Jemena Gas Networks (NSW) Ltd

Submission to the 2020 review of the Emissions Reduction Fund

An appropriate citation for this paper is:

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1. How is the ERF performing overall? What parts of the ERF could be improved and how?

The ERF has been successful in achieving short-term low cost emissions reductions at scale with scientifically supported methodologies. However, in order to achieve a low cost and economically productive transition to a lower carbon future it must evolve to enable method innovation, properly take into account risk and incentivise projects that have positive externalities.

1.1 Efficient short term allocation, but to the detriment of long term cost

The crediting of Australian Carbon Credit Units (ACCUs) is currently dominated by land and flaring methods that drives down the value of ACCUs. This enables low cost abatement in the short term but limits the participation of hard-to-abate sectors as the hurdle price for their projects are higher than the current ACCU price. If these sectors do not participate until the ACCU price reaches their hurdle rate they will not adapt, resulting in a higher medium term cost due to long investment horizons and slow rate of transition. Thus, enabling adaptation of these industries now is prudent for minimising the long-term cost of a transition to a lower carbon future, as shown in Figure 1 below.

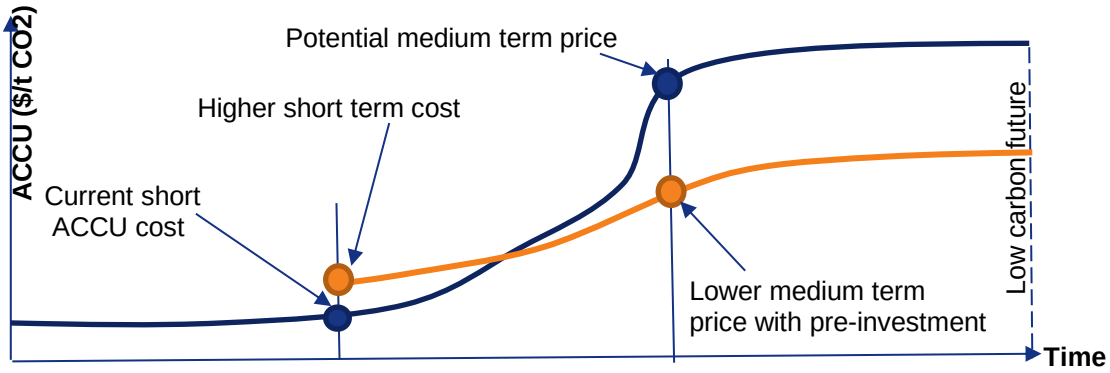

Figure 1 - Long term cost of abatement with an without investment in hard to decarbonise industries

An alternative approach would be to allocate ACCU auctions by method categories to ensure that industrial projects participate. This will maintain the integrity of the auction system to minimise cost and efficiently allocate funds while also decreasing the cost to the fund in the long term.

1.2 Low share of industry abatement that have additional economic benefits

Land and flaring methods that dominate the ERF provide minimal external benefits, such as zero-carbon energy security or regional development, and could actually reduce economic capacity by locking up potentially productive land for 100 years. For example:

- The methane that is flared from landfills reduces its equivalent carbon emissions, however that (bio)methane could be captured and injected into the gas network. Once in the gas network it can be provided to a hard-to-decarbonise industry as a locally produced zero carbon fuel while also destroying the methane in the process.
- ERF vegetation methods (such as avoiding clearing or reforestation) incentivise the locking up of potentially productive land for up to 100 years. Alternatively, this land could be continuously sequestering carbon through energy crops (such as from native grasses) and producing zero carbon fuels that can decarbonise other industries. For example biomethane can be produced from agricultural waste or energy crops then injected into the gas network to be used as a zero-carbon fuel in transport, industry and electricity production.

The direct and short term sequestration cost may be slightly higher based on the current methodology, but the carbon reduction would be continuous and risk free, rather than having to wait 100 years. Most importantly, the additional cost would be offset through increased economic activity through:

- Productive agriculture
- Transportation of material for processing
- Construction and operation of processing plants in regional areas
- Utilisation of zero-carbon fuels for industry

Suggested improvements are:

1. Allocate ACCU auctions by method categories (as noted in Section 1.1) with the allocations taking into account the potential additional economic activity
2. Institute a multiplier for methods that meet other policy outcomes based on their positive externalities.

1.3 Reliable and auditable, but high overhead limits innovation

The currently approved methods ensure that credits are reliable, well audited and one of the most trusted schemes in the world and we recognise the trade-off that needs to be made between efficiency and reliability. However, the current compliance and auditing overhead creates barriers for innovation and competition. This is important as it does not allow the testing of new methods that have a potential to reduce abatement costs.

The suggested improvements are:

1. Provide funding for the auditing and compliance process for smaller projects or proponents
2. Enable industry developed methods and independent review with appropriate limitations

1.4 Potential of enhancing the risk based approach to crediting of projects

The purchase of ACCUs is an investment by the ERF in a carbon abatement 'return', just like other projects with cash returns over time. The ERF currently recognises that an investment in the carbon abatement of a sequestration or land-based project is more risky than other projects through the risk reversal buffer and permeance period discount. The risk reversal buffer and permeance period discount to land based abatement methods is a step in the right direction, but currently insufficient. The insufficient risk based discounting of the future carbon abatement 'returns' of sequestration and land-based projects is that industry projects that provide risk free returns are not being supported, to the detriment of achieving a lower carbon future.

A potential improvement to the ERF is to extend the current risk mechanisms to a fully risk based approach to future carbon abatement returns. This would entail the consideration of risk in methods based on a literature based risk analysis.

2. Do you have any views on the operation of the offsets integrity standards and the additionality provisions as key principles supporting the integrity of abatement under the ERF?

Jemena understands the reasons for these principles under the ERF, however the implementation does create some restrictions to potentially beneficial projects. Further improvements to the implementation of these principles could include:

1. The newness requirement can distort some markets that could otherwise further reduce carbon emissions. For example, if a plant was destroying carbon before the ERF and a competitor enters later, the existing facility is at a permanent disadvantage. Unfortunately this could result in that facility reducing the carbon it abates (potentially completely) and so a net detriment to the transition to a lower carbon future. A suggested change is that the newness requirement only applies if the facility had benefited from previous emissions reductions mechanisms or the allowable abatement reduced to account for existing investment.

2. Furthermore, the newness requirement can limit innovation because a destruction concept may need to be tested before full implementation. This could be replaced by a time restriction post implementation.

The additionality provision is appropriate.

3. Do you think the governance structures of the ERF remain fit for purpose?

Yes.

4. What are your views on method prioritisation, method development and method review processes in the ERF? Please include any thoughts on how these processes could be improved, including how the expertise of industry could be better incorporated.

Jemena supports the existing efforts to allow the proposal and assessment of methods by stakeholders. Further improvements could include:

1. **Custom/trial methods** - utilising private accredited auditors that verify reductions for new methods. Due to the uncertainty the total allocation to these methods should be limited in a 'custom' category (using categories as noted in Section 1.1). The method would then need to be developed or an existing method modified within a fixed period of time. This would enable rapid innovation while maintaining integrity.
2. **Easily accessible funding for method development –** would enable agile development of carbon reduction opportunities. This should include funding of trials and consultants to develop method proposals.

5. What are your views on the suitability of the permanence period discount? What are your views on the suitability of the risk of reversal buffer? What are your views on the risks posed to land-based abatement and the adequacy of ERF and project-level risk mitigation measures?

The permeance period discount, low risk reversal buffer and other land-based risk mitigation measures do not appropriately discount the carbon sequestration 'returns' from land-based and sequestration projects to take into account the risk that the carbon will not be permanently sequestered. The result is that ERF investment is not efficiently allocated on a risk weighted basis and so is skewed towards more 'risky' land based projects, as can be seen by the current proportion of credits per method.

Industry methods provide a low risk return on investment as they immediately reduce carbon emissions, while land-based methods result in a carbon sequestration in the future. Despite the required reporting and risk controls this carbon sequestration returns are still at risk of not being delivered, especially as they need to be maintained for 100 years to be 'permanent.' We support the consideration of risk and discounting of future returns in all methods to make the scheme consistent with accepted investment principles.

The permeance period should be method specific and be based on the actual carbon that has been permanently abated. The current discount implies that 80% of the carbon is sequestered permanently over 25 years however all of the carbon could be released after 25 years despite abatement purchased by the ERF. The risk reversal buffer of 5% is insufficient to account for the risk of not achieving the contracted carbon reduction.

Project level risk mitigation measures should be used to evaluate the risk of carbon reduction being permanent, with appropriate discounts as noted above. The lack of attribution of risk to projects results in projects with a higher risk weighted abatement 'return' not being supported, such as industrial efficiency and the prevention of carbon emissions.

Overall, we acknowledge that crediting the projects only when the sequestration becomes 'permeant' would not be practical, however the contracted permanent carbon sequestration from projects should be considered like any other investment and discounted based on the risk of achieving future returns. This should be applied to each method based on current scientific literature. The risk of not doing this is that the investment in carbon reduction is inefficiently flowing to risky investments in future sequestration while industrial methods that provide an immediate and risk free return are not receiving support.

6. What are your views on the risks to contracted abatement resulting from ERF projects being concentrated geographically and by method type?

A geographic restriction should not necessarily be the focus of the restrictions, as impacts of events can spread over large areas. For example the impacts of the recent extreme bushfires. Instead there should be sufficient discounting and payment delays to account for the risk as noted in Section 5.

We support the allocation of ACCUs by category as discussed in Section 1.

7. What role could the ERF play in future economic recovery efforts?

The ERF has a significant opportunity to play a role in future economic recovery while enabling lowest cost long term abatement.

An example of this is bioenergy, specifically a biomethane plant from agricultural waste in a region such as Griffith. Currently a significant amount of potential energy from agricultural waste is unutilised and allowed to degrade and emit carbon. This waste could be kept on farms or collected (creating transport jobs) so that it is digested to produce methane (and a digestate fertiliser) within a closed vessel. This methane that would otherwise have been emitted can be processed to produce a renewable gas that can be injected into a gas pipeline and destroyed when it is used for industrial heat. This enables:

1. Jobs on farms and transportation
2. Utilisation of marginal land for energy crops that continuously sequester carbon
3. Additional income for the farmer from sale of the gas
4. Offset of chemical fertiliser import and use, reducing cost to the farmer
5. Destruction of methane that would have been emitted
6. The decarbonisation of hard to decarbonise applications such as industrial heat, heavy transport or electricity production
7. Enable energy security through the provision of a locally produced zero carbon fuel
8. Local construction, manufacturing and processing jobs

This project could enable carbon emission reduction, however it cannot compete in the short term with abatement projects. This would be enabled by some of the suggestions in the sections above, including:

1. Allocation of ERF auctions to particular categories – including industry and bioenergy (Section 1)
2. Appropriately discounting based on risk of achieving permeant carbon reductions (Section 6)
3. Multiplier for projects that enable jobs and energy security (Section 1)

Biomethane technology is well established overseas and there are significant organic wastes across Australia that are available now to be utilised as a feedstock. Implementing these improvements could enable a significant amount of investment in biomethane projects in the short term. For example in NSW Jemena has identified 20 – 40 potential projects that could produce over 10 PJ/a of biomethane per annum, this program could have the potential benefits:

1. **Jobs –** 2 500 construction and 300 – 400 operations (30 – 50% in regional areas)
2. **Investment -** $200 - $400M of project investments
3. **Energy security –** Equivalent to 1 200 MW of solar and 6 000 MWh of storage
4. **Decarbonisation of households and industry –** equivalent of 750 000 households and low cost decarbonisation of industrial heat

8. Should the ERF more explicitly address climate resilience and impacts? If so, how?

Yes, but more than just accounting for the effects. It should focus on enabling the adaptation of industries that take a long time to adapt. The market/auction based mechanism is efficient at short term allocation of investment, but is inefficient at long term incentives. The ERF should enable front loading or partial prepayment of credits for hard to adapt industries that require high capital investment.

9. Is there a need for enhanced guidance on how to manage ERF projects for multiple benefits? If so, should this be part of the ERF or complementary programs and policies?

The ERF should focus on carbon reduction benefits to ensure efficient allocation, but implement changes noted above to take account for risk and requirements for difficult to decarbonise industries.

Complementary policies such as a renewable gas tariff or target will assist in enabling the decarbonisation of hard to decarbonise industries such as heavy transport, dispatchable electricity and industrial heat, while enabling regional investment. One example of a renewable gas is biomethane, which is produced from the anerobic digestion of organic matter from sources such as wastewater, agricultural waste or organic waste. Once in the gas network it can be utilised in any of the industries described above utilising existing gas network connections. There is 371 PJ of biogas potential in Australia (ENEA, *Biogas Opportunities for Australia*, Mar 2019) which is more than 4x the total gas usage in NSW.