VERIFICATION AND AUSTRALIA'S EMISSIONS REDUCTION FUND: INTEGRITY UNDERMINED THROUGH THE LANDFILL GAS METHOD?

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Since the repeal of Australia's carbon pricing mechanism in 2014, the Emissions Reduction Fund ('ERF') has formed the 'centrepiece' of Commonwealth action on climate change. Criticised in some quarters, the ERF nonetheless has the potential to be a powerful weapon to remove the low hanging fruit of Australia's greenhouse gas emissions. However, its structure has become an example of slippage between a strong enabling Act and far weaker delegated legislation undermining the intent of the original legislation. This article uncovers structural deficiencies in the methodology for landfill gas capture and destruction such as stretching the term 'additional' to include its opposite, and raises other, more general issues with the ERF including the insufficiently accountable independent audit and review process. These deficiencies have obvious impacts upon the transparency and legitimacy of funding these projects under the ERF. Important questions are raised about whether substantial public revenue should be spent in this area. Given these methods are included in Australia's emissions reduction calculations, a spectre of doubt is cast over whether Australia is actually achieving its domestic and international emissions reduction goals.

I INTRODUCTION

The present Australian government was the first, and to date the only, national government in the world to oversee the repeal of a carbon price.[1] In the lead-up to the repeal, senior ministers described the original legislation as a 'great big new tax on Australian families'[2] that 'attempt[ed] to cut emissions by cutting economic growth'.[3] When the Coalition government led by Prime Minister Tony Abbott came to power following the September 2013 federal election, these earlier statements had effectively slammed the door on a conventional Emissions Trading Scheme ('ETS') and also a carbon tax, the most common broad-scale greenhouse gas ('GHG') control strategies. As a replacement, the

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[1] Rob Taylor and Rhiannon Hoyle, 'Australia Becomes First Developed Nation to Repeal Carbon Tax' *Wall Street Journal* (online), 17 July 2014 <http://www.wsj.com/articles/australia-repeals-carbon-tax-1405560964>.

[2] Commonwealth, *Parliamentary Debates*, House of Representatives, 2 February 2010, 4 (Tony Abbott) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.

[3] Greg Hunt, '$2.55 Billion Confirmed for Emissions Reduction Fund' (Media release, Department of Environment, 13 May 2014) <https://www.environment.gov.au/minister/hunt/2014/mr20140513.html>.

Commonwealth government drove the implementation of its Direct Action Plan. The centrepiece of this plan is the Emissions Reduction Fund ('ERF').[4] Unlike a traditional ETS, where private actors fund emissions abatement activities, the ERF sees these activities funded by the state. Currently, $2.55 billion of public funding is allocated to the scheme,[5] and while some concerns are mentioned below in Part III that the ERF is running out of funds, as noted in that section, it is likely that the fund will *nominally* reach its goals within that budget.

The ERF has potential to reduce emissions but its implementation hampers that potential. While the ERF was born of and continues to operate in a somewhat toxic policy context,[6] the context does not explain the scheme's weaknesses. The issues raised in this article exist in the deeper architecture of the scheme, and that aspect has multi-party support.[7]

At present, for the reasons specified below, there is a significant gap between whether the scheme is achieving its abatement goals *on paper* versus whether it is achieving them *in reality*. It is teetering on the brink of becoming a policy failure. Under the framework defined by McConnell,[8] the ERF is a political success, but a program failure. This is defined as a policy area where:[9]

> [f]or example, government may succeed in perpetuating its governance ideas by initiating policy with a high placebo content, demonstrating that a policy is in place to tackle a particular 'wicked problem', *but which fails to actually deliver on programme goals* because of the complexity and intractability of problems with multiple individual, institutional and societal causes. [Emphasis added.]

In some regards, the ERF is world-leading. It is one of the widest reaching attempts to credit GHG emissions abatement activities, particularly in the land sector. It includes methods such as savannah fire management and soil carbon sequestration.[10] These activities are, to a degree, the *raison d'etre* of the Australian scheme.[11] Undermanaged in most countries' GHG abatement plans, these land sector activities are brought within the scope of the *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) ('*CFI Act*') that underpins the scheme. As will be shown, the execution of the scheme has been less than ideal. Many of the same problems that affect other offsetting programs affect the ERF, and the scheme has run into several new issues as well.

The ERF itself has three limbs:

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[4] Department of the Environment, 'Emissions Reduction Fund White Paper' (Australian Government, April 2014) <https://www.environment.gov.au/climate-change/emissions-reduction-fund/publications/white-paper>.
[5] Hunt, above n 3.
[6] John Taberner and John Zorzetto, 'A Short History of Climate Change Policy in Australia' [2014] *Australian Environmental Law Digest*.
[7] See, e.g., Commonwealth, *Parliamentary Debates*, Senate, 18 August 2011, 4843-4848 (Nick Xenophon, Christine Milne, Simon Birmingham and Joe Ludwig) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.
[8] Allan McConnell, 'What Is Policy Failure? A Primer to Help Navigate the Maze' (2015) 30(3–4) *Public Policy and Administration* 221.
[9] Ibid 238.
[10] For the full breath of activities covered under the ERF see Clean Energy Regulator, *Emissions Reduction Fund* (2015) <http://www.cleanenergyregulator.gov.au/ERF>.
[11] For a recent, detailed analysis of land sector methods, see Jonathan Verschuuren, 'Towards a Regulatory Design for Reducing Emissions from Agriculture: Lessons from Australia's Carbon Farming Initiative' (2017) 7(1) *Climate Law* 1.

1) crediting emissions abatement activities of private actors;
2) purchasing those credits; and
3) safeguarding emissions to prevent significant increases in emissions elsewhere.

This article does not intend to engage with what might be termed 'political' criticisms of the ERF. Rather, it meets the fund on its own terms. For this reason, discussions of issues such as whether the ERF complies with the 'polluter pays' principle in Ecologically Sustainable Development (ESD), or the ongoing funding situation of the ERF are largely outside terms. The ERF has politically-determined goals and set funding allocations that are not the focus of this article.

While the safeguard mechanism has come under significant criticism,[12] this article focuses instead on the crediting mechanism. The reason for this shift is that verification and accountability issues within the scheme have powerful effects on the scheme's utility. These issues would undermine even the strongest caps and cast doubt on the policy credentials of the ERF.

Here, accountability does not refer to 'political accountability' or an individual or group being held to account for the failures of the scheme, although as with all policy areas this is an important consideration. Instead, we are referring to the potential, or not, for GHGs to be *accounted for* and the strength of the mechanisms for doing so. This is a problem of measurement, the terms of which are set by the legal framework. Given the scheme's unit of trade has a physical form, albeit one which is invisible and soon lost to the atmosphere, it is theoretically possible to quantify the amount of the various GHGs that are going into, or being drawn out of, the atmosphere. However, the issues in so doing, and the effect of aleatory and epistemic uncertainties, create an environment prone to implementation issues resulting in slippage between a strong enabling Act and weak delegated legislation.

Our main contention is that while the primary legislation for the ERF sets up a strong foundation for the scheme, there appears to be a system-wide problem in the scheme's delegated legislation. As detailed below, the process for verifying and certifying emissions reductions under the ERF is weak.

The current arrangements of the ERF have resulted in a policy setting whereby a scheme for crediting new GHG abatement activities is used to incentivise existing actors to maintain existing projects. The maintained abatement is counted as new abatement for the purposes of our national greenhouse accounting. While the argument run by these existing actors for access to funding is that without it, their beneficial behaviours will cease, what is in fact occurring is likely pure rent-seeking.[13] Permitting this is inconsistent with the government's rhetoric regarding necessary improvements to the budget bottom-line.[14]

However, even if rent seeking is tolerated, a separate issue remains. The fictional benefit from these methods is applied in the calculations of our progress toward the global abatement

[12] See, eg, Nicholas Aberle, 'Direct Action Safeguard Mechanism Provides No Safeguard at All' (Media release, Environment Victoria, 5 May 2015) <http://environmentvictoria.org.au/media/direct-action-safeguard-mechanism-provides-no-safeguard-all>.
[13] As defined in Robert D Tollison, 'Rent Seeking: A Survey' (1982) 35(4) *Kyklos* 575.
[14] Scott Morrison, 'Omnibus Savings Bill Introduced to Parliament' (Media release, Australian Government Treasury, 31 August 2016) <http://sjm.ministers.treasury.gov.au/media-release/074-2016/>.

task. Because of this scheme, we are further from our climate change goals than our GHG reporting would have us believe. We are counting as new benefit steps that have either never occurred, or that happened in the past. Worse still, given the extraordinary level of inertia in the climatic system, the effect of today's poor treatment will not be felt for decades. The fictional benefit 'provided' under the scheme may look good on the national climate change scorecard, but its presence in the accounts impedes genuine progress in dealing with an existential environmental threat. Therefore, in addition to the moral opposition to rent-seeking behaviour there are significant effectiveness problems.

The ERF might play an important role in cutting emissions through targeting the low hanging fruit of Australia's emissions profile. However, the critical weaknesses we point to in this article undermine its utility. Technical issues we identify include the inadequate landfill gas methodology, inadequate independent audit processes and uncertainty about the true environmental benefit of projects funded under the ERF.

Part II sets out the approach of this article, discussing the importance of verification to carbon trade and summarises Australia's greenhouse gas emissions reduction policy before the advent of the ERF. Given the complexity of the scheme, to aid the reader Part III outlines the organisational structure of the ERF. The crux of the article is contained in Part IV, which examines specific, critical problems we have found in the ERF legislation. Part V concludes.

II AUSTRALIAN CLIMATE CHANGE MITIGATION POLICY

Before we turn to the importance of verification in carbon markets, it is useful to provide an overview of Australian climate policy and how the ERF came into being.

For present purposes, it is not necessary to provide a detailed history of the tumult in recent years regarding broad-scale emissions reduction policy in Australia.[15] Before the election of the Rudd Labor government in 2007, economy-wide greenhouse gas emissions reduction policy was underdeveloped. After this point, and particularly after the failure of the global community in December 2009 to reach meaningful agreement in Copenhagen,[16] climate change mitigation policies have been in a state of flux. Today in Australia, we are left with the ERF, a form of carbon market where emissions reduction credits are almost all destined to be purchased by a single party, the Commonwealth government.[17] The ERF evolved from a voluntary carbon market mechanism that originated under the previous Labor-controlled parliament, the Carbon Farming Initiative ('CFI'). Indeed, despite heavy amendment, the

[15] For a concise history, up to but not including the ERF, see Taberner and Zorzetto, above n 6.

[16] See further Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on Its Fifteenth Session, Held in Copenhagen from 7 to 19 December 2009 — Addendum — Part 2: Action Taken by the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol at Its Sixth Session*, UN Doc FCCC/CP/2009/11/Add.1 (30 March 2010). See also related commentary in Rowena Cantley-Smith, 'Climate Change and the Copenhagen Legacy: Where to from Here?' (2010) 36 *Monash University Law Review* 278; Meinhard Doelle, 'The Legacy of the Climate Talks in Copenhagen: Hopenhagen or Brokenhagen?' (2010) 4 *Carbon & Climate Law Review* 86; Rafael Leal-Arcas, 'Kyoto and the COPs: Lessons Learned and Looking Ahead' (2010) 23 *Hague Yearbook of International Law* 17; John Vidal, Suzanne Goldenberg and Allegra Stratton, 'Low Targets, Goals Dropped: Copenhagen Ends in Failure' *The Guardian* (online), 19 December 2009 <http://www.theguardian.com/environment/2009/dec/18/copenhagen-deal>.

[17] The ERF mechanism does not preclude participation by those wishing to offset their own emissions by purchasing and then cancelling the certified emissions reductions, but it is similarly not designed to facilitate such purchases.

enabling Act for the ERF retains the name of the earlier scheme.[18] Thus, while the ERF was designed with the express intention of substituting for an ETS,[19] *sensu stricto* it is a scheme for the trade in emissions. However, it is non-traditional given that it is a near perfect monopsony. All significant purchasing of abatement under the scheme is done by a single entity, the Clean Energy Regulator, a government body reporting to the Minister responsible for the Act. From a policy design perspective, this is interesting as it increases the capacity of the state to shape a market. Notwithstanding this key difference, the carbon market in the ERF shares many of the verification and crediting mechanisms of a conventional ETS. Indeed, the ERF is built upon legislation designed to facilitate a traditional ETS being the aforementioned CFI.

The process of verification is vital to ensuring the accountability and legitimacy of the ERF. The lack of robust methods for verifying the truth of claims that the unit of trade, the Australian Carbon Credit Unit ('ACCU'), in fact represents its face value will undermine the trade from the outset.

In carbon markets, the traded unit is literally thin air or, more accurately, a promise not to emit certain classes of thin air into the atmosphere. Alternately, the promise is to remove previously emitted gases from the atmosphere. The list of relevant gases includes carbon dioxide, methane, nitrous oxide and hydrofluorocarbons. In total, there are 24 different gases regulated under the ERF.[20] These gases vary in terms of their properties and sources, as well as the direct and indirect impacts of their extraction (or creation), consumption and release. However, under the ERF, the trade in these gases is expressed in terms of their equivalence in terms of a single property they share, their potential to trap infrared radiation and therefore warm the globe should the gases reach the atmosphere. Even within this single property, the gases differ. Methane, for instance is a more powerful GHG than carbon dioxide, but decays in the atmosphere much faster.[21] Thus, while it is more-or-less standard within climate change mitigation literature to compare the effect of the gases over a 100-year timeframe, and this is the approach used by the ERF, the comparison would be quite different if a 20 or 500-year timeframe were chosen. Under the ERF, the trade is expressed in units of global warming potential equivalent to one tonne of carbon dioxide over the course of the first 100 years since its release, or tCO_2-e. One ACCU notionally represents one tCO_2-e abated.

Within the academic literature on carbon markets, verification proper is often broken down into its component parts that deal with issues of additionality and baseline setting.[22] It will be treated as such here.

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[18] *CFI Act*.

[19] This policy of the previous Labor government was legislated but not yet fully operational at the time that the Coalition came into power in September 2013 and was due to start July 1, 2015 (*Clean Energy Act 2011*, s 5 (definition of 'flexible charge year') (repealed)).

[20] *National Greenhouse and Energy Reporting Act 2007* (Cth) s 7A ('*NGER Act*').

[21] Piers Forster et al, 'Changes in Atmospheric Constituents and in Radiative Forcing' in Susan Solomon et al (eds), *Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, 2007). Even accepting a standard base year, the differing effect of methane and carbon dioxide is far from certain Myles R Allen et al, 'New Use of Global Warming Potentials to Compare Cumulative and Short-Lived Climate Pollutants' [2016] *Nature Climate Change* <http://www.nature.com/doifinder/10.1038/nclimate2998>.

[22] See, eg, Climate Change Authority, 'Coverage, Additionality and Baselines—Lessons from the Carbon Farming Initiative and Other Schemes' (CCA Study, April 2014) <http://www.climatechangeauthority.gov.au/files/files/CCARRP/CCA_CFIStudyPublicReport_v7.pdf>.

Additionality refers to the process of ensuring that the emission reduction activity would not have occurred without deliberate outside investment to reduce or sequester the quantity of greenhouse gases. It is about establishing that the expenditure of public funds is being used in a way that provides benefit that would not otherwise occur. Baseline setting involves predicting emissions based on historical data offset by awareness of future developments that are likely to affect the validity of that data. In short, tests for additionality and baseline setting assess *whether* and by *how much* net emissions have been decreased by the project.[23] Over the project's lifetime, the difference between the real (or calculated) emissions or abatement and that baseline is credited to the project proponent.

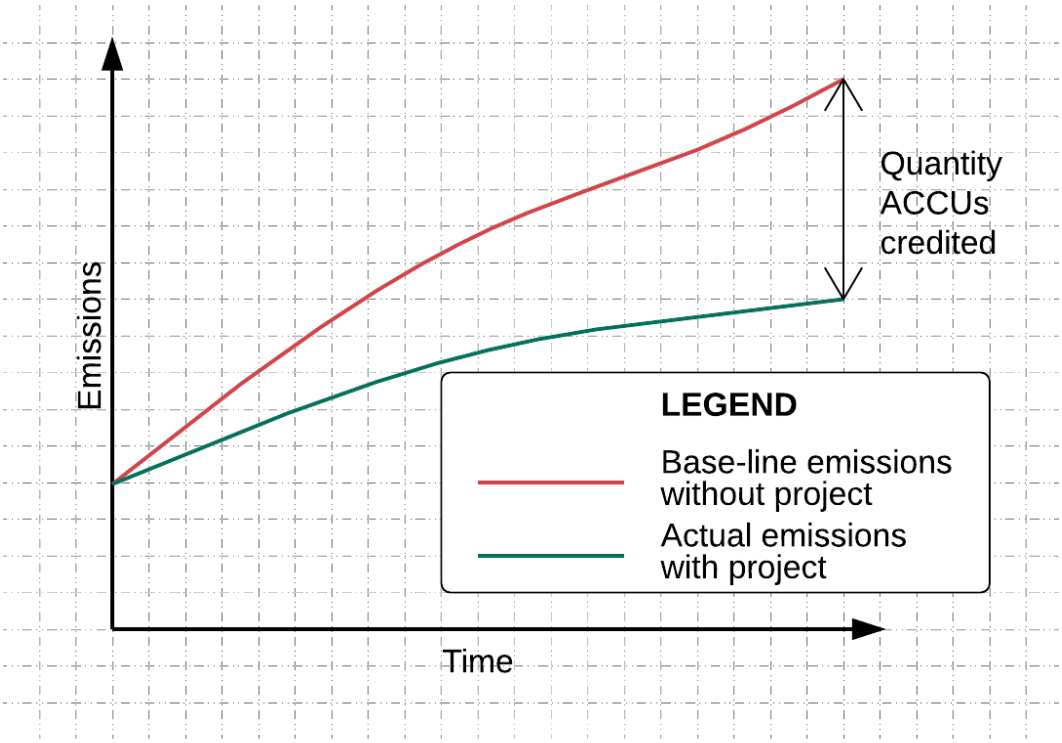

Figure 1: Crediting emissions reduction activities

In Figure 1, additionality and baseline setting refers to figuring out the location of the red upper line so that the actor is only credited for emissions reductions that occurred because of the government investment. The tests for additionality in the ERF are contained in s 27(4A) of the *CFI Act*. Ensuring additionality and setting the baseline is an issue for both emission reduction activities and emission sequestration activities.[24] These tests are fundamental to the development of good policy that reduces emissions and thus serves the public interest.

The ERF mechanism deals with issues of uncertainty and leakage in emission reduction projects through monitoring, reporting and verification obligations contained within the method determinations made under the *CFI Act*.

[23] Ibid.

[24] With regard to the ERF, these issues are looked at from an economic perspective in Paul J Burke, 'Undermined by Adverse Selection: Australia's Direct Action Abatement Subsidies' (2016) 35(3) *Economic Papers: A journal of applied economics and policy* 216.

On a project level, some of the uncertainty for proponents is offset by the operation of a secondary market. The secondary market facilitates the trade in ACCUs between those parties with an excess or shortfall in contracted emissions reduction credits, permitting those with a shortfall to meet their obligations to the Commonwealth notwithstanding any adverse developments that may occur at their own projects. The successful operation of this market is important for the integrity scheme as, without it, adversity would be met with a failure to deliver on emissions abatement pledges and hence with less abatement obtained. The secondary market also incentivises parties to go beyond their contractual obligations with the promise of financial reward for exceeding expectations.

Per some commentators, no amount of finesse can redeem the fact that the trade in carbon is based on false equivalences.[25] These false equivalences go to the heart of the trade itself. We recognise the concerns raised by those authors, though not their conclusion that carbon trading is therefore a lost cause. For instance, across meaningful timescales the effect on the biosphere of releasing one tonne of carbon dioxide from the burning of fossil fuels is not equivalent to sequestering one tonne of carbon dioxide in relatively short-lived trees. Similarly, the emission of different greenhouse gases is difficult if not impossible to standardise accurately in a single unit of currency. Even standardising for the same gas across different methods of release or capture proves difficult.

However, our own dispensation is toward pragmatism in the handling of these complex problems. Thus, we cannot agree that carbon markets should be abandoned as a viable emissions reduction policy option. Within the sphere of legal and regulatory means to mitigate the worst effects of climate change, there is room for carbon markets to play a role, so long as societies remain aware of their shortcomings and make concerted efforts to minimise their detrimental effects. There is similarly a role for divestment, rapid decarbonisation, energy efficiency, reforestation, climate change adaptation and other related actions taken by public and private parties. None of these individual actions will be able to meet the complex problem of climate change on its own. We support an approach that strengthens existing mechanisms such as the ERF, while advocating further action.

III STRUCTURE OF THE ERF

This section sets out the structure of the ERF to aid the reader's comprehension of the analysis to follow in Part IV, Figure 2 shows in a simplified manner the allocation of roles and responsibilities under the legislative framework of the ERF.

[25] Kevin Anderson, 'The Inconvenient Truth of Carbon Offsets' (2012) 484(7392) *Nature* 7; Keith Hyams and Tina Fawcett, 'The Ethics of Carbon Offsetting' (2013) 4(2) *Wiley Interdisciplinary Reviews: Climate Change* 91; Larry Lohmann, 'Carbon Trading: A Critical Conversation on Climate Change, Privatisation and Power' (Development Dialogue no. 48, Dag Hammarskjöld Foundation, September 2006) <http://www.thecornerhouse.org.uk/sites/thecornerhouse.org.uk/files/carbonDDlow.pdf>.

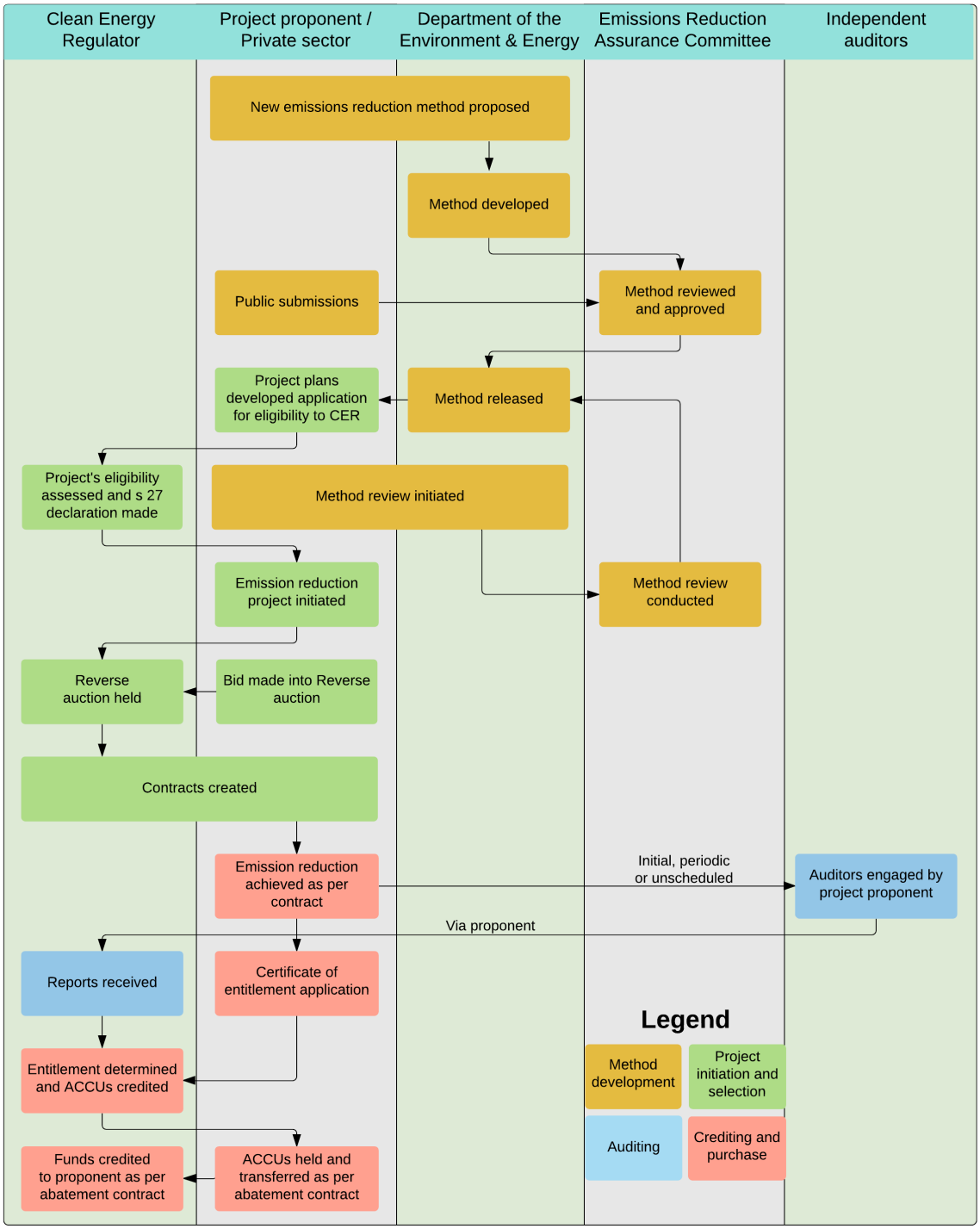

Figure 2: Allocation of roles and responsibilities under the ERF

At the time the principal Act passed into law, the stated purpose of the *CFI Act* was to 'unlock the abatement opportunities in the land sector'.[26] With the advent of the ERF, the scope of activities covered by the *CFI Act* expanded considerably, though the objects of the Act remained substantially the same.

[26] Explanatory memorandum, *Carbon Credits (Carbon Farming Initiative) Bill 2011 (Cth)*, p. 3

The principal objective of the ERF is to be found elsewhere. The Department of Environment's 2014 White Paper on the ERF states the scheme's main objective as to 'reduce emissions at lowest cost over the period to 2020, and contribute towards Australia's 2020 emissions reduction target of five per cent below 2000 levels by 2020'.[27]

The current budgetary allocation was made based on Australia's bipartisan target for greenhouse gas emissions reductions of 5% on 2000 levels by 2020.[28] To date, there has been no allocation of additional funds to enable the ERF to play a role in meeting Australia's expanded target of reducing greenhouse gas emissions by 26-28% on 2005 levels by 2030,[29] despite the government's stated reliance on the ERF to meet that larger goal submitted to the *Paris Agreement*.[30] There is apparent disagreement within the Commonwealth Government with regard to whether any future allocation of funds will be forthcoming.[31] In late 2017, a government review will report on Australia's climate change policies that may or not recommend change to regulatory infrastructures.[32]

[27] Department of the Environment, 'Emissions Reduction Fund White Paper', above n 4, 68. Since Josh Frydenberg assumed the role in mid-2016, this department has been known as the Department of Environment and Energy.

[28] Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on Its Eighth Session, Held in Doha from 26 November to 8 December 2012— Part 2: Action Taken by the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol at Its Eighth Session*, UN Doc FFCCC/KP/CMP/2012/13/Add.1 (28 February 2013). While this agreement is not yet in force, and may never come into force, the Australian government has publicly stated its intention to consider itself bound (Malcolm Turnbull, Julie Bishop and Josh Frydenberg, 'Ratification of the Paris Agreement on Climate Change and the Doha Amendment to the Kyoto Protocol' (Media release, 10 November 2016)).

[29] Department of Prime Minister and Cabinet, 'Australia's Intended Nationally Determined Contribution to a New Climate Change Agreement' (August 2015) <http://dfat.gov.au/international-relations/themes/climate-change/submissions/Documents/aus-intended-nationally-determined-cont-new-cc-agreement-aug-2015.pdf>.

[30] Conference of the Parties, United Nations Framework Convention on Climate Change, *Report of the Conference of the Parties on Its Twenty-First Session, Held in Paris from 30 November to 11 December 2015 — Draft Decision — Durban Platform for Enhanced Action (Decision 1/CP.17) Adoption of a Protocol, Another Legal Instrument, or an Agreed Outcome with Legal Force under the Convention Applicable to All Parties*, UN Doc FCCC/CP/2015/L.9/Rev.1 (12 Dec 2015) ('*Paris Agreement*'); Tony Abbott, Julie Bishop and Greg Hunt, 'Australia's 2030 Emissions Reduction Target' (Media release, Liberal Party of Australia, 11 August 2015) <http://www.liberal.org.au/latest-news/2015/08/11/australias-2030-emissions-reduction-target>.

[31] 7.30 Report, *Government Puts Australia 'in Rank of Comparable Nations' Says Greg Hunt* (11 August 2015) ABC News (online) <http://www.abc.net.au/7.30/content/2015/s4291521.htm>; David Uren, 'Carbon Billions Miss out in Budget' *The Australian* (online), 31 January 2016 <http://www.theaustralian.com.au/national-affairs/budget-2015/carbon-billions-miss-out-in-budget/news-story/164466c27bc4d35be118ab97e5cc3a19>

[32] Department of the Environment and Energy, *Review of Australia's Climate Change Policies* (5 December 2016) <http://www.environment.gov.au/climate-change/review-climate-change-policies>.

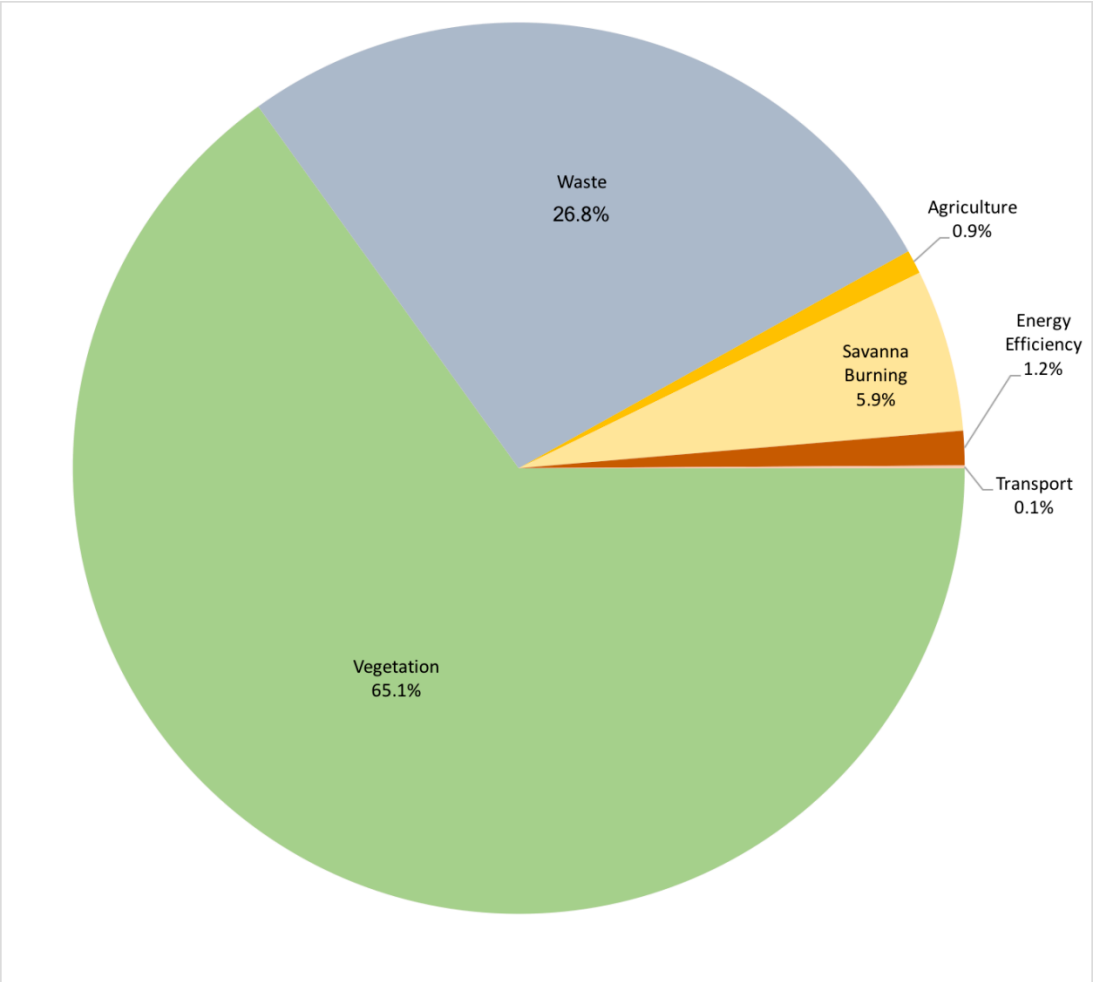

Figure 3: Historic ACCUs issued by method (as at 7/7/2017)

Nevertheless, the abatement activities contracted under the ERF extend as far as 2025, so much of the actual abatement will occur in the next decade. Extrapolating out the contract lengths and volumes under current carbon abatement contracts shows that roughly half of that abatement will be available under each commitment period.[33] Given more than 85% of the ERF budget has been committed in the five auctions to date, this is in accord with the government's projection that the ERF will see 92 million tonnes of abatement before 2020.[34] It bears repeating however, that this is contingent on the abatement contracted for providing the stated benefit. As discussed below, this is unlikely.

To sell the ACCUs created by their abatement activities to the regulator (acting here on behalf of the Commonwealth), the proponent must be party to a Carbon Abatement

[33] This presumes a delayed start to the abatement delivered in some instances due to the additionality requirements within s 27 of the *CFI Act* that mandate that projects should be in an early stage of development. As will be seen below in Part IVA, these requirements are undermined for one of the largest classes of project but this does not affect the entirety of the ERF. Data from Clean Energy Regulator *Emissions Reduction Fund: Carbon Abatement Contract Register* (19 June 2017) <http://www.cleanenergyregulator.gov.au/ERF/project-and-contracts-registers/carbon-abatement-contract-register>.

[34] Department of the Environment, 'Tracking to 2020: An Interim Update of Australia's Greenhouse Gas Emissions Projections' (Commonwealth Government of Australia, 2015) <https://www.environment.gov.au/climate-change/publications/tracking-to-2020>.

Contract. The Act is permissive as to how contracting parties are selected,[35] however to date these contracts have exclusively been created with successful bidders in the Clean Energy Regulator's reverse auction process.[36] There have been five such reverse auctions, in April and November 2015, as well as April and November 2016 and April 2017. In 2015, approximately half the ERF's $2.55 billion was committed to emissions abatement projects.[37] At the 2016 auctions, a further third of the budget was committed,[38] leaving $450 million uncommitted. While this may indicate that the fund is running out,[39] the chair of the Clean Energy Regulator does not consider that this will occur anytime soon. She has stated that she expects future auctions to be for smaller amounts and a lower price.[40] This has been the trend so far, although there was a nominal increase in the price at the November 2016 and April 2017 auctions.[41]

If the environmental benefit of each ACCU equates to one tonne of abatement, the $2.2 billion committed so far will offset 3.0% of Australia's annual emissions. However, under the current scheme, to presume the equivalence of one ACCU to one tonne of actual abatement might be termed *heroic*. Given the substantial sums involved, this raises important questions about how finite taxpayer revenues are allocated. This is an issue of whether stated policy goals are being achieved and what opportunity costs are foregone.

[35] *CFI Act* (Cth) s 20F.
[36] Clean Energy Regulator, above n 33. The Clean Energy Regulator is a statutory body tasked with overseeing the operational elements of the ERF, among other schemes including the Renewable Energy Target.
[37] Ibid.
[38] Clean Energy Regulator, *Emissions Reduction Fund: Auction Results – April 2016* (6 May 2016) <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/april-2016>.
[39] RepuTex, *'Mega Projects' Drive ERF close to Floor, but Price Rebound Ahead? Behind the Numbers* (5 May 2016) <http://www.reputex.com/knowledge-centre/mega-projects-drive-erf-close-to-floor-but-price-rebound-ahead%e2%94%82behind-the-numbers/>.
[40] Evidence to Senate Environment and Communications Legislation Committee, Parliament of Australia, Senate, *Estimates*, Canberra, 5 May 2016, 37 (Chloe Munro) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.
[41] Clean Energy Regulator, *Emissions Reduction Fund: Auction Results – November 2016* (13 November 2016) <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/November-2016>; Clean Energy Regulator, *Emissions Reduction Fund: Auction Results – April 2017* (28 April 2017) <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/april-2017>.

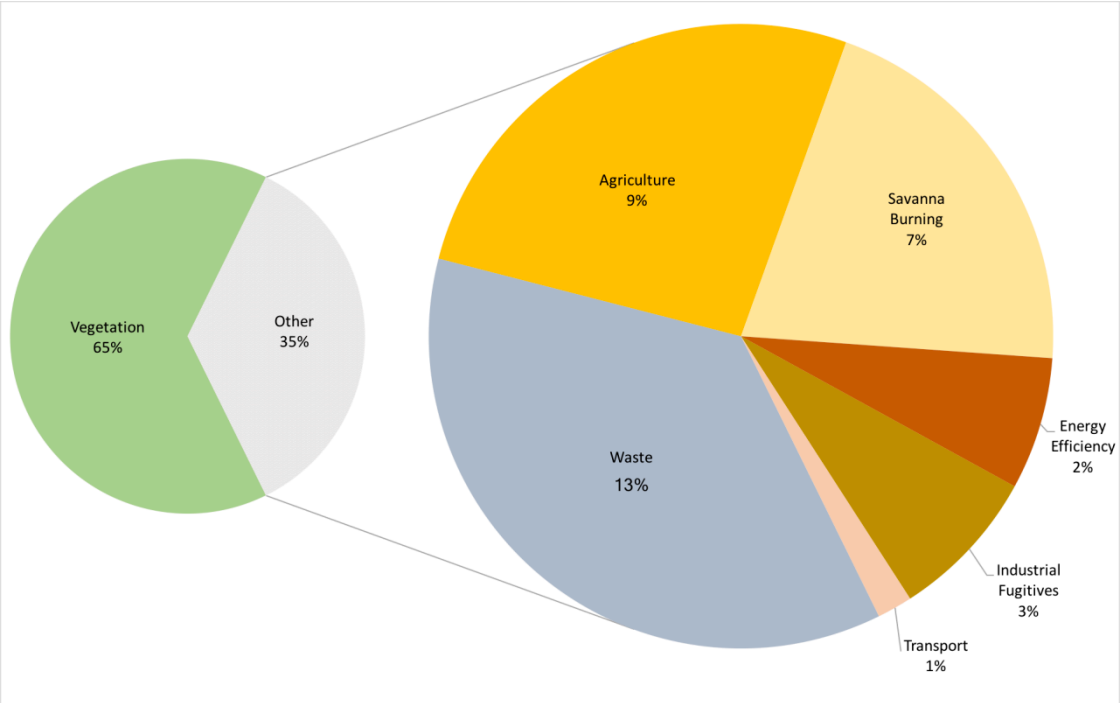

Figure 4: Committed abatement by method (as at 7/7/2017)

The projects contracted for under the ERF either limit the release of greenhouse gases through means such as capturing escaping gases from landfill sites or sequester them from the atmosphere through means such as reforestation. Most of the abatement contracted for under the first five auctions comes from revegetation projects at 65% of the total.[42] Waste management and landfill gas methods account for a further 13% of the total abatement contracted.[43]

At the first auction, waste management and landfill gas methods accounted for more than a third of the contracted abatement, or 16.7Mt of the 47.3Mt contracted.[44] This may be an artefact of the industry's 'early-mover advantage' and the weakened rules for additionality under the landfill gas methods as discussed in Part IVA.

IV DESIGN WEAKNESSES IN THE ERF CREDITING MECHANISM

Through our research, we have found several points at which the ERF crediting mechanism is weakened by its own establishing and enabling legislation. These are points at which the broad goals and best intentions of the scheme's originators are undercut in a manner that undermines those same goals. The largest of these involves the neutering of the Act's additionality tests when dealing with pre-existing landfill gas operations. Part IVA uses as a case study the involvement of LMS Energy, a company specialising in electricity generation from capture of landfill gas, in the ERF based on their dominance in the landfill gas to energy industry and under the relevant methodology determination. This dominance is

[42] Ibid.
[43] Clean Energy Regulator, above n 33.
[44] Clean Energy Regulator, *Emissions Reduction Fund: Auction Results – April 2015* (9 November 2015) <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/april-2015>

demonstrated below in Figure 5. They alone are responsible for nearly half of the abatement contracted under the landfill gas methodology.[45] In Part IVB we look at the importance of methodology determinations, which can lead to vastly different outcomes. The effect of the one-sided administrative and judicial review mechanism is discussed in Part IVC, and audit requirements in part IVD.

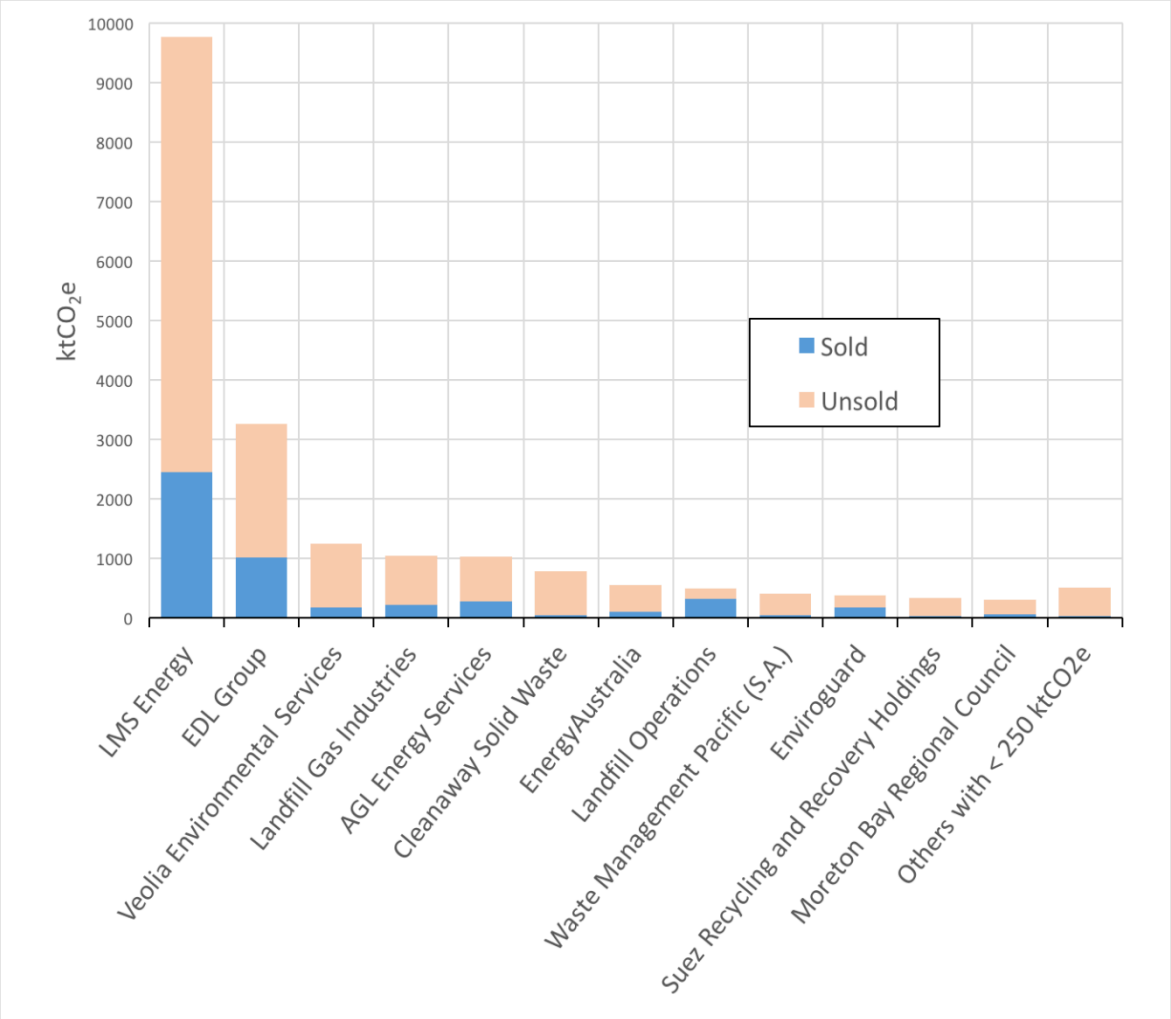

Figure 5: Contracted and sold abatement under the landfill gas methodology (as at 7/7/2017)

A The Case of Landfill Gas

1 *Additionality Under s 27*

The tests for additionality in the ERF are contained within s 27(4A) of the *CFI Act*. There, three default tests are outlined: the *newness requirement* (para (a)); the *regulatory additionality requirement* (para (b)); and the *government program requirement* (para (c)).

On initial assessment, the tests contained in the legislation set a high bar for additionality. They are strong, but not nuanced. The *newness requirement* tests whether the project has

[45] Clean Energy Regulator, above n 33.

already begun to be implemented before their registration under the Act. To assess whether the government investment under the Act is in fact required for the project it identifies key moments in the proponent's commitment to proceed with the project. If the proponent has already committed to the project, and it will go ahead whether government funding is supplied or not, the project is deemed ineligible to participate in the ERF for want of additionality. The *regulatory additionality* test looks to whether the project is already required to be carried out under Commonwealth, state or territory laws and precludes those projects that are already required. The *government program requirement* interrogates whether, in the absence of government investment under the ERF, the project would be likely to be carried out under some other government scheme. If it is likely that another might fund the project in the absence of ERF funding, then it is, again, deemed ineligible.

The Clean Energy Regulator applies these tests to decide whether to approve an application for eligibility to the ERF. Combined, their effect should be to preclude funding under the ERF for most projects that are not additional. However, as will be seen in the following section, there is evidence that the tests actually applied do not reflect the spirit of the Act. Projects that could not be deemed 'additional' in any good faith interpretation are being accepted into the ERF. As such, government contracts are awarded to the proponents of projects that are of questionable environmental benefit. This raises significant questions about the inherent legitimacy of the ERF process.

2 *The Circumvention of Additionality in the Case of Landfill Gas*

The results of the first reverse auction process, held in April 2015, detail the disproportionate emphasis at that round on contracting for the reduction of emissions through the capture and combustion of landfill-generated gas. Of the 20 million ACCUs committed under the landfill gas methodology to date, 14.5 million were committed at the first auction.[46]

Traditionally, landfills are a source of greenhouse gas emissions. As organic waste decomposes, it leeches large amounts of methane, a greenhouse gas approximately 25 times more powerful than carbon dioxide.

[46] Clean Energy Regulator, above n 33.

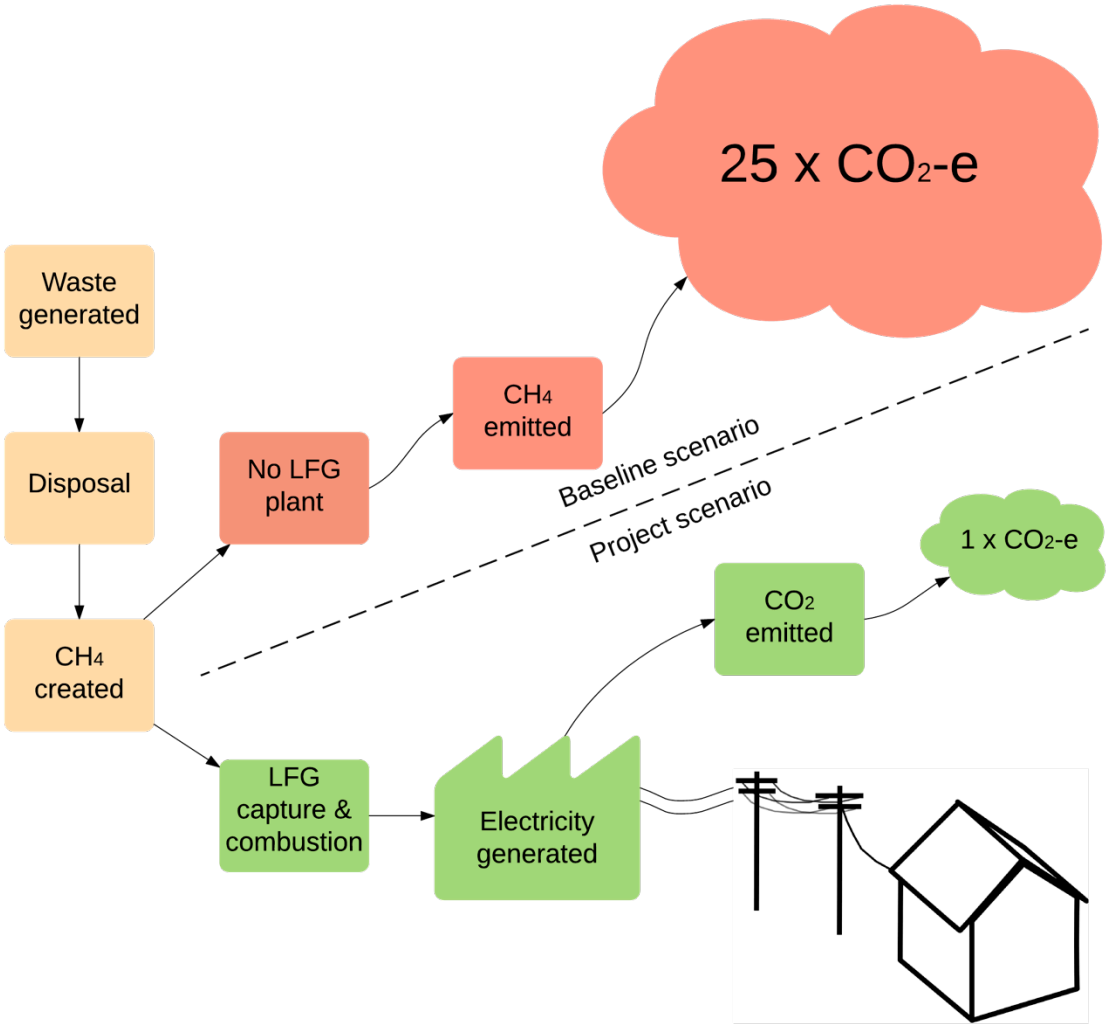

Figure 6: Capture and combustion of methane under landfill gas methodology (CH_4 = methane; CO_2 = carbon dioxide)

Landfill gas operations approved under the ERF seek to capture and combust this gas before it can be released into the atmosphere. Combusting methane converts it to carbon dioxide and water. While there is difficulty comparing the warming effects of different greenhouse gases on global temperatures, converting the methane to carbon dioxide reduces its impact by 96% over a 100-year timeframe.[47]

If it is additional, the capture and conversion of methane from landfill could do much to reduce our greenhouse impact. These baseline and project scenarios are represented in Figure 6, where, as in Figure 1, the baseline scenario and project scenario are represented by red and green respectively. The ACCUs issued for such a project are based on the difference between the effect on global temperatures of the methane that would have been emitted in the absence of its capture, and the effect of the carbon dioxide that is emitted when the methane is combusted. Under the *National Greenhouse and Energy Reporting Regulations 2008* (Cth) ('*NGER Regulations*') reg 2.02, 1 tonne of methane is equivalent to 25 tCO_2-e of methane.

[47] Forster et al, above n 21.

Thus, hypothetically, for every tonne of methane combusted, 24 ACCUs should be created. In practice, the number of ACCUs issued varies based on the circumstances of the plant.

These projects come with considerable co-benefits for their proponents. For instance, during combustion, heat is produced. This heat is often used to drive turbines and create electricity. The electricity is fed into the grid and the project proponent is paid accordingly. Further, the proponents who do this often participate in the Renewable Energy Target, another scheme administered by the Clean Energy Regulator. Participation in the Renewable Energy Target entitles the proponent to Renewable Energy Certificates that can be on sold to entities that are liable under that scheme. Thus, between the ERF, electricity sold and Renewable Energy Target, the proponents can have three separate income streams. As well, landfill operators must limit the emissions that come off their sites as a condition of environmental licensing. Failure to follow licensing requirements attracts heavy penalties. It is often economic to combust these emissions on site.

Thus, through participation in the ERF and Renewable Energy Target, project proponents receive three income streams to perform an activity that, for the most part, they are already compelled to perform. Could this be sound policy that serves the public interest?

A further policy issue connected to the participation of landfill gas operations in the ERF is that many of the projects receiving credit under it predate the scheme, some by a full decade. Specific examples of this are discussed below.

To recap, these schemes fail the regulatory additionality test because they already must capture and dispose of emissions. They fail the government program requirement because they receive funding under the Renewable Energy Target. Finally, many fail the newness requirement because they were fully operational long before the ERF was even conceived.
And so, to say that it is worrying that these projects are given access to the ERF would be polite understatement. Unfortunately, the path to their inclusion is more worrying still. To include these projects, each of the tests in the principal Act is deliberately neutered by the delegated legislation. Accidental loopholes in the legislation are not to blame. Landfill gas is included because of a deliberate decision to credit projects of questionable benefit.

For *regulatory additionality*, as mentioned above, state-based environmental protection laws require that landfill operators capture methane emissions from their sites.[48] Because of this, landfill gas operations would conflict with the regulatory additionality test at least insofar as it is described above. However, an alternate pathway to meeting this requirement exists.[49] This pathway permits an overriding, method-specific additionality test, set out in the methodology determination, to take the place of the default in the Act. For the projects at issue, the relevant method is *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (Cth), where the goalposts for landfill gas projects are shifted. There, in a subversion of the spirit of the Act, the regulatory additionality requirement is replaced by a requirement that a landfill gas operator must simply be a landfill gas operator.[50] Given the methodology only applies to landfill gas operators, this is a

[48] See, eg, Environment Protection Authority (NSW), 'Environmental Guidelines: Solid Waste Landfills' (1996); Environment Protection Authority (Vic), 'Best Practice Environmental Management: Siting, Design, Operation and Rehabilitation of Landfills' (2010).
[49] *CFI Act* (Cth) s 27(4A)(b)(ii).
[50] *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (Cth) s 13(2).

foregone conclusion. The rationale for neutering the rule is provided in the Explanatory Statement to the determination:[51]

> State and territory regulations for the management of landfill gas to meet safety, odour and environmental objectives are a common reason why landfill gas collection systems are installed or upgraded. The existence of a regulatory requirement does not, in itself, render a project ineligible.

While the first statement is true, the existence of regulation requiring that such plant be installed *by definition* creates a lack of additionality. The emissions reductions credited would have been done for compliance purposes whether or not the *CFI Act* existed at all. Where projects are excluded from the ERF on the basis that they are required by law, the regulatory additionality test is working as it should. That it is being subverted is cause for concern as to the strength of the scheme. It erodes any confidence that relevant policy goals are being achieved.

The second under-cutting occurs with the *government program requirement*. This requirement should prohibit the participation in the ERF by projects that are already receiving a source of income under another government program. This immediately raises opportunity costs concerns, not only over whether *double dipping* is occurring but also whether these finite public resources would be better spent elsewhere. Using the equivalent pathway as is used above,[52] a project is made additional if it is 'an emissions avoidance project that primarily involves the avoidance of methane emissions'.[53] For landfill gas operations, this is again a foregone conclusion and represents a neutering of the requirement of the Act. The effect of this is a second blow to the integrity of the scheme.

The explanatory statement to the rules claims that under the ERF projects participating in both schemes 'are only credited for the destruction of methane and not in relation to their renewable electricity generation'.[54] This is a superficially appealing claim. Indeed, the statement is true *if* the pricing of the renewable energy certificates generated under the *Renewable Energy (Electricity) Act 2000* (Cth) and the ACCUs generated under the *CFI Act* reflects the two schemes' proportionate contribution to the existence of the project. However, this is questionable. An adapted response to the fact that the two schemes cover the same activity is not to void the test outright. Doing so introduces a considerable information asymmetry between the project proponent and the purchasers of electricity, Renewable Energy Certificates and ACCUs.

This asymmetry is prone to exploitation. In an environment where project proponents bid their own price into the market, there is no requirement that the proponent take their other sources of income into account. Neutering the regulatory additionality test is acceptable if you believe that it is not in the proponents' interests to maximise profits. Such a belief

[51] Explanatory Statement, *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (Cth) 8–9.
[52] *CFI Act* (Cth) s 27(4A)(c)(ii).
[53] *Carbon Credits (Carbon Farming Initiative) Rule 2015* (Cth) r 21(2)(a)(i) ('*CFI Rules*').
[54] Explanatory Statement, *Carbon Credits (Carbon Farming Initiative) Rule 2015* (Cth) 8.

requires either perfect competition in the market or perfect altruism on behalf of the proponents. We do not see a case for the existence of either.[55]

Of the three additionality tests, that leaves one, the *newness requirement*, which tests whether the project has commenced, or would commence, without funding under the ERF. Despite this test, however, numerous projects that are more than ten years old have been deemed eligible. Here, the subversion of the Act's additionality tests is perhaps the most egregious. For example, at the April 2015 auction, LMS Energy contracted with the Clean Energy Regulator to provide 9.8 million tCO_2-e in carbon abatement across nine years and 36 different sites.[56] LMS Energy is the largest participant in the ERF under the landfill gas methodology. As such, they are a useful case study. After five auctions, LMS Energy is the third largest participant in the ERF, contracted to supply 8.6 million ACCUs to the Clean Energy Regulator over seven years. Under the landfill gas methodology, they are by far the largest participant, and three times larger than their nearest competitor.

At the first auction, five contracts were made between LMS Energy and the Clean Energy Regulator. Four of these relate to existing sites commissioned and operational between the years 2002 and 2013,[57] and so before the initiation of the ERF. Almost all the established sites predate even the CFI,[58] the 2011 regulatory ancestor of the ERF. The fifth LMS contract contains the seven projects that were not yet operational in 2015. Those 21 projects that predate the ERF represent 95% of LMS Energy's contribution to the scheme.[59] This is a problem. These projects represent 5% of the abatement contracted under the ERF. A further eight LMS projects amounting to 1.2 million ACCUs received contracts at the April 2017 auction. Two other LMS Energy projects are registered with the ERF, but to date have no contract with the Clean Energy Regulator.

Understanding why projects that are not new are declared to be so requires a short history lesson of Australia's abatement schemes. LMS Energy's largest projects were all participants in the NSW Greenhouse Gas Abatement Scheme ('GGAS'). That scheme, which ran from 2003 until 2012 included no formal tests of additionality.[60] The rationale for not testing additionality was to avoid project approval delays.[61] Under GGAS, projects dating back as far as 1997 were being credited under that scheme.[62]

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[55] For instance, there is little evidence that the spot price of LGCs or STCs (the two classes to Renewable Energy Certificate) have declined after any of the auctions as might be expected. See National Carbon Bank of Australia, *Certificate Prices* (3 January 2017) <http://www.nationalcarbonbank.com.au/certificate-price/>.

[56] Clean Energy Regulator, above n 33.

[57] LMS Energy, *Renewable Energy Locations* (n.d.) <http://www.lms.com.au/index.php/renewable-energy-facilities-locations-and-profiles/>.

[58] Independent Pricing & Regulatory Tribunal (NSW), 'NSW Greenhouse Reduction Scheme – Strengths, Weaknesses and Lessons Learned' (Final Report, July 2013).

[59] Clean Energy Regulator, above n 33. It must be noted that while claims have been made in the media that up to 25 of the 28 projects were established at the time of the auction, his does not fit with the information we have obtained through publicly accessible documents (See Steve Cannane and Brigid Andersen, *Government's Carbon Abatement Auction Awarded Millions to Old Projects* (27 May 2015) ABC News (online) <http://www.abc.net.au/news/2015-05-27/carbon-abatement-auction-goverment-awards-millions-old-projects/6500716>).

[60] Rob Passey, Iain MacGill and Hugh Outhred, 'The NSW Greenhouse Gas Reduction Scheme: An Analysis of the NGAC Registry for the 2003, 2004 and 2005 Compliance Periods Sources of Registered NGACs, Estimated Impacts on NSW Electricity Emissions, Unresolved Issues of Scheme Design & Additionality, and Governance Implications' (UNSW Centre for Energy and Environmental Markets, August 2007).

[61] Independent Pricing & Regulatory Tribunal (NSW), above n 58.

[62] Passey, MacGill and Outhred, above n 60.

At that scheme's closure, those projects were granted access to the CFI by the original landfill gas methodology.[63] This transitional provision was requested by LMS Generation (as it then was) in its submission to the 2011 Senate Inquiry into the CFI,[64] and subsequently granted.[65]

In turn, when the CFI methodology was replaced by an updated version for the ERF, any projects declared 'new' under the 2012 methodology remained so for the 2015 version.[66] Through this grandfathering process over time and between different jurisdictions, a series of projects that predate the ERF by more than a decade have remained new, and therefore additional, for the purposes of the scheme. The additionality of each of these projects, in terms of real deviation from the historic baseline is very much in doubt and deserving of much higher levels of public scrutiny. It must be emphasised that this occurred without any further test of additionality and compounds the already substantial problems of verification and transparency.

Given that the outcome of LMS Generation's advocacy was the total neutering of additionality tests in favour of powerful industry stakeholders there are obvious questions to be asked over whether this could be considered 'regulatory capture' in the sense outlined by Dal Bo.[67]

It takes considerable effort to unpack this process, and it is easy to become lost in the detail. Of the three tests in place to prove the existence of actual environmental benefit from the project being funded by the ERF, all are circumvented in favour of a powerful actor in their industry. That actor is now being paid up to one hundred million dollars in taxpayer revenues to continue behaviours that form part of the baseline scenario of Australia's emissions and do not, as per the goals of the scheme, provide much, if any, new abatement.[68] This cannot be said to represent sound public policy.

To replace any requirement for *actual* additionality, transferring landfill gas operations instead have a discount applied to them. For projects that are new, upgraded or re-commissioned a discount is applied to the projects' emissions calculations. This discount is based on the degree to which such projects go beyond the minimum required by law.[69] At least insofar as it deals with the regulatory additionality, this might be an adaptive response to the problem.

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[63] *Carbon Farming (Capture and Combustion of Methane in Landfill Gas from Legacy Waste) Methodology Determination 2012* (Cth) s 2.1.

[64] LMS Generation, Submission No 14 to Senate Standing Committee on Environment and Communication, *Inquiry into Carbon Farming Initiative*, 8 April 2011 (2011).

[65] Department of Parliamentary Services (Cth), *Bills Digest*, No. 5 of 2011–12, 1 July 2011.

[66] *Carbon Credits (Carbon Farming Initiative—Landfill Gas) Methodology Determination 2015* (Cth) s 12.

[67] Ernesto Dal Bo, 'Regulatory Capture: A Review' (2006) 22(2) *Oxford Review of Economic Policy* 203.

[68] As with all ERF contracts, the specific terms of the contracts are commercial-in-confidence between LMS Energy and the Clean Energy Regulator, so our rough estimate of the total value of the contracts varies very widely. At the average price per tonne of the auctions where LMS Energy bids were successful, this total value would be approximately $120 million. However, the possible range is exceptionally broad.

[69] Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education, 'Carbon Farming Initiative: Guidelines for Calculating Regulatory Baselines for Legacy Waste Landfill Methane Projects' (June 2013).

No such assessment occurs for those projects that have transitioned from other schemes without amendment, such as the bulk of LMS Energy's projects. In those instances, a flat discount for additionality applies instead.

Thus, for any landfill gas project that was in operation under the NSW GGAS scheme a blanket 76% of the gas captured by a site is deemed additional.[70] Even ignoring the fact that the rate does not account for the lack of newness or other sources of government funding, it ignores the fact that under GGAS, projects did not need to be based in New South Wales,[71] and that emissions laws vary across state borders. For example, New South Wales regulations permit methane leakage from landfill sites at a rate eight times that permitted in Victoria.[72] Using a flat discount, one of two things is true: either the regulatory additionality of projects in New South Wales is being under-stated, or that of projects in Victoria is being over-stated. Given how effective the industry's lobbying efforts have been to date, the latter seems more likely.

In this article, LMS Energy has been chosen for its influence on the market and not because of any perceived misconduct. Indeed, it has complied with the relevant law under discussion here every step of the way. And it is not alone in taking this path into eligibility under the ERF. As per the Climate Change Authority's 2014 Study of the CFI, 59 different projects representing millions of tonnes of 'additional' greenhouse gas abatement followed an equivalent path into the CFI and then into the ERF.[73]

This revelation sits uneasily with the Department of Environment's statement in the ERF White Paper that: 'Credits issued under the ERF must represent genuine emissions reductions. Emissions reductions are genuine if they: would likely not have occurred without the ERF…',[74] and later, 'A project will be eligible for registration where it meets the following criteria: … the project activity has not commenced before it has been registered by the Clean Energy Regulator …'.[75]

Under these clear statements of intent, there is no basis for the inclusion of decade-old landfill gas projects in the ERF. A substantial amount of taxpayer revenue, upward of one hundred million dollars if we include all projects under the landfill gas methodology, is being paid to projects with doubtful environmental benefit. As well as this, considerable amounts of political capital are being invested in the scheme. This political and financial capital would be better spent elsewhere, preferably to support climate change abatement that is additional.

3 *'Early Movers' and 'Reverse Additionality'*

There exists an argument in favour of providing financial benefit to early movers, including LMS Energy, who began to perform their abatement tasks before the advent of the *CFI Act* and the ERF. Members of the Commonwealth Senate have run this line of argument,[76] and it

[70] Ibid.
[71] Independent Pricing & Regulatory Tribunal (NSW), above n 58.
[72] Environment Protection Authority (NSW), above n 48; Environment Protection Authority (Vic), above n 48.
[73] Climate Change Authority, above n 22.
[74] Department of the Environment, 'Emissions Reduction Fund White Paper', above n 4, 69.
[75] Ibid 75.
[76] Commonwealth, *Parliamentary Debates*, Senate, 18 August 2011, 4843-4848 (Nick Xenophon, Christine Milne, Simon Birmingham and Joe Ludwig) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.

has also been raised by industry lobbyists in parliamentary committees.[77] The argument goes: if later arrivals to the market are rewarded for their entry where earlier arrivals are not, then the earlier arrivals are, in a sense, being 'punished'[78] through lack of benefit for their altruistic action. This argument is spurious on three simple grounds.

First, actors who provide offsets to the ERF are motivated by commercial benefit rather than altruism. As mentioned above, a great many of these operations are required by law. Where the projects exceed minimum legal standards, this is done because it is a commercially viable action. Where the regulation has changed, as with the closure of GGAS, sovereign risk is an issue that entities engaging with the government must always face. It would have been, or at very least should have been, embedded into their original bid price.

Second, as shown above, the purpose of the scheme is not to reward positive behaviour.[79] If there is a need to reward early movers, the ERF is not the appropriate mechanism to provide that reward. If it is used in this way, their continuing abatement should not be included in the national accounts.

A simplified restatement of the three additionality tests is that they determine whether such projects *would have occurred without the scheme*. The primary purpose of the ERF is to fund projects that would not and so create environmental benefit.[80] Rewarding later entrants to the market (and later projects from existing participants) while refusing to provide further incentives to existing participants is consistent with this goal. It purposefully goes some way to providing an additional incentive to those projects that are not quite, but nearly, viable. Thus, it encourages *additional* environmental benefit and so constitutes sound policy.

The final argument advanced on behalf of the sector is that after the closure of GGAS and without the government funding provided by the ERF, landfill gas operators would become uncommercial.[81] In short, to not fund these existing projects would result in a form of reverse additionality. Such a circumstance would see emissions increase above the historic baseline because of the companies' collapse and the cessation of their operations. That specific details, such as the total dollar value of the contracts, are treated as commercial-in-confidence by the regulator makes it difficult to evaluate these arguments.[82] But let us attempt to do so with the most basic information, LMS Energy's returns to the Australian Securities and Investments Commission ('ASIC') over the period where their largest successful bid into the ERF occurred.[83]

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[77] Evidence to Senate Economics Legislation Committee, Parliament of Australia, Canberra, 29 May 2009, 2 (Max Spedding) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.

[78] Commonwealth, *Parliamentary Debates*, Senate, 18 August 2011, 4847 (Nick Xenophon) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.

[79] *CFI Act* (Cth) s 3(2). See the discussion in Burke, above n 24.

[80] Department of the Environment, 'Emissions Reduction Fund White Paper', above n 4.

[81] Commonwealth, *Parliamentary Debates*, Senate, 18 August 2011, 4847 (Nick Xenophon), 4886 (Simon Birmingham) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>; Evidence to Senate Economics Legislation Committee, Parliament of Australia, Canberra, 29 May 2009, 2 (Max Spedding) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.

[82] Given the huge sums of public money involved, there are strong accountability and legitimacy grounds for expecting higher levels of public disclosure.

[83] Company financial statements obtained from Dun & Bradstreet, *Company 360* <http://www.company360.com.au>.

Per the ASIC documents, in the 2014-2015 financial year LMS Energy showed very strong growth. They had a return on equity of over 30%, return on total assets of over 20%, and earnings before interest and tax (EBIT) growth of over 60%. The terms of the contract are unavailable, but that financial year included three months of potential ERF funding. Based on the average price for an ACCU at the April 2015 auction, it can be seen that LMS Energy stood to make approximately $4m/quarter from its first round of ERF contracts across their seven-year duration.[84] While any ERF payments, if they occurred in that financial year, were undoubtedly a boon to the company's revenue, against a more than $50m gross profit it is difficult to see how the absence of less than $4m revenue[85] could see the company become immediately 'unviable',[86] and result in reverse additionality. Indeed, in that financial year, more was paid out to the shareholders ($6m) than could have been earned in potential ERF revenue. At least in the case of LMS Energy, the reverse additionality argument is simply without basis.

So, let us broaden the focus to the industry in general. Within the earlier negotiations surrounding the closure of GGAS and the commencement of the Carbon Pollution Reduction Scheme,[87] Max Spedding of the Australian Landfill Owners Association, the peak body that represents LMS Energy, spoke before the Commonwealth Senate Economics and Legislation Committee.[88] There he advocated for the separate treatment of those landfill gas operators that were disadvantaged by the closure of the NSW scheme. In those 2012 negotiations, he suggested that five years of further government support would see the affected projects become commercially viable on their own. Mr Spedding did not advocate for the inclusion of GGAS participants in the CFI. Accepting for a moment that his statement was true, and bearing in mind that landfill gas operators did in fact receive the requested assistance via eligibility to participate in the original version of the CFI, that government support would have ended in 2017. Under the ERF, those same projects will be receiving government funding until 2022.[89] This means the operators are receiving five years of windfall profits beyond the date they were expected to become wholly commercial. It is a moot question to ask how this could be interpreted as sound policy.

The general rule within the *CFI Act* for emissions avoidance projects (including landfill gas operations) is that their eligibility extends for a period of 7 years from the date of their registration under the Act.[90] Ordinarily, this period is non-renewable, so projects may only participate for a single crediting period.[91] Under the Act, however an emissions avoidance project registered before the ERF receives two separate crediting periods: one for the period between the project's registration under the Act and the commencement of the scheme, and another for a full seven years, as is issued to new projects.[92]

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[84] Clean Energy Regulator, above n 33.
[85] This is an intentionally high estimate of the potential ERF revenue for the benefit of LMS Energy. The first auction was part way through April, and it is presumed that volumes of abatement delivered late June 2015 would not have been paid until the 2015-2016 financial year.
[86] Commonwealth, *Parliamentary Debates*, Senate, 18 August 2011, 4847 (Nick Xenophon), 4886 (Simon Birmingham) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.
[87] The original name for the legislative package that included the *CFI Act*.
[88] Evidence to Senate Economics Legislation Committee, Parliament of Australia, Canberra, 29 May 2009, 2 (Max Spedding) <http://www.aph.gov.au/Parliamentary_Business/Hansard/>.
[89] Clean Energy Regulator, above n 33.
[90] *CFI Act* (Cth) s 69(3).
[91] Ibid s 69(6).
[92] Ibid s 70(3).

The oldest of LMS Energy's projects, such as the Rochedale Landfill Gas Project southeast of Brisbane, received eight years' worth of government support under GGAS, already more than a new project will receive under the ERF. Its inclusion in the CFI and the subsequent extension of its eligibility will allow it a decade of additional support, totalling eighteen years, over and above its other revenue streams. Using the average price mentioned above, Rochedale's participation in the ERF amounts to $9m government funding to LMS Energy for just one of its 28 projects, with that funding granted on the basis on questionable additionality. Again, this raises profound questions of legitimacy.

4 *Subversion of Additionality Elsewhere in the ERF*

This subversion of additionality is by no means unique to landfill gas operations. As part of the ERF package, the government introduced the safeguard mechanism on 1 July 2016. It is intended to guard against 'significant increases in emissions above business-as-usual levels'.[93] The mechanism does so by placing a ceiling on the allowable emissions of any facilities that produce more than 100,000 tCO2-e per year.[94] It places no limits on other facilities' emissions.[95] The limit is set at each facility's highest annual emissions for the five financial years from 1 July 2009.[96] A generous capacity for variation of limits is embedded in the legislation, based on a variety of exigencies.[97] Given this capacity for variation, by our analysis, it seems difficult for a facility to be caught by the mechanism, especially where, among other options, a baseline can be varied on the basis that a facility merely *expects* to exceed its limit.[98] However, if a facility should somehow manage to be bound by the safeguard mechanism, that facility is required to abate its emissions to bring them below the baseline or else face a penalty.[99]

However, it is not expected that emitters should be bound by this penalty. Instead, emitters that exceed the limit will bring their emissions for a period down below the limit by purchasing and surrendering ACCUs to the Clean Energy Regulator. Each ACCU surrendered reduces the calculated emissions of the facility by 1 tCO_2-e.[100] If the facility is party to a carbon abatement contract, there is no prohibition on using its own ACCUs to do so.

The important detail here is that in this circumstance, the sale of the ACCUs to the regulator under an ERF contract is deemed to be a surrender for the purposes of the safeguard

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[93] Department of the Environment, 'Emissions Reduction Fund Safeguard Mechanism' (Factsheet, Commonwealth Government of Australia, 2015) <https://www.environment.gov.au/climate-change/emissions-reduction-fund/about/safeguard-mechanism>.

[94] *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* (Cth) r 8 ('*NGER Safeguard Rules*'). Most the rules for the safeguard mechanism are set out in: *CFI Act* pt 3H; *NGER Safeguard Rules*; *NGER Regulations*; and *National Greenhouse and Energy Reporting (Audit) Amendment Determination 2015 (No. 1)* (Cth).

[95] Aberle, above n 12.

[96] *NGER Safeguard Rules* (Cth) r 17.

[97] Ibid rr 19-26. As well, any increase of emission in a single year can be disregarded for a suite of reasons (ibid rr 64-67; *NGER Act* (Cth) s 22XE(2)-(4)).

[98] *NGER Safeguard Rules* (Cth) rr 22, 26. Other related rules include the development of new facilities, 'significant expansion', 'inherent emissions variability' (ibid rr 22-25).

[99] *CFI Act* (Cth) s 22XF. This penalty is currently set at $21,000 per day for each day that an 'excess emissions situation' exists, up to a maximum of $2,100,000 per year (*NGER Regulations,* reg 4A.01, *Crimes Act 1914*, s 4AA).

[100] *CFI Act* (Cth) s 22XN(1).

mechanism.[101] Deeming the *sold* ACCUs as *surrendered* produces a double benefit for those facilities that are engaging with the ERF and that are forced to comply with the safeguard mechanism. Facilities are paid to do something that is legally required of them. In the explanatory statement to the *NGER Safeguard Rules*, the provision setting this rule was described under the heading, 'Avoiding double counting'.[102] This is, quite simply, perverse. The rule *causes* double counting. That a policy safeguard document with an internal title 'Avoiding double counting' should cause double counting beggars belief.

Far from being an oversight, this strange rule has been confirmed by alteration to the *CFI Act*'s regulatory additionality requirement.[103] In the past, s 27(4A) would have precluded the abatement being counted for the purposes of both schemes. After the safeguard mechanism came into force, the *NGER Act* was precluded from consideration under that test.[104] The legitimacy problems in this are obvious.

The Commonwealth government's recent policy proposal for a National Energy Guarantee—designed to reduce emissions from the National Electricity Market while ensuring reliability of supply—includes a proposal to allow electricity retailers to meet a proportion of their emissions reduction obligations through the purchase and surrender of ACCUs in the same manner as occurs under the safeguard mechanism.[105] There is very little detail on this proposal at the time of writing, but it seems likely that the policy choices made for the safeguard mechanism will be replicated in the National Energy Guarantee. It remains to be seen whether this will occur. We hope a sensible approach prevails.

B When is a Tonne not a Tonne?

The instance of LMS Energy's involvement in the ERF is revealing for yet another reason; its participation further illuminates the critical importance of the method setting process. As mentioned above, many of LMS Energy's projects were registered under the GGAS before they transitioned to the *CFI Act* and the ERF. This includes the four largest,[106] which alone represent more than half of the company's expected abatement credits.[107]

The easy transition of projects from the GGAS to the CFI, and then into the ERF is premised on the notion that what counts as a tonne of abatement under one scheme is equal to a tonne of abatement under the other. This is a simple concept. And while they have different names, the units of trade under GGAS and the *CFI Act* do nominally represent the same amount of abatement, being one tCO_2-e. However, the methodologies for crediting those units are remarkably different. This came to head in a 2014 dispute between LMS Energy and the Clean Energy Regulator, where the difference between the two methodologies was key to the dispute.[108] Despite nominally using the same base unit, activity that would entitle a landfill

[101] Ibid s 22XN(6).
[102] Explanatory statement, *NGER Safeguard Rules* (Cth) 16.
[103] *CFI Act* (Cth) s 27(4A)(b)(i).
[104] *Carbon Farming Initiative Amendment Act 2014* (Cth), item 12A.
[105] Energy Security Board, 'Energy Security Board Advice on a Retailer Reliability, Emissions Guarantee and Affordability' (Advice provided to Josh Frydenberg, Commonwealth Minister for Environment and Energy, 13 October 2017) 5.
[106] Being Hallam (Vic), Eastern Creek (NSW), Wollert (Vic), and Rochedale (Qld) LMS Energy, above n 57; Independent Pricing and Regulatory Tribunal, 'Compliance and Operation of the NSW Greenhouse Gas Reduction Scheme during 2011' (July 2012).
[107] Clean Energy Regulator, above n 33.
[108] Ibid [19].

gas operator to 100 ACCUs under the newer scheme would have entitled the operator to 147 credits under the older.[109] This means that one in three of the 'tonnes' of abatement credits generated and sold under GGAS for destruction of landfill gas did not exist for the purposes of the ERF.

To labour the point, the differences between methodologies have no direct effect on the operation of the plant. The variation in the 'tonnes' of abatement credited had no regard or effect upon the fact that the exact same plant was conducting the exact same activities under the same operating conditions. Despite this, 50% more abatement 'occurred' under the old methodology than the new.

We can make no claims to holding the relevant technical expertise in this detailed area of point-source atmospheric science. However, such a significant deviation is at least *prima facie* evidence of the need to treat the data coming out of the ERF with scepticism. As noted in this, and the other sections of this article, there are troubling signs that, in the ERF, the methodologies have been critically weakened, strength is almost entirely absent. As such, even though the ERF methodology was the stronger of the two considered in the dispute above, we have legitimate concerns about the strength of the methodology still.

C One-Sided Administrative Review Mechanism

Like most modern Australian statutes, the *CFI Act* includes specific provision for the administrative and judicial review of executive decisions under the Act.[110] The table at s 240 of the *CFI Act* contains an exhaustive list of decisions that are subject to administrative review under the Act. Item 3 in the table of reviewable decisions is 'A decision to refuse to declare that an offsets project is an eligible offsets project under section 27'. Notably absent, and so not subject to review, is a decision to *make* that declaration.

This asymmetry pervades the administrative and judicial review mechanism. Every item in the table of reviewable decisions is a right to be exercised in favour of the project proponent, with no process to challenge decisions that have gone in a proponent's favour.

The overall effect is to place a downward pressure on the quality of projects declared eligible and so also on the credits issued. Presuming good faith application of the tests in s 27(4A), under real world conditions there will of course be some degree of uncertainty at the borderline between a determination that a project is and is not legally additional. Any refusal by the regulator to declare a project eligible within this grey area might be met with administrative review.

Given the nature of the applicant, that review process can only do two things: it can either let the regulator's judgement stand or it can declare the regulator's reading of the Act to be excessively strict. Each time the regulator's judgment is declared invalid by the tribunal or court, a lower standard is pushed on to the regulator. At a single instance, this might not influence the quality of the scheme in any marked way. However, in the *CFI Act*, the only possible direction administrative review can be applied is downward on the scheme's quality. Without a countervailing force pushing upward, the existence of this review process can

[109] Ibid.
[110] *CFI Act* (Cth) pt 24.

therefore only allow projects to take part where they might otherwise be precluded. How can this situation be said to form sound public policy?

While allowing review only of a refusal to declare a project *eligible* for the ERF is perhaps the most straightforward example of the right to administrative review placing downward pressure on the quality of the scheme, all 22 items contained in the list of reviewable decisions in s 240 could be described in the same way.

As such, the net effect of the administrative and judicial review element of the Act in part 24 is to weaken the scheme; whether that be by relieving proponents of their obligations under the Act or by limiting the power of the Clean Energy Regulator to exclude a proponent or project.

If there was policy change to expand the reviewability of decisions made under the Act it would help to protect the integrity of the scheme's purpose by offering a countervailing upward pressure on the standard of decision-making under the Act.

D Auditor Appointment and Compliance

For the purposes of the *CFI Act*, auditors are selected from those registered under the *NGER Regulations*. This auditor is appointed and paid by the project proponent. Such an approach has been criticised in other offset programs as potentially weakening the review process.[111] It does this by creating the possibility that the most amenable and least stringent auditors would be most likely to be re-hired by project proponents. Thus, this regulatory design may incentivise innocent or wilful misfeasance by the auditors.[112] This presents a clear, though not uncommon, problem for the integrity of the scheme as a constant downward pressure is placed on the quality of audit.

The Clean Development Mechanism in operation under the *Kyoto Protocol to the United Nations Framework Convention on Climate Change* ('*UNFCCC*') has a solution.[113] Under that scheme auditors (there referred to as 'designated operational entities') are personally liable for purchasing any shortfall in emissions if it is the result of their misfeasance or negligence and results in their suspension or withdrawal from the scheme.[114] In doing so, it creates a counterforce to the downward pressure, at least in theory. However, due to the vicissitudes of *UNFCCC* process and international law more generally, there is no way to enforce this penalty and the deterrence value is limited.[115] Under domestic law, the issue of enforceability does not arise. If included in the ERF, introducing personal liability for

[111] Francesca Romanin Jacur, 'Paving the Road to Legitimacy for CDM Institutions and Procedures: Learning from Other Experiences in International Environmental Governance' (2009) 3(1) *Carbon & Climate Law Review* 69.
[112] Nicola Durrant, *Legal Responses to Climate Change* (Federation Press, 2010); Jacur, above n 110.
[113] *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, opened for signature 16 March 1998, 2303 UNTS 162 (entered into force 16 February 2005) art 12 ('*Kyoto Protocol*').
[114] Conference of the Parties, UNFCCC, 'Decision 3/CMP.1: Modalities and Procedures for a Clean Development Mechanism as Defined in Article 12 of the Kyoto Protocol', *Report of the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol on Its First Session, Held at Montreal from 28 November to 10 December 2005 — Addendum — Part Two: Action Taken by the Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol at Its First Session*, UN Doc FCCC/KP/CMP/2005/8/Add.1 (30 March 2006) annex, [22].
[115] UNFCCC Secretariat, *Possible Changes to the Modalities and Procedures for the Clean Development Mechanism* (Technical Paper), UN Doc FCCC/TP/2014/1 (19 March 2014) [43]-[46].

misfeasant auditors would provide a powerful incentive for them to comply with their obligations.

Such penalty provisions for misfeasant auditors exist neither in the *CFI Act* nor in the *NGER Regulations*. There, the only penalties for a misfeasant or negligent auditor are suspension and deregistration as a greenhouse auditor.[116] While this provides a strong incentive to auditors to act with diligence, the critical role that they play in the ERF requires much stronger penalties.

The same appointment process is contained in the *Corporations Act 2001* (Cth) where individual companies are free to select their auditor from a list of registered auditors maintained by the regulator.[117] In that case, the regulator is ASIC. However, within the schema of corporate law, penalties for a misfeasant auditor go as far as imprisonment in some circumstances.[118] The standard of behaviour expected from greenhouse auditors is no less onerous than that expected of corporate auditors.[119] That there is no pecuniary penalty available whatsoever to a misfeasant greenhouse auditor is an anomaly that must be rectified. The fact that the performance standards within the *NGER Regulations* and corporate law are similar might preclude some of the most basic poor behaviour by greenhouse auditors. However, without strong and adaptive penalties these standards are undermined.

2 *Content of the Audit*

The *CFI Act* makes provision for the periodic and triggered audit of projects. In the Act, a greenhouse auditor is deemed an 'entrusted public official'.[120] Under the regime for auditing greenhouse gas emissions, the same tripartite relationship exists between auditor, regulator and the management of the audited body as exists in the context of ASIC and the Australian Taxation Office ('ATO').[121]

Included in the content of the audit is a review of the s 27 declaration mentioned above in Part IVA and Part IVC.[122] However, the focus of this audit is on the compliance of the project proponent with the declaration made under that section and not on the legitimacy of the declaration itself. Therefore, even if the s 27 declaration does require full consideration of the newness, regulatory additionality and government program requirements under sub-s (4A), a declaration affected by innocent or wilful misfeasance from the regulator would not be picked up. While true misfeasance in public office is rare in Australia,[123] it is not so rare that it need not be addressed at all. Under our proposed reforms, project auditors should not at each instance reopen the whole of the additionality assessment. That said, crosschecking the regulator's determination against detailed project level information and broader goals of the scheme would increase accountability, transparency and legitimacy.

[116] *NGER Regulations*, regs 6.30, 6.35.
[117] *Corporations Act 2001* (Cth), Chapter 2M.
[118] Many of the offences are contained in ss 307-313 of that Act and the respective penalties are listed in Sch 3.
[119] The former is contained in the *NGER Regulations* div 6.6.
[120] *CFI Act* (Cth) s 5 (definition of 'entrusted public official').
[121] Auditing and Assurance Standards Board, 'Framework for Assurance Engagements' (April 2010).
[122] *CFI Rules* (Cth) pt 6, div 3.
[123] Transparency International, *Corruption by Country: Australia* (2015) <https://www.transparency.org/country/#AUS_DataResearch>.

It is difficult to test the veracity of the audit process with a desktop analysis. However, some insight can be gained by using the quantum of issued penalties to project proponents as a proxy. Given how early it is in the life of the scheme, this is of limited value. However, in the life of the CFI and ERF, five penalties against project proponents have been issued, all under s 88 of the *CFI Act*.[124] That section deals with 'false or misleading information' provided by project proponents to the regulator. Whether these were the result of the audit process is unclear. The only notice to relinquish where information is publicly available was issued because of an error of transcription reported to the regulator by the proponent. The proponent in that instance was LMS Energy.[125]

V CONCLUSION

As the principal mechanism for reaching Australia's greenhouse gas reduction targets, the detailed legal structure of the ERF is an important object of analysis, and one that has, aside from examples referred to in this article, largely been overlooked. This article examined in detail the specifics of the one of the most used methodologies under the ERF, and one that was responsible for a disproportionate share of the abatement contracted for in early auctions.

The weaknesses of the ERF raised in this article are the neutering of the additionality under the landfill gas methodology, issues of accounting, the ERF's one-sided administrative review process and problems of audit strength.

We suggest repair, rather than abandonment of the ERF. While the policy has potential, at the point of verification, it is too often so weak that meaningful reduction in greenhouse gas emissions cannot be achieved. While it is difficult or impossible to assess the total effect that these weaknesses have had on the scheme, Government claims regarding abatement of greenhouse gas emissions so far achieved under the scheme should be discounted. These claims are addressed in detail in Part IV but include, for instance, that the ERF will deliver 189 million tonnes of abatement.[126] It seems unlikely, given the findings of this article, that the ERF will deliver that amount of abatement, even if it does deliver that many ACCUs. The current ERF infrastructure thus creates significant opportunity costs by claiming public revenues of $2.55 billion that could have produced far greater actual benefit to the environment than has been done under this scheme.

While the issues described are uniquely expressed in the ERF, we do not feel that they are issues that are unique to the ERF. These issues will affect any carbon market, whether cap-and-trade or baseline-and-credit and indeed will likely affect any policy that must grapple with complex, diffuse and messy problems.[127]

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[124] Clean Energy Regulator, *Emissions Reduction Fund: Project Register* (7 July 2017) <http://www.cleanenergyregulator.gov.au/ERF/project-and-contracts-registers/project-register>.

[125] Clean Energy Regulator, *ACCU Notice to Relinquish* (27 September 2013) <http://www.cleanenergyregulator.gov.au/Carbon-Farming-Initiative/News-and-updates/Pages/2013-12/10-December-2013-LMS-landfill-projects-reach-30.aspx>.

[126] Clean Energy Regulator, *Emissions Reduction Fund: Auction Results – April 2017* (28 April 2017) <http://www.cleanenergyregulator.gov.au/ERF/Auctions-results/april-2017>.

[127] Here, 'messy' is used in its technical sense rather than the colloquial. For discussion, see Stewart and Ayres 'Systems Theory and Policy Practice: An Exploration' (2001) 34(1) *Policy Sciences* 79.

Despite its weaknesses, we suggest that the problems affecting the ERF need not result in the policy's total abandonment. Arguably, the fact that the ERF is a monopsony gives the state greater leverage to improve the scheme. Notwithstanding its potential, $2.55 billion of public money has been committed to the scheme along with considerable political capital. These same funds might be applied to health, education or any of the myriad other state obligations and so the figure comes with a considerable opportunity cost. If the ERF is to continue, it must provide verifiable environmental benefit.

To date, the ERF has largely failed to meet this goal. Undoubtedly, there is some benefit brought about by the fund, but it does not meet the simple and yet complex rubric of verifiability. As shown in Part IVA, tens of millions of dollars in public money are being offered to just one contractor under the ERF acting under one of the 33 approved methodologies.[128] The bulk of the environmental benefit offered in exchange for this massive sum is at least questionable. This would be a matter of serious concern even if the scheme were not attached to as great a threat as climate change.

We hesitate to suggest that individual carbon abatement contracts should be reviewed and the weakest of them not honoured. This would introduce considerable uncertainty into a sector that is essential to the national effort to abate emissions. That said, the methodology determinations themselves must be reviewed. Included in this review process is the need to review the calculations and assumptions embedded into the methodologies to ensure that the Commonwealth is in fact getting what it pays for (*see*: Part IVB).

Administrative review and audit mechanisms must be tightened in the ways suggested in Parts 3.3 and 3.4 to ensure that any downward pressure on the quality of abatement is offset by an equally strong upward pressure. Greenhouse gas emissions abatement projects are a matter of serious public concern, and public interest administrative review will provide some measure of counter-force to the current lop-sided review mechanism.

If these changes are made, the ERF and the *CFI Act* may begin to meet the standard of verifiability that the nation needs them to. These changes might mean that the ERF and *CFI Act* could begin to model a positive, inclusive emissions abatement scheme for other nations to consider as an element of their climate change mitigation strategy.

[128] Department of the Environment, *Emissions Reduction Fund Methods* (2016) <http://www.environment.gov.au/climate-change/emissions-reduction-fund/methods>