future Infrastructure Requirements'* and as such follows the structure in that paper.

1. What Infrastructure is being considered?

Geodynamics believe that significant electricity transmission infrastructure is required to be constructed, in addition to the existing state based networks, to support the growth in remote renewable generation projects over the next decade. This transmission infrastructure is required to create a high voltage backbone or 'Transmission Super Highway' opening up renewable energy provinces in remote areas and creating a true electricity transmission 'grid' for the National Electricity Market (NEM).

This Transmission Super Highway (TSH), capable of supporting thousands of Megawatts of power, could connect Adelaide with Brisbane and Sydney via a geothermal electricity generation hub in the Cooper Basin. The TSH would be characterised by 'on ramps' along the route for the introduction of remote renewable generation sources such as geothermal, wind and solar thermal. There would also be 'off ramps' along the route to allow access by remote users of power such as country towns, indigenous communities and mining interests. Figure 1 below shows a possible route for a TSH. This figure is illustrative and is not intended to indicate the optimal solution.

Indeed, significant transmission infrastructure of this type would open up both new sources of renewable power generation and new resource provinces previously not considered commercially viable.

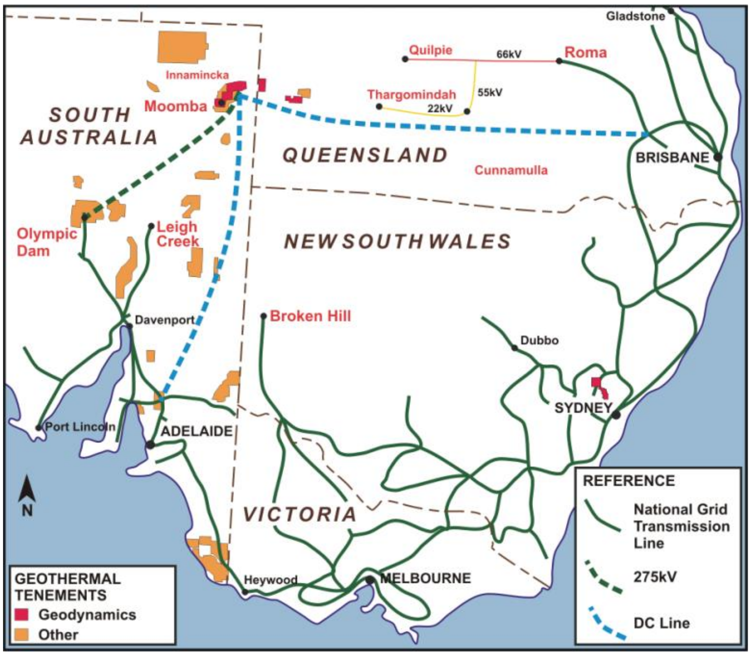

Figure 1. Illustrative line routes for a Transmission Super Highway

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A TSH would improve efficiency in the NEM by linking major load centres with the locations of current traditional and new renewable energy generation capacity. A TSH would also truly unlock the economic potential of the National Electricity Market.

2. Why is this Infrastructure Important?

Geodynamics believe the goals and strategic priorities as set out in the discussion paper are appropriate for considering infrastructure projects of national significance. The company also agrees with the statement that infrastructure does not matter for its own sake; it matters because it can play a fundamental role in determining whether Australia meets its economic, social and environmental goals.

Briefly, the benefits of a TSH include providing a:
- Backbone for the NEM overcoming the limitations in place due to weak interconnection between State networks, and
- Link to the NEM for new remote energy generation capacity from renewable energy resources including wind, solar thermal and geothermal.

Meeting Goals

Geodynamics believes that the TSH concept is vital to meet the stated goal of ‘Environmental sustainability and reduced greenhouse gas emissions’ and aligns with the strategic priority of ‘Reducing greenhouse gas emissions’.

For Australia to meet its long term emission reduction levels and renewable energy targets, significant proportions of future generation production will need to come from renewable sources. There is no doubt that ‘clean-coal’ technologies using carbon capture and storage techniques will also have a major role in the future generation mix, but meeting the challenge will require a combination of technologies, to maximise the chances of success of attaining renewable energy and carbon emission reduction objectives..

Relieve Congestion

There are significant expected renewable resources from wind, geothermal and solar sources. The location of these abundant renewable sources tends to be remote from population centres and the existing transmission networks.

Good wind resources tend to occur in the South West of the NEM connected grid, the predominant geothermal resources have been identified in the Cooper Basin in South Australia and the best solar resources occur in a band across the centre of the country encompassing many desert and remote areas and require a large above ground footprint.

Any of these resources producing at scale, connecting into the existing transmission grid at the nearest point, would create many problems with the network and effective dispatch of the market. The problems would arise because a significant amount of generation will be coming on line in South Australia and South Australia does not have the demand to utilise this generation. There would also likely be significant levels of constraints and congestion if significantly greater levels of generation capacity were brought on line and connected into South Australia. Significant augmentation of the existing network would be required at considerable cost. This augmentation will be required to push the produced electricity from one end of the

NEM (Port Augusta, South Australia) to the other (Cairns, Queensland) and into the centres of fastest increasing electricity demand including Sydney.

It is also questionable as to whether some of the required augmentation would actually be feasible or desirable, such as stringing more transmission lines and sighting more towers across the Snowy Mountains to complement the existing infrastructure. Rather, an alternative inland route is likely to have fewer visual, amenity, environmental and other impacts along the vast majority of a chosen route.

The concept of the TSH would alleviate the need for this deep augmentation of the existing network and allow the development and deployment of these renewable energy sources at scale to occur. An added benefit would be to create a true NEM wide grid, increasing system stability and competition.

Renewable Energy Development

There is the potential for many thousands of Megawatts of renewable generation to be produced and supplied into the NEM. Geodynamics alone, believes its Cooper Basin resource can generate up to 10,000MW of long term emission free, baseload power. However, many of the potential developments alone cannot afford or support the construction of high voltage transmission infrastructure to connect into the NEM. With a TSH, the transmission network would run through these remote renewable energy provinces and if they ran within 100km of a development (as opposed to 600km) the economics of these developments, such as in wind, solar thermal and geothermal become much stronger.

These projects will not be developed without significant transmission backbone infrastructure being constructed to support their route to market.

Economies of Scale

There is also the need to consider implications of size and economies of scale when evaluating the infrastructure required for developments of this potential size. Individual projects of 100MW to 500MW could consider building and owning individual network connections over many 100's of KM. From an economic efficiency perspective, rather than having 10 small power projects with their own transmission lines, it would be more optimal to have large trunk lines transmitting power to major load centres than having piecemeal additions to lines which would result in duplication, increased cost and limited redundancy or expansion capability. Small projects become more economically viable when able to connect into a larger network.

True Electricity Grid

The current operation of the NEM and the transmission network, has the extremities of the NEM exposed to events that could effectively 'island' regions and disconnect them from the rest of the market. These extremities are unable to benefit fully from the market mechanism due to the existence of multiple constraints and interconnectors between the various states, so that at present South Australia cannot truly access the low cost generation being produced in Queensland, due to intra-regional and inter-regional constraints driving load flows across the NEM.

Indeed, the operators of the market, NEMMCO, recognise this fact and undertake a significant amount of planning, and incorporate a significant amount of redundancy into the market to cope with these islanding events between states.

The introduction of a TSH would effectively ‘close the loop’ between the extremities of the NEM providing additional system security benefits, eliminating some of the built in redundancy and allowing greater competition and transparency across the NEM. The full effects of these benefits are not examined in this submission, but warrant more detailed consideration.

3. What are the Current Problems?

Cost

Connection into the NEM from remote generation locations is very expensive. Physical line losses are significant over long distances unless large capacity, high voltage lines are constructed.

Significant transmission infrastructure of the nature proposed for the TSH is a multi-billion dollar investment. Large capacity, long distance transmission lines are very expensive. As such it is extremely difficult for individual renewable energy project proponents to consider making such an investment in their own right.

Utilisation and Ramp Up

There is also an issue of capacity utilisation and ramp up of infrastructure of this nature. To achieve appropriate economies of scale once fully utilised, and to reduce physical line losses, the general rule is ‘bigger is better’ in terms of voltage and line capacity etc… However most renewable energy projects are modular or fairly small in nature. There is a very low likelihood of a single renewable energy power plant being brought on-line with a capacity of 750MW as was the case with Kogan Creek in Queensland. The largest wind turbines are in the order of 3-5MW and geothermal power plants in the Cooper Basin will be developed in 50MW module sizes. The largest solar thermal plant in the world is located in the United States and has a generation capacity of 64MW with most plants being much smaller in capacity.

It is therefore unlikely that a single project proponent would consider building a 1,000km transmission line with 1,000MW capacity. Even if many proponents were to club together to form a consortium to build the required line, it would be extremely difficult to align the construction of the power generation projects to all coincide with the final commissioning of the transmission line. Therefore, there is likely to be a period of underutilisation which may be significant before an optimal line (in terms of physical losses and economies of scale) would be adequately utilised.

Indeed it is unlikely that any proponent would wish to be a first mover due to a range of possible disadvantages including the risk of being diverted from core power generation business into a transmission maintenance function, the risk of coming under the control of external regulation as a regulated asset or other regulatory outcomes resulting in redundancy of the asset. Essentially all proponents would prefer another first mover to take on these and other risks, with the result being no development.

Existing Network Structure

The above issues are not unique to the electricity industry. However there are some characteristics of the electricity industry that are unique. The current National

Electricity Market (NEM) structure was created from multiple existing state based electricity commissions and networks.

Each state had its own radial transmission network from power stations into load centres. These were generally characterised by very strong robust networks around the metropolitan areas which generally got weaker the further away from the metro centres the network extended. This generally meant that a town near a state border was connected to the state grid with a ‘skinny’ low capacity transmission line. A lot of focus was placed on ensuring the stability and robustness of the metropolitan grid with limited focus on the remote areas. This led to the metro area networks being very strong and the extremities of the network being very weak from a network connection point of view. There was very limited interstate power flow.

When the NEM was introduced, there was a requirement for the states to be connected (QLD, NSW, VIC, SA and finally TAS) and this was undertaken generally between the closest connection points in the adjoining states. However, many of these connection points were also the weakest points in the states own network. A number of interconnectors were built and a significant amount of augmentation was undertaken within the existing networks to allow these interconnectors to flow. There has been and there will always be an amount of congestion and constraint within the existing networks due to the way they were conceived (state based focus) and then ultimately modified (interconnected NEM focus). The cost of these interconnectors and the required augmentation has all ultimately formed part of the regulated asset bases of the various state based Transmission Network Service Providers (TNSPs)

The concept of significant remote generation (in the orders of 100’s of km) connecting to the nearest point in the respective states transmission network is akin to the interconnector issues at the commencement of the NEM. Connection may occur, but it will change the characteristics (flows, congestion, constraints) of the immediate network and require significant augmentation of the existing network to accommodate this new dynamic.

Through a significant infrastructure development from a mix of public and private sources, a TSH would have the benefits of improved and more efficient load flows as well as unlocking the potential of Australian renewable energy resources and enabling additional electricity from clean sources to be brought to market.

Current Regulatory Test

The NEM is operated under the National Electricity Rules. TNSPs derive income from their transmission networks as defined under the rules and have this income set by the market regulator on a periodic basis. Their income is basically a specified return on the value of their regulated asset base, as determined by the market regulator.

To have new infrastructure elements included as part of the regulated asset base, the TNSP must undertake a lengthy process and prove to the regulator that the new element passes the ‘Regulatory Test’.

Under the current test, elements can be included in the asset base if they satisfy either the ‘reliability limb’ (where the element is needed to ensure the continued reliability of the network) or the ‘market benefits limb’ (where the market benefits of the element outweigh the cost of building it). The current Regulatory Test is being modified to amalgamate the two limbs into one umbrella test.

Under the current rules, new generators are required to pay for connection into the transmission network. This concept makes sense with the traditional power generation model, where generators can be located reasonably close to the existing transmission network and fuel can be transported to the generation site (ie coal via trucks or conveyers and gas via pipelines), the decision on location predominantly being one of economic optimisation.

In the situation being faced in the near future with the imperative / requirement for large scale renewable and low emission generation, the past model is not able to be replicated into the future as the fuel source for these generation technologies is location specific and cannot be transported. As such, under the current rules it would appear that a transmission line from the Cooper Basin connecting into the Electranet transmission network north of Adelaide would be classified as a connection asset as opposed to a network asset and could not therefore be considered under the Regulatory Test as forming part of the regulated asset base.

It is however, unclear, as to the treatment of a TSH concept where the asset would / should be used by many project proponents to export renewable power (from a multitude of projects and technologies) from the remote area into metropolitan centres. If the TSH were to fall within the boundaries of the Regulatory Test it would be feasible that an existing TNSP could mount the argument that the TSH satisfies the market benefits limb of the Regulatory Test. This would enable the cost of the TSH to form part of the regulated asset base of the TNSP and to be recovered form the market as a whole. As proposed later in this submission, Geodynamics believes this uncertainty should be removed and could be achieved through a review and amendment of the existing rules.

4. What are the Impacts of These Problems?

No Investment

If these issues are not resolved then the nation could be faced with a situation where large scale renewable energy in remote areas does not eventuate. This is due to the relatively small size of most renewable projects and the inability to justify the construction of large scale transmission infrastructure from individual projects.

It is very unlikely that individual projects will proceed without guaranteed transmission infrastructure to market the electricity generated, and it is unlikely that merchant operators will commit to large scale infrastructure development without major projects already operating to utilise the capacity.

This is a classic Catch-22 situation or market failure, where without government intervention, the large scale remote renewable generation will not eventuate.

Deferred Investment

If these issues are not resolved in a timely manner then the deployment of large scale renewables in remote areas and the development and deployment of technologies such as geothermal and solar thermal will be delayed.

Large scale transmission infrastructure as envisaged in the TSH concept takes many years to develop. Even if the project were started in earnest today it would likely be at least ten years before it would be completed.

As any TSH is unlikely to commence in earnest before 2010, there is a significant risk that any delays in the project would result in Australia missing its proposed renewable energy targets.

There is also the risk that in the absence of a timely optimal solution being developed for the long term, individual larger scale projects will develop individual project specific solutions for transmission that are sub-optimal (see below for further discussion). This could result in smaller projects being unable to get off the ground at all due to not being able to access transmission infrastructure.

Sub-Optimal Solutions

As discussed above, in the absence of a timely optimal solution being developed for long term large scale remote renewable generation, individual project proponents will develop solutions to connect into the grid.

These individual solutions will end up being sub-optimal for a number of reasons, not the least of which because they will not take into account the bigger picture need for large scale infrastructure such as the TSH.

They will be built without sufficient capacity for others to utilise the line. They may not take into account the knock on effects a particular connection will have on the rest of the network and the subsequent augmentation requirements. They may connect into a point which is not optimal for the system as a whole. They will certainly also be sub-optimal from a physical loss perspective.

There is also the requirement to consider open access regimes and the fact that a first mover project proponent will bear all the costs of developing a transmission solution for a particular project and may be forced to allow future projects to utilise the infrastructure without fully compensating that first mover.

5. How did the Problem come about?

Heightened Awareness of Climate Change

In recent years, there has been a major change in public perception around climate change issues and the requirement to take action to address this issue. As a result of this change, there is a growing need for new renewable generation sources to supply power to satisfy the additional future load growth, and to reduce the emissions intensity of the electricity generation sector as a whole.

This push is evidenced by the introduction of policy measures such as the Mandatory Renewable Energy Target (MRET) (and the proposed 5 fold expansion of that target) and the proposed introduction of a Carbon Pollution Reduction Scheme (CPRS).

For both of these policy measures to be successful in achieving their stated goals requires a significant proportion of electricity generation in future to come from renewable sources. As discussed above large scale renewable energy generation will come from provinces not traditionally observed in the NEM and will require substantial remote area generation capacity to be brought online.

Existing Transmission Network Insufficient

Because of this heightened awareness and the need to act, significant new transmission infrastructure to cope with these wholesale changes needs to be built.

When the NEM was formed, there were significant state based transmission networks, predominantly focussed around fossil fuelled generators, already in place. This led to the legislation surrounding the NEM transmission network, and extensions to that network, reflecting “what was there at the time” and incremental modifications to that network.

The current rules do not adequately consider the situation that the nation is faced with at present, which will require wholesale large scale modifications to the transmission network, to cope with the growth of large scale remote renewable power generation.

Expansion of the Network

There is still a mindset that prevails, driven by the current NEM Rules, whereby new generators must pay for their connection to the existing network regardless of the circumstances faced or the policy situation being imposed.

Large scale, remote, renewable power generation needs significant transmission infrastructure to be built which isn’t “connecting” to the existing grid but actually “expanding” the existing grid. As such, Geodynamics believe expansion should be considered in light of the benefits to the market, and not simply a charge to be imposed for these new generators to connect into the existing grid. As discussed above, if this mindset continues, solutions will be introduced that are piecemeal and sub-optimal with some projects not able to succeed at all.

Following the construction of the TSH, Geodynamics firmly believe that individual generators should pay for connection to the proposed TSH as generators currently do under the existing NEM Rules.

6. How might these problems be addressed?

Appropriate Level of Government Support and Attention

In short, Geodynamics believe that the construction of significant, large scale, remote area transmission infrastructure is a project of national significance and as such should receive an appropriate level of government support and attention at both the State and Federal level.

This belief is not solely self interest from Geodynamics but is a response to government stated policy objectives regarding the expanded MRET, the proposed introduction of a CPRS, and ultimately the aspirational goals of reducing Australia’s emissions to 60% below 2000 levels by 2050.

Geodynamics truly believe that without appropriate levels of government support and attention for a TSH, there is a real risk of not achieving the outcomes the policy settings aim to achieve.

Long Term Viable Economic Solutions

Assuming that the expanded MRET, the CPRS and the aspirational goals discussed above continue to prevail, TSH infrastructure of the type considered here will be economically viable in the long term.

The large scale, remote area, renewable generation technologies discussed in this submission will play a significant role in enabling Australia to meet its environmental goals, and on a level playing field, are economically viable against existing fossil fuelled technologies.

The question is one of when and how these technologies and individual projects are developed to meet Australia's growing need. As discussed above, it is a Catch-22 situation:

- Australia wants / needs these projects / technologies to develop.
- These projects / developments will not go ahead without the transmission infrastructure being in place to connect to.
- The timing of these projects / developments will not be simultaneous.
- Private sector will not finance the construction of this transmission infrastructure without knowing that it will be significantly utilised in a timely fashion.

This highlights the need for government support and attention in overcoming these roadblocks.

Government Pays

The simplest solution to the problem is one where the Government pays for the construction of the TSH, although this may also be the least palatable as this infrastructure will require a multi-billion dollar investment.

However, once constructed and being utilised (albeit at a low level as projects are developed and brought on-line) the government could charge a pro-rata usage fee to start recouping the investment. This is an approach adopted in the UK, by the government, to encourage the development of offshore and onshore wind farms in remote locations. As the TSH would also be connecting the extremities of the NEM there may also be the option of extracting revenue as a merchant interconnector under the existing rules.

Once being utilised to a suitable level the government would then have the option to sell off the TSH assets (and revenue streams) to an infrastructure fund or superannuation fund type structure. This would be possible as the returns would be fairly stable and the risk fairly low. There could also be the option for the TSH to become a regulated asset in the NEM.

This would tie-up a significant amount of funds for an extended through construction and start up of the TSH and also until utilisation was at a sufficient level.

Changes to the Regulatory Test

As discussed previously, when the NEM Rules were created they did not envisage large scale expansions to the existing transmission network. Therefore situations such as those faced now cannot be adequately accommodated.

A change to the rules to allow these large scale expansions to be considered as part of the regulated asset base of a TNSP would be desirable.

This would allow transmission development proponents to undertake an optimisation process to determine the best structure of a TSH, and compare it against other transmission options, taking into account the potential generation sources and locations, and policy frameworks and outcomes required.

If approved by the regulator, the TSH could be constructed by the TNSP with costs of the TSH being effectively recouped from market customers via transmission use of system (TUOS) charges.

There would also need to be changes to the rules to reflect that the construction of a TSH would be for the benefit of the entire market and not just the states that the TSH serviced. At present, the NEM Rules spread the TUOS cost of regulated assets only across the market customers in the region where the infrastructure is located. This system is adequate when considering an augmentation to relieve an intra-regional constraint, but inequitable when considering transmission system expansions of the nature being considered with the TSH.

The facilitation of this process and change in thinking from state based parochial transmission networks to a NEM wide focus will be enhanced by the proposed introduction of a National Transmission Planner (NTP). The NTP will undertake an annual planning process assessing the needs and requirements of the market from a transmission perspective within a 10 to 20 year planning horizon. The NTP will suggest the initiatives it believes are required to be implemented to keep the NEM operating according to its objectives.

Geodynamics believe the introduction of the NTP is an extremely positive step toward improving the NEM. However, there are still some reservations about the timeframe for the introduction of the NTP and the uncertainty around the mechanisms to ensure the initiatives proposed by the NTP are actually implemented.

Leveraging Government Funds

It is obviously in the public interest if governments are able to leverage additional private sector investment from public sector investment.

Minister Albanese, in announcing support for NSW road projects made the following statements about the role of the Building Australia Fund:

"We see the $20 billion as leveraging much more than $20 billion of infrastructure," he said. "We see it as being able to make possible projects which may not have been viable without Commonwealth support"
"We know there is an economic return from infrastructure investment … There will also have to be an assessment of the social returns and the environmental returns in the context of climate change."
Source: Sydney Morning Herald, 30/09/08

The Treasurer, Wayne Swan, also made the following comments in a speech to the Infrastructure Association of Australia:

"It will help leverage many more billions of dollars in private investment by, for example, providing seed funding for projects that generate social returns above the commercial returns to the private investor."
Source: Speech No.34 Transcript, 09/09/08

An alternative to funding provided purely by government is proposed here, modelled on Export Finance Guarantee arrangements, where a specific purpose low emissions loan guarantee company, wholly owned by government, would be established. This company would facilitate the establishment of major infrastructure to support low emission technologies, by providing loan guarantees to financiers of projects over specific risk factors not able to be managed by traditional lending models. This would provide for detailed decisions on the allocation of support to be taken within a more commercial culture at arm's length from government.

An illustrative outline of how such an arrangement might be configured and managed is contained in Appendix 1. Whilst this outline suggests that the guarantee company could be funded from emissions permit auction proceeds, this could also be possible with funding from the Building Australia Fund.

It is worth noting that this mechanism could equally be used for other infrastructure projects suffering similar characteristics to the TSH proposal, such as bulk CO2 transmission pipelines from generation locations (ie Hunter Valley) to sequestration basins (ie Cooper Basin).

This loan guarantee structure has been adopted extensively in the United States of America to promote the development of renewable, nuclear and clean coal technologies.

APPENDIX 1

Illustrative outline of Low Emission Guarantee Company (LEG Co)

LEG Co would be formed by the Federal Government. It would have a substantial balance sheet, funded by proceeds from the auctioning of permits to emit under the Carbon Pollution Reduction Scheme (CPRS) proposed by the Federal Government.

LEG Co funding would only be a proportion of the total proceeds from the auction process. It is envisaged that the balance would be used to satisfy energy intensive industry requirements and low income households.

LEG Co would then be in a position to provide commercial guarantees to lenders for specific unmanageable risks faced by them and the Low Emission project proponents. This would be similar to the structure of export credit guarantee agencies.

The eligibility of projects to receive LEG Co support would be subject to a number of strict criteria, viz projects:

- Are additional to what the proponent would have undertaken in the absence of the support – as measured by the gap between typical returns required by investors and the project with and without assistance.

- Demonstrate sufficient Australian resource to realistically supply a substantial proportion of Australia's energy needs over the period to 2050, with preference for projects/technologies that can achieve cost effective build out at scale early – the metric could be expressed in GWh (as per the MRET target).

- Have a very low environmental impact overall (including both zero / very low emissions), and be sustainable in the long term in terms of the size of the resource and its ongoing environmental impacts – the metrics here would be both tonnes of CO_2e avoided and air pollution, water draw / pollution, land / biodiversity impacts on a full cycle basis.

- Have a demonstrably realistic chance of commercialisation at scale domestically and internationally - metrics here would a minimum internal rate of return (post government assistance) commensurate with the risk profile.

- Are capable of potentially leveraging a significant multiple of private sector funding – a minimum gearing ratio might be 1:1 but possibly differentiated according major classes of asset.

Every project would be unique and the support provided by LEG Co would be different for each project depending on the various risks being faced, whether they involve low emissions technology directly or facilitating investments (such as transmission augmentation).

In these guarantee structures the project lenders (Finance Co below) will then be in a much better position to provide sufficient levels of debt at commercial rates as they are basically receiving a government guarantee for specific risks that are unable to be assumed by the lenders or the project proponents.

The project proponent will service the debt as normal with the lenders and will pay LEG Co a commercially based fee for providing the specific risk guarantee.

The effect of this structure is to support low emission generation proponents on the road to commercialisation without the need for direct government subsidy. Specific risks can be isolated and borne by the various parties to the project being the Proponent, Lender and LEG Co.

Proposed Scheme Mechanism

Each project will be unique and whilst there will be some similarities / crossovers in the risks being faced this is not a cookie cutter approach with standard agreements and terms. There will undoubtedly be a significant amount of time and effort to draw up these complex risk allocation guarantee structures, but it will lead to a more commercially focused arrangement and will drive significant commercial rigour into the development and negotiation of financing arrangements.

LEG Co would ultimately aim to be self financing, funding its guarantee liabilities through guarantee fees. However, LEG Co's guarantee obligations would be backed by the Federal Government.

The size of the directly funded balance sheet (from the proceeds from the emissions trading scheme) would enable it to potentially leverage the amount of the project guarantees by some multiple and give it the ability to cope with the inevitable failure of a proportion of the projects.

For example, if the expected and actual failure rate was 1 in 5 and the balance sheet of LEG Co was funded by $500 million of proceeds from the emissions trading scheme, LEG Co could expect to guarantee $2.5 billion of project obligations before the Federal Government were required to fund any obligations.

Such mechanisms will allow traditional debt financing approaches to be used to fund projects of a renewable nature where the traditional lending criteria would not otherwise be met (i.e. technology certainty, revenue certainty, low risk, bankability) due to the risk characteristics of the project. This reduces the need for explicit government funding / support.