

**Submission by the Clean Energy Finance Corporation to the
Environment and Communications References Committee Inquiry
into the Government's Direct Action Plan**

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THE SENATE

**STANDING COMMITTEE ON ENVIRONMENT AND COMMUNICATIONS
REFERENCES COMMITTEE**

12 December 2013

Ms Jillian Broadbent AO
Chair
Clean Energy Finance Corporation
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Sydney NSW 2000

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Dear Ms Broadbent AO

Inquiry into the Government's Direct Action Plan

On 10 December 2013, the Senate referred the Government's Direct Action Plan to the Environment and Communications References Committee for inquiry and report by 24 March 2014. The full terms of reference are attached.

The Committee invites you to provide a written submission addressing issues that may be of relevance to you. The submission should be lodged by **20 January 2014**. The Committee prefers to receive submissions online as an attached document by accessing the committee website and selecting the Upload Submission Online link <https://senate.aph.gov.au/submissions/pages/logon.aspx>. Alternatively, submissions may be emailed as an attached document to ec.sen@aph.gov.au or mailed to the address below.

Submissions become Committee documents and are made public only after a decision by the Committee. Publication of submissions includes loading them onto the internet and making them available to other interested parties including the media. Please indicate if you wish the Committee to consider keeping your submission, or part thereof, confidential.

Any person or organisation making a submission must not release it without the approval of the Committee. Submissions are covered by parliamentary privilege, however the unauthorised release of a submission is not protected.

Information relating to Senate committee inquiries, including notes to assist in the preparation of submissions for a committee, can be located on the Internet at http://www.aph.gov.au/senate/committee/wit_sub/index.htm

The Committee will consider all submissions, and may invite individuals and organisations to give evidence at a public hearing.

Should you require further information, please contact the Committee Secretariat on (02) 6277 3526.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Christine McDonald'.

Christine McDonald

TERMS OF REFERENCE

On 10 December 2013, the Senate referred the following matter to the Environment and Communications References Committee for inquiry and report by 24 March 2014:

- a. An inquiry into the Abbott Government's Direct Action Plan and the Abbott Government's failure to systematically address climate change, including:
 - i. whether the Direct Action Plan has the capacity to deliver greenhouse gas emissions reductions consistent with Australia's fair share of the estimated global emissions budget that would constrain global warming to Australia's agreed goal of less than 2 degrees,
 - ii. whether the Direct Action Plan has the capacity to reduce greenhouse gas emissions adequately and cost effectively,
 - iii. the effect of technical issues that arise for measuring abatement under the Direct Action Plan, including additionality and establishing emissions baselines for emitting entities and long-term monitoring and reporting arrangements,
 - iv. the impact of the absence of policy certainty derived from the Direct Action Plan to encourage long-term business investment in the clean, low carbon economy,
 - v. the impact of the abolition of the Clean Energy Finance Corporation on the availability of capital for clean technology and industry investment,
 - vi. the repeal of the Clean Energy Package and the Direct Action Plan's impact on, and interaction with, the Carbon Farming Initiative,
 - vii. the fiscal and economic impact of the Direct Action Plan,
 - viii. the impact of repealing the Clean Energy Package on Australia's ability to systemically address climate change,
 - ix. the impact of repealing the Clean Energy Package on Australia's pollution cap,
 - x. the impact of repealing the Clean Energy Package on international efforts to reduce carbon pollution,
 - xi. the impact of abandoning linkage with the European Union on international cooperation to reduce emissions,
 - xii. the ability of the Government and the Australian people to receive expert independent advice on an appropriate carbon pollution cap for Australia following the abolition of the Climate Change Authority,
 - xiii. the impact of cuts to funding for the Australian Renewable Energy Agency, and
 - xiv. any other related matters; and
- b. In undertaking this inquiry the committee must have regard to the Climate Change Authority's draft report, *Reducing Australia's Greenhouse Gas Emissions – Targets and Progress Review*, dated October 2013.

2. Executive Summary

- This Clean Energy Finance Corporation (CEFC) submission is in response to the request of the Committee Secretary received in December 2013 (reproduced at section 2 above).
- The CEFC is an Australian Government owned fund which has proven itself as a flexible and cost-effective policy tool. To date the CEFC investment portfolio has been successful in creating jobs, growing Australian businesses and increasing the deployment of low carbon and renewable technologies across the nation.
- The CEFC has significant direct market experience in mobilising financiers to participate and develop the financial structures to grow clean energy investment. In this way, the CEFC is facilitating cost-effective direct action on abatement in Australia by way of its portfolio of investments. The lack of available finance, split incentives and inertia, have previously inhibited Australia's investment in some of the lowest cost emissions reduction projects.
- By August 2013, investment of \$536 million of CEFC funds has attracted \$1.55 billion in private sector co-financing for over \$2.2 billion in total project cost, delivered approximately 4 million tonnes of abatement, and achieved it at a negative cost (i.e. net return or benefit) of \$2.40 per tonne of abatement.
- The Emission Reduction Fund (ERF) design must address the challenges experienced by abatement project developers in obtaining upfront finance to implement abatement projects. In particular, the proposed five year forward contracts will be insufficient and may need to be for longer than five year's duration to be effective in attracting the necessary finance for abatement projects.
- The effectiveness of Direct Action and the ERF is co-dependent on what other policy remains in place [including the Large-scale Renewable Energy Target (LRET) and Small-scale Renewable Energy Scheme (SRES)] and could be enhanced if the market were provided with policy and regulatory certainty, including through contractual and regulatory certainty for ERF appropriations.
- The ERF as proposed would buy emissions reduction at the cheapest price through a reverse auction. In the absence of both available finance and development support (such as the CEFC), it is unlikely to be able to accessed by small to medium enterprises (SMEs) for building upgrades and energy efficiency. This risks the economy foregoing the broader benefits from improving the competitiveness of the SME sector and from realising the economic growth from innovation, technology development and employment generation from this sector.
- The Australian Government's policy intent to abolish the CEFC is estimated to cause a loss to the Budget of between \$125 million and \$186 million per annum once the Corporation's investment base reaches \$5 billion (i.e. half of its \$10 billion funding allocation)^[1].
- The CEFC could be a highly effective complementary mechanism supporting the ERF. It could continue to work with the private sector banks on low abatement cost projects which are smaller scale and which need facilitation to aggregate and structure financing to provide access to upfront capital that will most likely not be provided by the market acting alone.
- There is significant abatement opportunity that will be lost without the CEFC as there are real market barriers otherwise unaddressed. Without the CEFC,

^[1] CEFC Submission to the *Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and Related Bills*

momentum from demonstration effect; the move down the cost curve; the leverage from (and learnings of) CEFC's co-financiers; and the support for new technologies (which may facilitate cheaper emissions reductions in the future), will be unlikely to continue at the pace needed.

- The CEFC works well with ARENA, with ARENA able to be funded in future by CEFC receipts. However, this funding is at risk if the CEFC is abolished.

3. About the CEFC

KEY POINTS:

- **The CEFC is an Australian Government owned fund with a mission that is complementary to Direct Action**
- **In a short time it has proven itself cost effective**
- **It is Government policy to abolish the CEFC**

The CEFC is a legislated fund dedicated to working with the private sector to invest in clean energy projects. From April 2013, the staff and assets of Low Carbon Australia Limited (LCAL - a related entity formed in 2010) were transferred to the CEFC.

The CEFC's mission is to accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction.

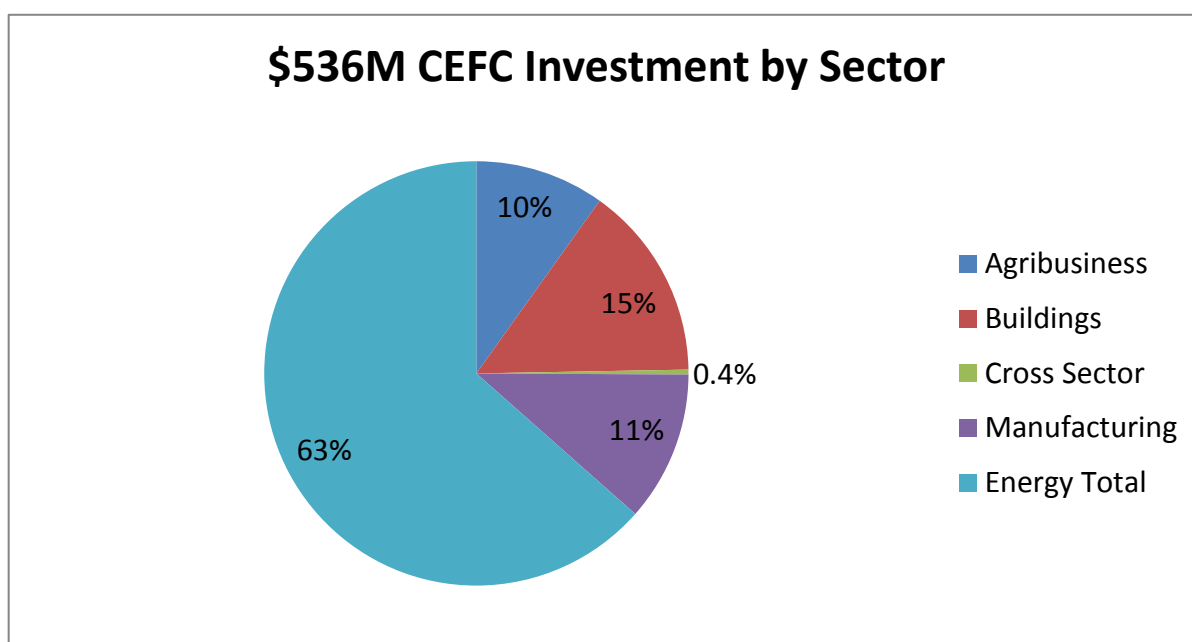
The CEFC is governed by a Board, comprising the Chair, Jillian Broadbent AO, and six other members with diverse business and government experience and an in-depth understanding of financing and energy markets.

The Corporation increases the flow of funding to the commercialisation and deployment of Australian-based renewable energy, low emissions and energy efficiency technologies ('emissions reduction projects') by mobilising public and private sector capital and skills, so preparing and positioning the Australian economy and industry for a carbon-constrained world.

CEFC Portfolio

The CEFC portfolio of investment is distributed across the energy, manufacturing, agribusiness, and buildings sectors (Figure 1 and Table 1 below). In addition, the CEFC also has a strong forward pipeline of viable investment opportunities in energy efficiency and emissions reduction.

Figure 1: CEFC investment portfolio by sector (20 August 2013)



By working with private sector co-financiers, the CEFC multiplies the total amount of funding available for investment. Through investing \$536 million of CEFC funds and attracting \$1.55 billion in private sector co-financing, by August 2013 the CEFC had facilitated over \$2.2 billion in projects, delivered approximately 4 million tonnes of abatement, and achieved it at negative cost (i.e. net return or benefit) of \$2.40 per tonne of abatement.

Table 1: The CEFC's investment impact to 20 August 2013

Sector	Generation Capacity Installed (MW)(b)	Annual tCO2e abated ('000)(b)	Average Investor (i.e. CEFC) Cost \$/tCO2e(a)(c)	Average Cost to Govt \$/tCO2e(a)(d)
Totals(e)	500	3,900	-\$2.40	\$0.20
Notes & Key: a) Negative cost indicates a positive return to investor/government b) 'Nameplate' or maximum operating output of installed generation c) Average Investor Cost = cost to CEFC as investor (including Government cost of capital and operational cost) d) Average Cost to Government = cost to government as funder (CEFC cost + Federal Grants received) e) Includes an estimate of effect of unapplied demand aggregation financing programs				

CEFC Operations

In its relatively short period of operation, the CEFC has invested across a broad base of technologies which will improve Australia's emission reduction options and help lower their cost.

The CEFC operates as a sector-focused financial institution that provides market based support and long-term financing. The CEFC is a professional and functional operation with a flexible, high performing team of 44 staff with extensive experience in investments, portfolio management, finance, corporate treasury, legal, risk management, governance, corporate affairs, human resources, marketing and communications and government.

The CEFC has added to the expertise and shared learning across the finance sector to build Australia's capacity to fund clean energy projects. The CEFC's legislative framework, funding and commercial approach for a public good outcome enable it to invest more time, effort and resources in transactions which have the public policy benefits it is charged to deliver. Such transactions might take more than a year to reach financial close because, for example, they are small, yet still complex; or, are remote and involve special challenges like transmission issues; or, are first in-kind technology that involves a range of skill sets that are not easily assembled in larger financial institutions.

The CEFC makes its investment decisions independently, based on rigorous assessment of the commercial business case, detailed due diligence and risk assessment on all projects, ensuring only those projects likely to deliver a return on investment in both an economic and an emissions reduction sense are supported with CEFC funding.

To date the CEFC investment portfolio has been successful in creating jobs, growing Australian businesses and increasing the deployment of low carbon and renewable technologies across the nation.

The CEFC has demonstrated that it represents a positive cost-benefit outcome for Australian taxpayers, businesses, the economy and the environment. Australia has made a valuable investment in establishing the CEFC as a flexible and low cost policy tool. Through combining market know-how in both finance and energy technology, including

the staff and assets of Low Carbon Australia, the CEFC has a proven capacity to mobilise private capital to achieve emissions reduction.

Current Status

The Australian Government has indicated its intent to abolish the CEFC, introducing a *Clean Energy Finance Corporation (Abolition) Bill 2013* into the Parliament. This Bill passed the House of Representatives but was defeated in the Senate in the December 2013 sittings.

As a statutory authority, the CEFC has cooperated with the Australian Government fully in provision of information and in making preparations necessary for such a shutdown. As required by its statutory mandate, so long as the law establishing the Corporation and its functions remain in effect, the CEFC will continue to perform its functions and operate in accordance with the law.

The CEFC's submission to the Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 has addressed the reasons advanced to date by various Government Ministers in seeking to shut down the CEFC.

4. Scope of submission

KEY POINTS:

- **The CEFC is not commenting on all terms of reference, and limiting its comment to matters which pertain to its own scope of operations**

The CEFC notes that the Committee has been provided with broad terms of reference into a review of the Direct Action Plan and climate change policy generally. The CEFC has confined its comment to those Terms of Reference that fall closest to the CEFC's functional remit and operational experience.

The submission includes chapters dealing with the following subject matter that align with a selection of the Committee's terms of reference, in particular:

- the capacity of the Direct Action Plan to reduce greenhouse gas emissions adequately and cost effectively (term of reference a.ii)
- the technical realities of measuring abatement under the Direct Action Plan (term of reference a.iii)
- the ability of the Direct Action Plan to deliver long-term business investment in the clean energy sector (term of reference a.iv)
- the fiscal and economic impact of the Direct Action Plan (term of reference a.vii) the record and achievements of the CEFC and Low Carbon Australia in financing Australian based emissions abatement and clean energy projects over the past three years and the impact of the abolition of the CEFC specifically with respect to the Budget and more generally for the finance and energy markets (term of reference a.v)
- the impact of repealing the Clean Energy Package on international efforts to reduce carbon pollution (term of reference a.x), and
- the impact of funding cuts to the Australian Renewable Energy Agency (term of reference a.xiii).

Within the above issues, this submission focuses solely on matters relevant to the CEFC and its private and government sector experience, incorporating the organisation's commercial market insight and public policy outcomes and accountability.

As such, this submission is largely limited to the Emissions Reduction Fund components of Direct Action and it does not address other aspects of the Direct Action Plan such as the Carbon Farming Initiative, the One Million Solar Roofs and 20 Million Trees programs.

This submission should also be read in conjunction with the submission the CEFC has submitted to the Australian Government's *'Emissions Reduction Fund Terms of Reference'*¹ and the submission the CEFC made in relation to the *Clean Energy Finance Corporation (Abolition) Bill 2013*.²

¹ CEFC (2013) *Submission by the Clean Energy Finance Corporation to the Australian Government's 'Emissions Reduction Fund Terms of Reference'*, available at <http://www.cleanenergyfinancecorp.com.au/media/65401/cefc_submission_erf_terms_of_reference.pdf>

² CEFC (2013) *Submission by the Clean Energy Finance Corporation to the Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills* available at <<http://www.cleanenergyfinancecorp.com.au/media/65406/cefc-submission-to-inquiry-into-the-clean-energy-legislation-carbon-tax-repeal-bill-2013-and-related-bills.pdf>>

5. The capacity of the Direct Action Plan to reduce greenhouse gas emission adequately and cost-effectively (Term of Reference a.ii)

KEY POINTS:

- **The task of Direct Action is co-dependent on what other policy remains in place (such as the LRET, SRES, ARENA)**
- **To achieve the cumulative emissions reduction target the ERF auction price needs to be low at \$4-\$7/tonne**
- **Many of the lowest cost projects are smaller scale and disaggregated. They need access to upfront capital that will most likely not be provided by the market.**
- **The CEFC could play a role in supporting the ERF**

There are two elements to addressing the Committee's term of reference a.ii, namely:

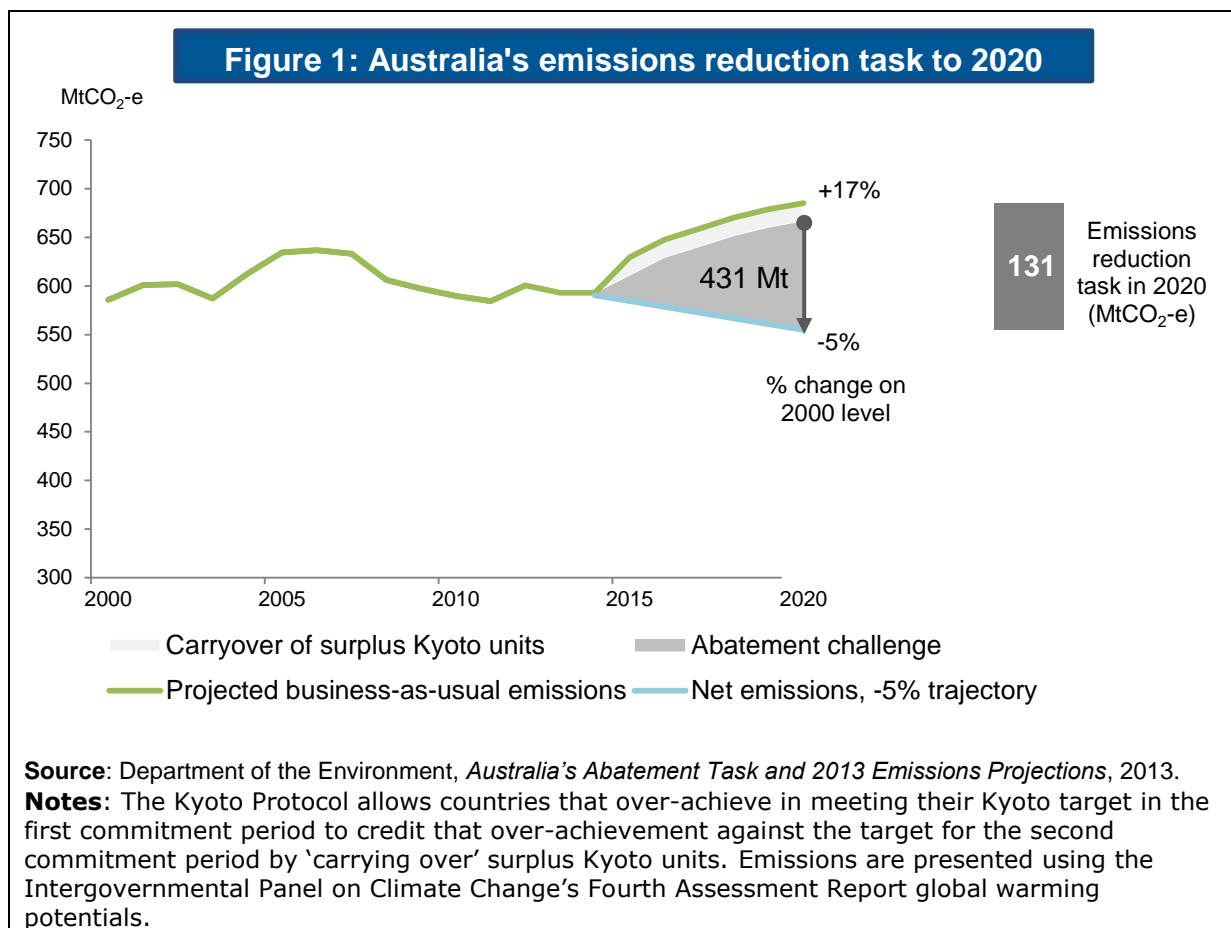
- Whether the Direct Action Plan has the capacity to reduce greenhouse gas emissions adequately ('adequacy')
- Whether the Direct Action Plan has the capacity to reduce greenhouse gas emissions cost effectively ('cost effectiveness')

5.1 Adequacy.

a. Is the Direct Action Plan quantitatively adequate?

The following diagram, reproduced directly from the Australian Government's Emissions Reduction Fund Green Paper ('the ERF Green Paper'),³ identifies the emissions reduction task facing this country – in cumulative terms (431Mt) and absolute terms in 2020 (131Mt).

³ Australian Government (2013) *Emissions Reduction Fund Green Paper*, Commonwealth of Australia, 2013. It should be acknowledged the target is an estimate and is itself subject to a number of variables. For example, changes in government regulation, general market conditions, and aggregate actions by state and local government, individual, business, community and individual actions that, in total, impact on the target.



'Direct Action' is a subset of policies within a range of Australian Government policy initiatives which impact towards achievement of emissions reduction goals, and which for the sake of convenience can be broadly sorted into three groups:

- 1) Policies which will remain unchanged by Direct Action or other foreshadowed changes in government policy in this area – e.g. the Greenhouse and Energy Minimum Standards (GEMS)
- 2) Policies which will change, but where the extent and impact of change is unclear - e.g. the Energy White Paper process, the foreshadowed RET review.
- 3) Other policies which are proposed by the Government to be defunded, reduced in scope or eliminated entirely– e.g. carbon price, ARENA, and the CEFC.

The impact of the changed policy settings may have an impact on the 431Mt target. For example, it is possible that the removal or substantial downscaling of the RET may revive the profitability of more carbon intensive forms of energy, and make the Direct Action task harder. If the RET review in 2014 were to reduce the renewables volume to around the 26-27,000 GWh some are arguing for, then the abatement reduction task from other sectors will be 10-15% (40-60Mt) larger as the displacement of fossil electricity (at 0.9-1t/MWh) by renewables at 0 will be lower.⁴

⁴ As another example of impact of changed policy settings, see Exhibit 52 at Appendix 1 of ClimateWorks (2010) *Low Carbon Growth Plan (March 2010)* at p99 and Figure 6 of ClimateWorks (2011) *Low Carbon Growth Plan (2011 update)* at p8 may serve indicatively to illustrate impacts on the investor cost curve by removing the carbon price.

However, taking the 431Mt target as given, and all other things being equal, whether Direct Action will be adequate to the task is a matter of estimating its impact, adding that impact to existing policies (i.e. 1 in the list above), subtracting the impacts of policies that are to be abolished (i.e. 3 in the list above), and adding or subtracting the impacts of 2 as required.

Once the matters in group 2) are determined, it should be possible to perform a ready assessment of whether Direct Action is adequate to the task.

What is clear is that even taking into account the abatement that could be achieved by other elements of Direct Action, to achieve the total volume of abatement required (a cumulative task of 431Mt to 2020), the hypothetical price per tonne of emissions purchased for abatement under the \$1.55bn Emissions Reduction Fund would need to be very low – possibly in the order of \$4-7/tonne if the ERF was expected to deliver the majority of this abatement target.

However, the ClimateWorks cost curve⁵ does not model this amount of abatement being available at that price. Reputex Carbon model an average abatement price of \$20/tCO₂e (and potentially rising as high as \$40 by 2018) based on the ERF attaining approximately 124 million abatement units into the Emissions Reduction Fund from 2014-17, with supply of 28 million Australian Carbon Credit Units (ACCUs) from the Carbon Farming Initiative and 96 million emissions reduction units to come from companies beating their emissions intensity baselines.⁶

As the CEFC's remit is the interaction of finance and energy, this analysis will focus on those relevant aspects of Direct Action discussed in the ERF Green Paper. The CEFC will highlight attributes of current design which may impact positively or negatively on the Direct Action's adequacy to the task.

b. What are the factors that will impact on the adequacy of Direct Action?

The key question as to adequacy is a question of volume at price.

In the ERF Green Paper, the Emission Reduction Fund component is said to have three basic features:

- Building on the existing elements of the National Greenhouse and Energy Reporting Scheme and the Carbon Farming Initiative
- A baseline calculus of emissions, with penalties for exceeding the baseline in certain cases.
- A fund for emissions reduction operating first by procurement and later by formal reverse auction, underpinned by tradeable forward contracts guaranteed by the government.

An examination of the ClimateWorks costs curve⁷ shows the lowest cost abatement activities to be concentrated in energy efficiency activities in buildings, transport and industry across the manufacturing, commercial building, residential and transport sectors.

Most of these types of projects are small-scale and geographically dispersed. The ERF Green Paper states (at page 3) that:

Some emissions reduction activities such as revegetation and household and commercial energy efficiency are small-scale actions that could be

⁵ClimateWorks, *Low Carbon Growth Plan (2011 update)*, 2011 (© Copyright, ClimateWorks) reproduced in the ERF Green Paper at Figure 1.5.

⁶ Reputex Carbon (2013) *Submission to the ERF Terms of Reference*.

⁷ See n5 above.

most cost-effectively implemented through aggregation. The Government will therefore encourage project aggregation and facilitate project development so that small businesses, households and farm groups can simply access the Emissions Reduction Fund in a practical and cost effective way.

According to the above mentioned ClimateWorks cost curve, if the small scale project opportunity is not captured, the price of abatement starts to increase - primarily larger scale forestry and power generation projects. To the extent this is so it should be noted more ERF funds per tonne will be required to get the project 'over the line'.

The CEFC and LCAL experience is that banks do not tend to concentrate on small project finance. If the CEFC is retained it could be a highly effective complementary mechanism to the ERF and could continue to work with the private sector banks to facilitate the types of projects that are likely to bid into the ERF.

Low Carbon Australia and the CEFC have established relationships with proven, experienced partners in the market with strong delivery capability, a developed pipeline of projects, and a willingness and capacity to innovate. These include:

- On-bill finance- offered through a co-finance agreement with energy utility, Origin. This finance model assists proponents to cover the upfront cost of energy efficiency projects but differs from regular hire purchase arrangements in that the equipment financed usually provides energy and dollar savings which can wholly or partially offset the cost of paying the finance back through regular energy utility bills.
- Energy Efficient Loan Program – the CEFC is partnering with Commonwealth Bank to provide finance to this \$100 million program aimed at manufacturers and other businesses upgrading their equipment and processes. Loans are available through Commonwealth Bank for upgrades including but not limited to lighting, power factor correction, variable speed drives, building management systems and metering, boiler upgrades, heating ventilation and air-conditioning upgrades, cogeneration or trigeneration installation and small-scale solar PV.
- EUAs – The CEFC and Low Carbon Australia have partnered with NAB and ANZ in providing funds managed through Eureka Funds Management to assist proponents undertake energy efficiency upgrades involving air-conditioning systems, building management systems and lighting. These projects tie finance to a commercial property rather than its owner and enable repayments through council rate notices. This structure allows longer payback periods, improving the attractiveness of undertaking energy efficiency upgrades.

The proposed design of the scheme defines a central feature which would result in a much lower emissions reduction than might otherwise be achieved:

- Applicant Bears the Risk of Upfront Costs Without the Certainty of Securing Finance - As described, the scheme requires a project proponent to conduct significant work in project development costs (such as project design, feasibility and bidding costs) *even before getting to auction*. Even with a perfectly sound business case and auction process there is a real risk they will be outbid and simply lose sunk costs.

Example – a major corporate spends \$1 million conducting engineering studies, putting together a comprehensive internal business case and seeking internal management and Board approval and seeking legal and tax advice on contracting risks. They are outbid at auction and don't implement since they were dependent on ERF funding for the business case to stack up under the additionality pre-selection criteria.

- Forward Contract Unlikely to Be Only Finance Necessary – If 'lowest cost' emissions abatement is the sole determinant as to whether a project receives an ERF payment, then for many projects (especially in energy efficiency) it is unlikely that the value of the forward contract will cover the project cost. In other words, the impact of the ERF payment can be expected to be marginal for many project types. The nature of project finance means that unless the business case is cash flow positive from day one, banks may not finance the project even with a forward contract. Australian banks do not typically offer project finance for projects less than \$20m. Without catalytic involvement such as is provided by the CEFC, the project will be stranded - unless the applicant has unutilised cash or an unutilised line of credit.

Commercial energy efficiency projects demonstrate this example. The abatement potential of Australia's existing building stock has been well documented and is widely accepted, with frequent reference to Australian building energy efficiency measures being some of the most cost effective abatement measures available. This is again evidenced in marginal abatement cost curves such as in *ClimateWorks' Low Carbon Growth Plan Update, 2011*.

Due to a range of potential barriers – company capability, motivation and project attractiveness - many of these measures remain unimplemented notwithstanding rising energy prices. If Direct Action, and the ERF more specifically, is intended to provide a financial incentive to deliver the lowest cost abatement then energy efficiency, and commercial buildings in particular, is likely to be a key target area.

Previous policies and programmes have been successful in catalysing energy efficiency activity in commercial buildings include the Green Building Fund and more recently, the availability of the CEFC's (and previously Low Carbon Australia's) co-finance products such as Environmental Upgrade Agreements (EUAs). These policies and programmes were successful in overcoming common barriers to energy efficiency activity by offering access to 'upfront' capital for a sufficient term to support the project, improving a project's payback rate and/or helping overcome the split incentive issues common between building owners and tenants.

If the ERF is implemented in its currently proposed format, where contracts are awarded for a maximum of 5 years, with payment post-delivery of abatement, then as a financial incentive it may (depending on the successful auction price) marginally improve a project's payback, but it would not address upfront capital barriers or help address split incentive issues.

The risk that the ERF only has marginal impact on energy efficiency investment activity can be illustrated through the theoretical example below:

Commercial Building Energy Efficiency Project Example:

- An energy efficiency upgrade project in a commercial building might identify cost effective measures that deliver 1,000tCO₂-e abatement p.a.
- Assuming the project is attractive and has relatively low upfront capital intensity requirement, it might require upfront investment of \$1,000,000⁸
- If the 1,000tCO₂-e p.a. abatement is through being more efficient and consuming less electricity purchased in NSW⁹ it might equate to a saving of 952 MWh p.a.

Assuming a retail price of \$150/MWh this would equate to a cost saving of \$143,000 p.a., then -

- Based on the above assumptions, the project has a payback of 7 years but is not being implemented since it is seeking ERF funding and meets the additionality requirements.
- If the project bid into the ERF, and was successful, it might secure a 5 year contract, requiring it to deliver 1,000tCO₂-e abatement, say for example at a price of \$25/tCO₂-e.
- This would equate to an additional annual revenue stream of \$25,000 p.a. or a 15% uplift on the existing energy cost savings. The maximum 5 year contract would improve the simple payback by 0.9 years to 6.1 years.
- There is a significant risk that this improvement in payback might be seen as marginal at best and therefore not catalyse additional activity where payback is a barrier. Furthermore it does nothing to address upfront capital issues (since payment is in arrears) or the split incentive. In addition, if the auction contract terms required the project developer to source alternative abatement at its own cost if energy use of the building actually increased due to changes in the way tenants used the building (e.g. more computers in a smaller space), then the additional revenue stream and shorter notional payback period could be viewed as insufficient to justify this risk, particularly where tenancy activities are outside the control of the bidder e.g. as an aggregator.

For the reasons highlighted in the example above, the availability of finance will remain a critical component required to enable energy efficiency activity in commercial buildings. Availability of grant funding can also help address these barriers, but is not as cost effective or scalable, as use of finance.

The same evaluation of likely attractiveness of ERF payments, post abatement activity, can be applied to all sectors and will have more or less impact depending on the prominence of payback rates as a barrier and the materiality of ERF payments in overcoming this. The CEFC notes that, comparable to other project types (e.g. reforestation), energy efficiency projects generally have relatively

⁸ ClimateWorks (2011) *Low Carbon Growth Plan (2011 update)* suggests typical upfront capital intensity for a cost effective commercial building project (and CEFC's experience is similar) is approximately \$1300/tCO₂-e. Therefore a more attractive project might have a capital intensity of \$1,000/tCO₂-e abated p.a.

⁹ Emissions intensity factor of 1.05kgCO₂-e/kWh from the National Greenhouse Account Factors, July 2013.

short payback periods, so a five year contract term is likely to be an even larger barrier to other project types.

- Mechanism to Deal With Market Gaps - Just because there is a financial benefit to be earned does not mean that action will occur. There are a range of well-documented market barriers, such as generally available market tenor, general policy uncertainty, threshold rates of return, split incentives, lack of know how etc. which would warrant being addressed in the proposed scheme.

Example – the project payback is 10 years – the bank only lends out to 5 years, and the ERF payment is insufficient to pull the payback below 8 years.

- No Finance Mechanism for the Non-ERF Component – If the sum awarded under the ERF won't cover the full costs there must be a mechanism by which a project proponent can finance the proposal.

Example – The project cost is \$12 million. The ERF award amounts to an effective subsidy of \$3 million. The proponent has a line of credit worth \$6 million and is having trouble getting the bank to commit to any more even though the project should generate additional profits by lowering costs associated with energy savings.

This could also be an issue for bankability where there is an incongruence between say, a 10 year contract for electricity off-take but the ERF contract only goes out to five years (see also Section 7 below).

- Scheme May Not Have Sufficient 'Push' or 'Pull' - To motivate action, across a broad, economy-wide range of sectors, including both large and small business, the parameters of the baseline measurement and penalty scheme (coupled with any reward or incentive mechanism) need to be sufficient such that it will not be cheaper to build-in the penalty cost.

How such a baseline and credit scheme could incentivise action was demonstrated in the *Submission by the Clean Energy Finance Corporation to the Australian Government's 'Emissions Reduction Fund Terms of Reference'*, but there has been recent suggestion that there will in fact be no penalty cost, at least for a transition period.¹⁰

Given the timeframes of the scheme delivery this 'no loss' position may be difficult to sustain, in that it may encourage baseline breaching by emitters in a consequence-free environment. Further, if no qualitative assessment is performed on bids, this could again encourage bidding to the scheme reckless to the outcome – for example a land or forestry project bid could be for 25 years abatement, none of which may ever eventuate.

- Scheme May Not Have Sufficient Funds to Purchase Volume of Abatement Required - By itself, and depending on what is achieved through other policy mechanisms, the ERF may not have sufficient funding to achieve the abatement necessary to meet the target.¹¹

¹⁰ Lloyd, Graham (2013) 'No penalty for carbon polluters', *The Australian*, 7 January 2013.

¹¹ Reputex Carbon (2013) *Abatement Supply and ERF Prices*, December 11 2013.

Example – ClimateWorks' *Low Carbon Growth Plan (2011 update)*, cited in the ERF Green Paper, identifies a range of activities up the investor cost curve well past the Reputex Carbon upper forecast price of \$40/tonne that may be financeable with loans, including: improved forest management, residential building envelope, closed cycle gas turbines, onshore wind, degraded farmland restoration and some biomass projects. These opportunities would most likely not be implemented.

- Pace of Methodologies Could be a Determinant of Success: For participants to apply in any volume via applications based on accepted carbon methodologies there must first of all be methodologies. The pace of development of a full range of methodologies and approval of existing methodologies will be important factors in the rate and pattern of ERF uptake.
- Scheme Design Should Incorporate Long Project Lead Times: Long project lead times are routine in contracting and construction. This was the LCAL and CEFC experience and the ERF needs to build this expectation into its lead times.

In putting an absolute cut-off for abatement to be achieved (i.e. at 2020) this does not leave very much time for the usual two years to develop, bid and build options post the scheme being implemented in 2014 – which may serve to further limit which proposals can bid in good conscience.

The ERF is not the first scheme designed around competitive purchased abatement. The Greenhouse Gas Abatement Program (GGAP) 'was a grant program to support activities likely to result in substantial emissions reductions or substantial sink enhancement.'¹² GGAP struggled to find enough applicants, and of those that it awarded, many had failed to complete construction within given timeframes. In relation to GGAP's failure to achieve its targets within timeline, the ANAO found:

*'The lengthy negotiation process for major projects are a result of a combination of the technical challenges required for results, as well as the substantial residual project risks being managed through the negotiable terms in formal agreements. Changing ownership and personnel in companies involved in projects and uncertainty about technologies and legal or financial issues, are particular challenges noted during the course of the audit...'*¹³

5.2 Cost Effectiveness

Making the Direct Action Plan cost effective

As has been previously demonstrated, the effective and efficient use of public funds is a crucial consideration in designing a response to global warming.¹⁴ Aspects include:

- Cost of Administration – Administering the ERF and other components of Direct Action will necessitate a development of number of program and regulatory activities (e.g. development of methodology, the auction process, project monitoring, acquisition etc.).¹⁵ The costs of administration ought to be added into

¹² ANAO (2010) *Audit Report No.26 2009-10: Administration of Climate Change Programs* at 42.

¹³ ANAO (2004) *Audit Report No.34 2003-04: The Administration of Major Programs: Australian Greenhouse Office*, p46 at 4.6.

¹⁴ See for example the two ANAO reports cited above.

¹⁵ See, for example, "Direct Action Calls for More Staff: Experts": *Australian Financial Review* Wednesday 15 January 2014

calculus of the auction price to determine the true cost of abatement under the Scheme.

- Lowest Cost – Reputex Carbon are estimating an effective price of abatement under the ERF of \$20-\$40 tonne.¹⁶ As a comparison, the CEFC is presently loaning for abatement at a negative cost (i.e. a benefit to government) of \$2.40 per tonne. Clearly, the ERF will not offer *absolute* lowest cost abatement as it will not recoup moneys lent with interest as the CEFC does. This is not to say that there is no place for an ERF style mechanism, or grants, or both. As a financier, the CEFC cannot lend to very early stage technologies or to very thinly capitalised entities, and there is still a role for government to assist in this regard – for example by ARENA or in the Renewable Energy Equity Fund established by the previous Howard Government. Conversely, for those successful ERF projects which cannot attract sufficient private sector finance e.g. due to small size or short tenor, the CEFC could play a role in supplementing the private sector finance available.
- Additionality - the ERF Green Paper states:
'Some schemes have sought to test whether individual projects would be financially viable without additional financial support — called 'financial additionality'. In general this approach is resource intensive for project proponents and regulators. Due to the high administrative costs involved, this approach is not favoured by the Government, although views are sought on this element of additionality.'

As a financier, the CEFC does not finance projects where funds are already available to support the project. Contracts for abatement (such as proposed in the ERF) can assist a proponent's business case to move from financial viability to profitability (and thus make the difference overall as to whether a given project proceeds). The risk in not requiring some type of assessment of financial viability/additionality is that it is difficult to justify the ERF's (i.e. the taxpayers) funding projects which would have been funded anyway and where the public funding just represents a windfall profit for the developer. It leaves the program more open to gaming for funding for projects which would have occurred otherwise.

The ANAO has previously commented in relation to the place of an 'additionality' criterion in the area of climate change policy that:

*'The ANAO considers that an important part of project appraisal is that an agency should be satisfied that projects would not proceed without assistance. Otherwise, funds paid in such circumstances provide no added value and represent an opportunity cost to the Australian Government. The ANAO considers that all future programs should address this criterion in the appraisal process.'*¹⁷

- Relative Permanence of Abatement - Buying abatement from projects that capture or reduce emissions only during the life of the project or the ERF contract is not a reduction but an offset. While one might expect all emissions saved (as compared to BAU activity) to degrade over time as equipment fails and technology advances, there are still qualitative differences in the relative permanence of abatement achieved. To the extent the scheme funds are directed to offsetting projects rather than more permanent abatement the economy may have to pay for the abatement more than once.

¹⁶ Reputex Carbon (2013) *Abatement Supply and ERF Prices*, December 11 2013.

¹⁷ ANAO (2004) *Audit Report No.34 2003-04: The Administration of Major Programs: Australian Greenhouse Office*, p50 at 3.13.

- Windfall Profiteering - Reputex have highlighted that businesses may receive windfall profits for ordinary fluctuation which drives their emissions below baseline ('grey credits').¹⁸ Unless some means of preventing this is built in to the scheme, in the event of a business downturn (either economy-wide or across a particular sector due to reasons unrelated to carbon abatement) this could become widespread.
- Duration of Emissions Reduction – The methodologies adopted must accurately take into account factors of degradation, such as the carbon emissions factors developed by Low Carbon Australia, endorsed by the Australian Government and used by the CEFC. If the land sector is to play a large part in reducing emissions, this should include adjusted assessment of risk of loss of claimed abatement through bushfire or changed land use. The scheme should also address the risk that abatement is granted for a land sector project over five years, and that abatement is then partially or completely reversed.

¹⁸ Reputex Carbon (2013) *Abatement Supply and ERF Prices*, December 11 2013.

6. Measuring abatement under the Direct Action Plan (Term of Reference a.iii)

KEY POINTS:

- **Several methodologies are available as already developed but there are still gaps**
- **Developing new methodologies can be long and expensive – this may create difficulties in a scheme which has to deliver within 6 years**
- **Measurement and verification is important for scheme integrity but it should be noted it builds in costs to the proponent, or the administrator, or both**

The CEFC again prefaces its remarks with the proviso that the commentary in this section relates only to CEFC areas of expertise.

Methodologies

The fundamental element to measuring abatement is establishing the methodology by which abatement is measured. Given the wide ranging activities that could potentially be funded under the ERF, an equally wide range of methodologies will need to be available to support these. Although Australia has made significant contribution to development of relevant methodologies through the Carbon Farming Initiative (CFI), State White Certificate Schemes and the National Greenhouse Gas Reporting Scheme, there are still significant gaps where appropriate methodologies are not yet in place.

Whilst broad based methodologies, covering a wide range of activities, might prove effective in enabling a wider range of projects to be applicable under that approach, the lack of tailoring to a specific abatement activity type might lead to sub-optimal measurement of savings and reduced effectiveness.

Similarly there might be a tension between the need to introduce methodologies soon after introduction of the ERF (i.e. adoption of readily available international methodologies) and the need to take the time to ensure a methodology is suitable for the Australian market, particularly where a different additionality approach is proposed (noting the CDM revolves around the concept of financial additionality). The former ensures projects being considered in the near future have an applicable methodology to base their bid, but it's only through the latter that optimal might be recognised.

Experience gained from project proponents seeking to have project methodologies approved under the CFI must also be considered. The resource and monetary costs have been significant, and the timescales required to achieve approval have been lengthy. This has been implicitly recognised in the ERF Green Paper with stated ambitions to reduce approval times and streamline procedure. This will be necessary as methodology approval timescales (in excess of a year) combined with construction periods for large projects (often exceeding a year), will leave very little time for abatement to be realised ahead of the 2020 deadline.

Measurement and Verification

Although recognising there will be multiple methodologies, the likelihood is that all will require a significant element Measurement and Verification (M&V) of abatement. M&V of savings is a critical component of any energy efficiency or carbon abatement project to ensure the core ERF requirement of real abatement.

The challenge faced by the ERF scheme as proposed is determining how to build in a demonstration of abatement achieved, without adding additional compliance and/or administrative costs that are not essential to the success of the project. The objective after all is to catalyse abatement activity, and not to divert funding away from abatement activities to instead demonstrate achievement. Furthermore with the financial incentives offered by the ERF potentially being marginal (see Section 5 above) any additional project costs for measuring abatement will only erode this marginal incentive and lead to the cost of abatement increasing.

For example the *Australian Best Practice Guide to Measurement & Verification of Energy Savings*¹⁹ suggests allocating costs for M&V in an energy efficiency project of 1-10% of energy cost savings achieved depending on the project. Bearing in mind the ERF might only be offering a 15% additional payment on top of the energy cost savings, up to two thirds of this additional incentive might be swallowed by ERF abatement measurement requirements. Whilst this level of stringent demonstration of abatement might be common for some 50% grant funded projects, where ERF incentives prove more marginal, the onus on reporting obligations needs to also adapt. The risk otherwise is that cost-prohibitive additional requirements are built in to the bids of prudent project developers and an otherwise meritorious project will not be in a position to take advantage of ERF funding.

Finally, a critical aspect of quantifying abatement is to establish the baseline against which emission reductions are compared. It is not yet sufficiently clear (as described in the ERF Green Paper) how baselines would be established, and significant issues are involved, including:

- Requirement for evidence of historic baseline data – newer projects might have insufficient historic data to establish a baseline, yet their abatement potential is no less diminished. Measurement techniques that rule out these projects will increase the cost of the ERF.
- Misleading baseline data – historic baseline emissions may be disconnected from likely emissions in the future (change of operational hours, change in product mix and relative emission intensity etc.) and therefore may not accurately predict business-as-usual emissions. The risk is that such non-additional activity is rewarded under the ERF.

¹⁹ Table 7.2 at 52.

7. The Direct Action Plan and long-term business investment in the clean energy sector (Term of Reference a.iv)

KEY POINTS:

- **There would be benefits from broadening the focus and extending eligibility criteria beyond 'lowest cost' positive externalities – including benefits to competitiveness and long-term innovation and technology development, and permanence of outcome ought to be considered**
- **Contracts may need to be for longer than five years' duration to be effective in assisting the financing of the project**
- **To deal with risk of non-delivery – let the market bid for a lower 'non-guaranteed' contract that awards on a pro-rata basis for delivery**
- **Publish a benchmark price cap (or at least an indication of it) to avoid wasted time and effort**
- **Policy and regulatory certainty required by the market**
- **CEFC could work in conjunction to assist in financing a successful ERF bidder**

Based on its own, and extensive international experience in carbon financing, the CEFC believes that achieving adequate long-term business investment in the clean energy sector needs to incorporate:

- selection criteria beyond 'lowest cost' and a more rigorous project feasibility assessment and pre-selection process; and
- adjustments to the structure to encourage debt and equity financiers to provide the funding support required for participating projects.

As explained in our submission on the 'Emission Reduction Terms of Reference', adjustments to the proposed Emissions Reduction Fund structure and process could help to deliver the long-term business investment that is required to achieve the goals of the Direct Action scheme. Without these adjustments, the Emission Reduction Fund could fail to attract feasible and creditworthy projects that achieve the promised abatement:

- **Broaden the focus and extend eligibility criteria beyond 'lowest cost':**
A clear focus on cost efficiency is commendable for responsible spending of Government funds. However, a focus exclusively on least cost can mean that the Plan only supports a narrow band of technologies which may not end up being the most cost effective for the economy as a whole, nor over the longer term. A focus purely on abatement cost will risk the competitiveness and long-term innovation and technology development which are generated from the small and mid-sized business sector and could have an adverse impact on growth in the economy and employment. A program based purely on abatement cost alone, risks Australia losing these broader benefits of economic diversification and development from new technologies and investment by SMEs which ultimately are the employment and innovation generators across the economy.

If one technology or project type (e.g. soil carbon) could reduce emissions at the 'cheapest' rate and all Emission Reduction Fund monies could be spent on this single sector, there is the risk of over stimulation of some sectors, with a flood of new businesses entering the market sector, with resultant

performance risk. The Emission Reduction Fund design should take care to avoid such market distortions and adverse consequences. In addition, by becoming involved in a project as a purchaser of carbon, the Emissions Reduction Fund will in turn need to address how risks such as Occupational Health and Safety are managed contractually. ARENA and the CEFC, as Government-owned bodies funding abatement projects, both have experience in this respect.

It has been common practice in the market to date²⁰ for governments or banks purchasing carbon credits from projects to be delivered in the future, to conduct minimum due diligence to assess the feasibility of the project. The CEFC proposes that such an assessment should be included as part of the Government's eligibility criteria for participation.

- **'Lowest cost' does not guarantee most efficient outcome:** Any ordinary procurement process, from employing a home builder to funding a toll road construction, will show that a promise of the cheapest price does not necessarily result in the best outcome, unless the promised price is known to be backed up by experience, financial resources and delivery capability and reliability. The ERF Green Paper does not propose to pre-screen projects other than for technical eligibility and price, so the Government would have no ability to exclude proposals based on lack of financial resources or delivery capability, or to include proposals based on outstanding ancillary benefits e.g. job outcomes. The CEFC suggests that the eligibility criteria should include a requirement that projects demonstrate 'feasibility' including financing prospects, management strength, technical risk, credit risk and construction/implementation risk. Only feasible projects should be eligible to participate at auction.

The minimal screening criteria envisaged in the plan risks auctions receiving bids for cheap abatement from projects which can't be delivered. Termination of a significant number of carbon purchase contracts for non-performance (which could have been predicted using some basic due diligence), could result in market disruption, reputational risk and lost opportunity cost and a failure of the scheme objectives. This in turn will be a strong disincentive to many other participants.

- **Increase maximum term of purchase contracts:** The ERF Green Paper indicates that the contracts entered into by the Government would have a 'maximum duration of five years'. This is understood to be a five year term i.e. the contract expires a maximum five years after it is entered into. The ERF Green Paper also suggests that project developers use the contract as a basis for obtaining private sector finance. In addition, projects do not need to have full approvals and permits before offering at auction, although these will be a condition precedent to a project. The time required for a project to achieve all relevant permits, as well as raising debt and equity for financial close and completing construction/implementation could take several years. Assuming abatement is measured and credited annually, a project may only start achieving revenue from the sale of the credits towards the end of the third year from the auction. If the contract is only valid for a five year term

²⁰ For example, see a summary of the World Bank carbon funds' approach at <https://crinfo.worldbank.org/wbcrinfo/sites/wbcrinfo/files/attachments/WB%20Carbon%20Offset%20Guidelines%20Public.pdf> or <http://www.ifc.org/wps/wcm/connect/6efd38804a9e309dbe73fe9e0dc67fc6/IFC+Carbon+Finance+Products.pdf?MOD=AJPERES> and the Norwegian Government's approach at <http://www.nefco.org/sites/nefco.viestinta.org/files/invitation.pdf>

then this would only allow for three years' worth of abatement. Assuming that the 'additionality' criteria requires projects to prove that they need the carbon credit value to occur, then a project would need a three year payback period to be financially viable. This will increase the dollar per tonne revenues that the project requires, so result in higher offer prices. Five years is likely to be altogether too short a period for many project types including those under the current Carbon Farming Initiative. Energy efficiency projects with a three year payback are likely to already have been implemented under the existing carbon pricing regime, so many of these projects are likely to be excluded as well.

Many of the successful projects will need to raise bank finance to achieve implementation. Banks generally require a firm offtake agreement for the product of the project (in this case the forward purchase agreement for carbon) and will generally require at least a 1 to 2 year 'tail' between the expiry of the offtake agreement and the subsequent expiry of the loan. This 'tail' gives the bank comfort that if the project underperforms then they have time to pay off the loan before the offtake agreement expires. So if the government will only pay for 3 years of credit (allowing time for financial close, construction and implementation), a bank will only likely loan 1 to 2 years on this basis, to mitigate the risk of underperformance. A repayment period of 1 to 2 years will narrow down the eligible projects to a very small and potentially expensive group.

Increasing the maximum tenor of the contracts to a minimum of five years from the date of practical completion of the project, which could be 6-8 years after the date of the auction would meet market needs. An even longer tenor, ideally, 7 or 8 years after the date of operation could better deliver a broader spectrum of projects and technologies, with persistent long-term abatement reductions. This time period is consistent with the loan tenor that CEFC has found that many strong projects require for payback.

- **Allow for two auction streams for 'guaranteed' and 'non-guaranteed' delivery:** The ERF Green Paper proposes that contracts will 'include a range of standard commercial provisions to manage changes in circumstances that could affect the implementation of projects and the delivery of emissions reductions', and that the Government could seek redress if emissions reductions do not occur. The CEFC acknowledges that in seeking to define terms of the forward contract, the Government will seek to strike a balance between:
 - certainty of delivery (which is best achieved by requiring creditworthy project developers to 'guarantee' delivery, and provide replacement credits if their project underperforms), and
 - including good projects which may not be in a position to guarantee delivery (for example, due to project risk e.g. slow growth or weather events in forestry projects, or delays in achieving financing or construction), or where such a guarantee is not worth much due to the small financial backing of the project developer.

While some projects could easily guarantee emission reductions savings (for example, some large service businesses will guarantee energy savings under Energy Performance Contracts), requiring a guarantee from all projects would rule out a number of projects which may otherwise achieve cheap abatement. For example, an aggregator of small discrete projects may not directly control the projects and could not guarantee performance of a portfolio. Requiring a delivery guarantee would result in projects only offering a small proportion of

the potential abatement into the auction, to ensure there is a substantive buffer for unexpected events. In addition, the risk of incurring additional cost to replace offsets (particularly if international offsets are not allowed) could incur substantial risk to the balance sheet of a project owner, which will be incorporated in a bank's assessment of whether or not to lend. The CEFC suggests that there are two forms of contract – one where delivery is guaranteed, with make-good provisions or liquidated damages for non-delivery, and another where the government purchases whatever is produced. Auction participants would choose which contract they wanted to bid under. The price paid for the guaranteed credits would be expected to be higher than the non-guaranteed credits, but the overall cost to the government should be lower as otherwise the non-guaranteed projects would not have participated.

- **Publish or remove auction settlement price cap:** CEFC notes the proposal in the ERF Green Paper that the auction will incorporate a 'commercial-in-confidence benchmark price',²¹ and that abatement will be purchased at lowest cost up to this price. We understand that this benchmark price is proposed to operate as a settlement price cap on the dollars per tonne that the Emissions Reduction Fund would pay in a particular auction, but that it is not proposed to disclose this cap to auction participants. Independent modelling has shown, consistent with CEFC's experience, that an abatement cost of between AU\$20-\$40 per tonne is the likely settlement price needed to achieve the goals of the Emission Reduction Fund.²² Participants in the auction would therefore run the clear risk that the undisclosed price cap in the auction would be well below the minimum price required, so that few offers would be successful. This would lead to much wasted expense and time for auction participants. For large companies where the potential revenue from the Emission Reduction Fund is a small part of their business, the possibility of wasted time and money would be a strong disincentive to participation. Publishing a benchmark price in advance for the auctions would ensure that only those participants who can achieve abatement below the benchmark will expend time and money developing project proposals and participating in auctions. Alternatively, the concept of the benchmark price might be abandoned, and instead the overall funds available for an auction published in advance, with abatement purchased on a reverse auction basis until the available funds are expended. The CEFC notes that it is proposed that the Government would publish information on auction results, and we would encourage the same transparency with the price cap.
- **Create both contractual and regulatory certainty for Emission Reduction Fund appropriations:** Investors in the clean energy sector have, over the past ten years, endured a range of regulatory change and uncertainty. As discussed above, the development of projects to a stage at which they can contemplate bidding into an auction takes time and money, and before spending this time and money project developers will want certainty that there will be future appropriations to support subsequent auctions in which they intend to participate. We note that in the Mid-Year Economic and Fiscal Outlook the announced Emission Reduction Fund allocations were not specifically identified, although other aspects of the Direct Action policy were included. Legislative, or at least budgetary, certainty around the amount and timing of Emission Reduction Fund allocations would greatly assist market functioning and certainty. In addition, an inclusion of a

²¹ Page 4 ERF Green Paper

²² Reputex Carbon (2013) *Abatement Supply and ERF Prices*, December 11 2013.

clause allowing the Government to terminate for convenience (which is common in other Government contracts) creates uncertainty and is likely to prove unacceptable to project developers and their financiers.

- **Design Emission Reduction Fund to work in complement with other Government financing mechanisms:** It is very possible that, at least for the first few auction rounds, traditional private sector financiers may not perceive sufficient revenue tenor or certainty to commit large amounts of funding to prospective projects. Based on the current proposal, the Emission Reduction Fund would not discover whether or not projects were bankable until the deadline passed for any conditions precedent in the forward purchase agreements (i.e. effectively until the projects failed to be implemented on time). This could be a matter of years after the auction, putting the Government further behind in its abatement target. Utilising the CEFC's investment and project development expertise to broaden the access of SMEs and a broader range of projects to the ERF through facilitating financial aggregation and mobilising co-financiers to invest.²³ Based on international experience multilaterally and in Europe and more recently in the U.S., the CEFC and the Emission Reduction Fund could be complementary measures, where funding arms and carbon procurement arms work together to facilitate emission reduction projects at least overall cost.

²³ See our prior submission <http://www.cleanenergyfinancecorp.com.au/media/65406/cefc-submission-to-inquiry-into-the-clean-energy-legislation-carbon-tax-repeal-bill-2013-and-related-bills.pdf>

8. The fiscal and economic impact of the Direct Action Plan (Term of Reference a.vii)

KEY POINTS:

- **Abolishing the CEFC will cost the taxpayer**
- **The ERF will cost the taxpayer whether it is successful or not**
- **There are economic costs to be considered if SMEs are locked out of participating**

An economic analysis or fiscal analysis on the impact of Direct Action is beyond the remit of the CEFC. The Corporation reserves comment on Committee term of reference a.vii. with exception of the following:

Fiscal Losses Associated with Abolishing the CEFC

Abolishing the CEFC will not achieve savings, but instead, will cost the taxpayer money.

As reported in the *Submission by the Clean Energy Finance Corporation to the Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills*,²⁴ the CEFC estimates that abolition of the Corporation will cause an annual fiscal balance loss of between \$125 million and \$186 million per annum once the Corporation reaches an investment base of \$5 billion.²⁵

Fiscal Losses Associated with Implementing an ERF

Unlike the CEFC, there is no repayment of funds under the ERF. The fiscal balance loss over forward estimates could therefore be expected to be the value of the fund i.e. \$1.55 billion.

However, this assumes 100% uptake of the ERF and 100% delivery on the forward contracts which may be overly optimistic. Because all payments by the ERF will be a loss to Government, to the extent that either:

- The auction fails, or
- The successful recipient fails to deliver;

then the unexpended amount could either be re-phased or returned to Budget as a saving.

Opportunity Cost Losses Associated with ERF

To the extent the ERF design does not deal with a subset of what Reputex Carbon calls 'grey credits' (credits for reductions below BAU that are generated by windfall), there is also a lost opportunity cost to the Commonwealth, and more dollars will be required from the scheme overall to meet the investor cost of legitimate action.

If the ERF funds are designed to substitute in the market for CEFC funds, then to the extent this is the case, the forgone investment return for the government (i.e. the net interest income) that the CEFC would have earned on loan/investment funds should also

²⁴ CEFC (2013).

²⁵ Pages 22-25 - based on the assumed yields and AOFM cost of funding the CEFC. A synopsis appears in section 9 below at Table 1 and Figure 2.

be counted as an opportunity cost of the ERF. Refer "**Fiscal Losses Associated with Abolishing the CEFC**" above for the estimated opportunity cost of between \$125m and \$186m per annum of a grants-based vs. loan-based program (in addition to the real capital cost of a grants-based vs loans based programs).

Economic Opportunity Costs

Projects which are foregone because of the lack of CEFC-type funding (loan based finance specifically tailored to the energy sector and the project) represent another opportunity cost to the extent that they are completely lost or cost more to do in another way.

Small to medium enterprises ('SMEs') are often described as the 'engine room' of the economy but this segment is least able to take the risk of investing the up-front capital associated with project development costs (such as project design, feasibility and bidding costs) before going to competitive auction.

According to the ERF Green Paper, the ERF may not accept 'small' bids, regardless of whether they are lowest cost per tonne.²⁶ Small bids (in project finance terms, less than \$20 million) are most likely to emerge from the SME end of the business spectrum. To the extent these projects are then abandoned because they cannot find another finance mechanism, they represent an opportunity cost. Note that if this occurs in any volume it may also impact on the ERF's average bid price.

'Aggregation' is suggested in the ERF Green Paper to be the solution.²⁷ The only financial products which aggregate demand in this way for energy efficiency, small-scale renewables and low emissions reduction are those developed and managed by the CEFC, or Low Carbon Australia (now integrated into the CEFC) – another argument for the CEFC's retention. By its nature project finance demands bespoke approach in financing development and due diligence in the assessment of risk, security and the business case of the individual project. The CEFC has developed aggregation finance which incorporates rigorous commercial assessment. Dealing with SMEs can be expensive to perform - still profitable – but potentially below the rates of return sought by banks, or to meet business needs, these projects require finance over longer term than typically available to them from banks. Notwithstanding the achievements of the CEFC and (and before it, Low Carbon Australia) in developing finance products to meet these needs, they do not suit all worthy projects, which is why both the CEFC and LCAL have on occasion financed small projects directly. This in turn underlines the flexibility and utility of the framework and mandate under which the CEFC operates.

However, the experience of the CEFC (and before it, Low Carbon Australia) suggests that the ERF as designed - and certainly without a CEFC - has the potential to significantly distort the market with typically large entities receiving free public funds to improve their energy efficiency (to reduce emissions) and drive down their operating costs, while the SMEs will be competitively disadvantaged as they do not operate at the scale required and are unable to front the capital, necessary to benefit from Direct Action and the ERF .

The cost to Australian GDP from disadvantaging SMEs (particularly in manufacturing and technology development and deployment) and the consequential lack of employment growth within the SME space will likely be an opportunity cost associated with Direct Action and the ERF. A loss of competition generally in the Australian market due to closure or relocation outside Australia of SMEs who find themselves competitively disadvantaged would also likely have an adverse impact on consumers who are likely to

²⁶ Page 31.

²⁷ Ibid.

suffer through less choice / higher prices resulting from less competition in the Australian economy.

Finally, the CEFC is required by investment mandate to consider positive externalities to its investment transactions. To the extent that these externalities do not otherwise eventuate they are opportunity costs.

9. The impact of the abolition of the CEFC (Term of Reference a.v)

KEY POINTS:

- The CEFC is working well to date as it was designed to do
- The CEFC is a flexible and low cost policy tool which is effective at addressing market barriers
- In the event abolition, the CEFC will transfer its contracts to the Australian Government who will then be responsible for administration of a number of financial products.
- There are no savings to be made by abolishing the CEFC – instead the taxpayer will make a loss by abolishing it
- There is significant abatement opportunity that will be lost without a CEFC as there are real market barriers otherwise unaddressed

The full impact on the energy industry specifically, and the Australian economy more widely, from the abolition of the Clean Energy Finance Corporation (CEFC) has been well publicised in recent months by the Australian media and in statements made by well-regarded eminent commentators and a range of Australian companies, organisations, peak bodies and industry experts.

The CEFC submitted a detailed submission on the impact of its abolition to the *Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills*.²⁸ The following chapter should be read in conjunction with that submission which expands in more detail in respect of issues arising from abolition of the CEFC.

In assessing the full impact of the abolition of the CEFC it is important firstly to examine the positive impact of its activities and to understand the prudent operation of the CEFC in practice. The box below demonstrates impact after just one year since the CEFC Act was proclaimed.

Overview of the CEFC's Achievements– August 2012 to August 2013

- CEFC funded projects involve over 500MW of clean electricity generation capacity installed or supported
- The CEFC has developed a total portfolio of \$536 million and through our co-finance partners have invested in projects over \$2.2 billion in value
- The CEFC is delivering abatement at negative cost (i.e. benefit) to the taxpayer of \$2.40 per tonne of CO₂ abated (net of government cost of borrowing)
- The CEFC is investing across a broad range of technologies including wind, solar, energy efficiency and low emissions technologies
- The CEFC invests in projects that are demonstrating the benefits of proven technologies in the Australian market
- The CEFC has conducted active discussions with more than 50 proponents for \$8 billion in projects and initial assessment of more than 250 projects together representing \$16 billion of opportunity

²⁸ The submission can be found at <http://www.cleanenergyfinancecorp.com.au/media/65406/cefc-submission-to-inquiry-into-the-clean-energy-legislation-carbon-tax-repeal-bill-2013-and-related-bills.pdf>

- The CEFC's investments will deliver an estimated 3.88 million tonnes of CO2-e abated annually
- CEFC investments assist in building Australia's clean energy supply chain capability
- The CEFC is funding projects in regional and rural Australia, supporting 21st century jobs in local communities
- Many industries are benefiting from CEFC financing, including agribusiness, property, manufacturing, utilities and local government
- Co-financing is integral to the CEFC strategy. Through matched private sector funds of \$2.90 for each \$1 of CEFC investment, the CEFC has been able to catalyse over \$1.55 billion in non-CEFC private capital investment in projects and programs to deploy renewables and to improve energy efficiency
- The 11 investments originated by the CEFC to date exceed the five-year Australian Government bond rate. The CEFC investments to 20 August 2013 carry an average yield of 7.33 per cent. The five-year bond rate across the portfolio was 3.11 per cent.

How the CEFC addresses market barriers

The main positive impact that the CEFC is required to deliver as an institution is to help address typical market barriers facing the sector. These barriers might include:

- capital constraints for organisations facing competing investment priorities;
- high transaction costs pitched against the small scale of projects;
- payback periods in excess of typical corporate funding finance terms;
- reluctance of organisations to finance non-core business capital projects in difficult economic conditions;
- lengthy time frames to acquire project approval through complex internal decision making processes within some organisations;
- lack of familiarity in identifying appropriate technology solutions or suppliers/vendors to deliver a project;
- sizeable construction lead times; and
- the scale and depth of a still developing clean technology sector leading to capacity constraints in skill and project delivery
- Uncertainty in policy and regulatory conditions that underpin return.

These market barriers are well documented,²⁹ and are not unique to the Australian market. For example a recent Bloomberg New Energy Finance Report³⁰ found practical constraints that:

'renewable power projects may be of too small a ticket size to attract large funds; smaller funds lack knowledge and the resources to build specialist teams; some institutions may feel that they are other, less risky types of infrastructure they can invest in, and so it is not worth investing to build an expertise in clean energy; consultants, or "gatekeepers", that advise pension funds on investments may not be familiar themselves with clean energy projects; and the new breed of quoted project funds may not be large enough – yet – to command the attention of a wide institutional audience....There are also policy and political issues. Long-term funds have become used to investing a percentage of their capital in

²⁹ For example Garnaut, Ross (2008) *The Garnaut Climate Change Review: Final Report*. Canberra: Commonwealth of Australia at chapter 17.

³⁰ McCrone, Angus (2013) *Clean Energy –White Paper: How to attract new sources of capital to renewables*. Bloomberg New Energy Finance.

infrastructure, but are hesitating about taking one step further into renewable power projects because of worries about the stability of subsidy support and what looks like a fracturing political consensus on future energy choices. This has the effect of reducing demand and raising the cost of what does get built.”

The range of investments undertaken by the CEFC addresses these market barriers as each investment cumulatively assists in building capacity in the clean technology industry and delivering a positive impact across a broad range of technologies and a wide range of industries from utilities to government to retail. Regional projects being funded by the CEFC build new businesses and capability across regional centres in Australia. There are several ways in which the CEFC builds industry capacity:

- The CEFC attracts new finance to the Australian market for investment in emissions reduction – the CEFC is working to help improve the flow and diversification of funds into the sector
- The CEFC can assist project proponents as an arranger, helping to develop the business case and introduce the proponents to other financiers to seek transaction close
- The CEFC helps build capacity within the finance sector by participating in transactions to de-risk the investment (for example by familiarising the financier with new asset types or through reducing their size of exposure)
- The CEFC works with the rest of the finance sector to develop and deliver new financial products to the market, specifically tailored to the needs, attributes and emerging delivery models for new technologies (e.g. distributed generation) and energy efficiency – in turn enabling small and midsized businesses to access finance
- The CEFC works with industry peak groups to promote opportunities in reducing energy costs; and
- Large scale projects are required to develop Australian Industry Participation Plans (AIPPs), which help to open up supply opportunities to Australian suppliers of goods and services.

In addition, the CEFC is developing a number of innovative approaches to scale up and deepen the Australian clean energy and energy efficiency market, including:

- Investing in community renewable projects
- Creating a green residential mortgage product
- Expanding Environmental Upgrade Agreement loan offerings
- Working with manufacturers and supply chains to facilitate jobs growth in the low carbon economy
- Developing a listed ungeared vehicle for pension funds and retail investors to benefit from stable cash flows generated by the renewables sector
- Supporting remote generators to reduce dependence on diesel generators
- Encouraging demand management and augmentation activities to reduce transmission expenditure
- Developing financing options for rooftop residential and commercial solar
- Further supporting the expansion of utility scale solar where feasible
- Expanding co-finance vehicles to target smaller to mid-sized projects for improved energy efficiency and small scale emissions reduction.

Practical effect of the abolition of the CEFC for existing contracts

In December 2013, the *Clean Energy Finance Corporation (Abolition) Bill 2013* was defeated in the Australian Senate. It remains open to the Government to reintroduce the Bill at any time.

In the event of a CEFC Abolition Bill passing the Australian Senate, the CEFC's existing assets and liabilities would be transferred to the Treasury Department. In introducing the original abolition Bill, the Government stated that the Commonwealth will ensure an orderly transition of the CEFC's investments and minimal disruption to the clean energy market so business can continue as usual.

The CEFC has previously stated its strong view that a disorderly shutdown of the Corporation is in no-one's interests and, in the eventuality that an abolition Bill is passed, the CEFC is committed to working professionally to transition the loan book across to the Commonwealth.

The Australian Government has also committed (via the Explanatory Memorandum of the original abolition Bill) to 'honour all payments that are necessary as part of meeting our contractual obligations to committed investments. These obligations will be met from the CEFC's existing funding, which will be transferred to a new CEFC Transitional Special Account.' It is important that these undertakings are honoured and included in any future iteration of an abolition Bill.

Impact on the Budget bottom line

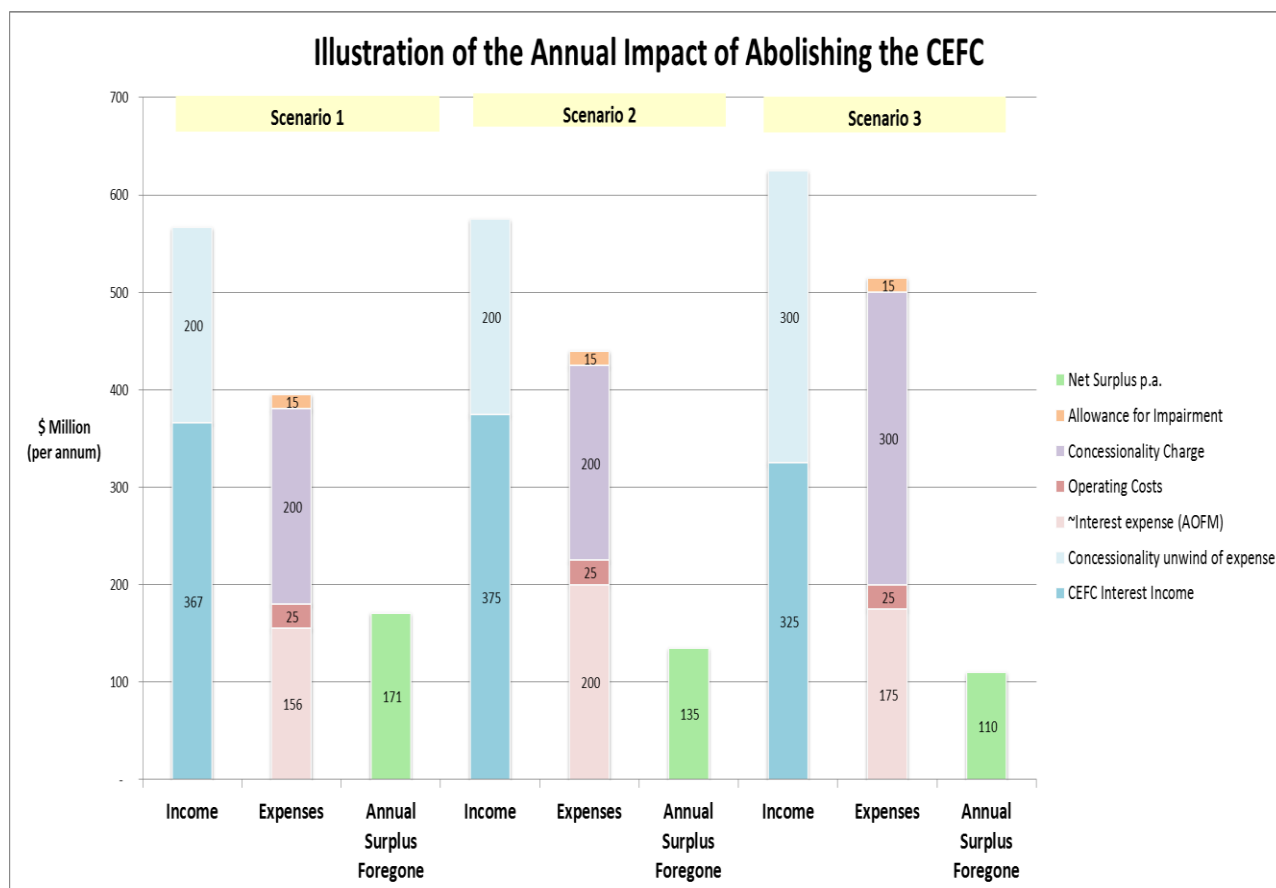
In the submission lodged with the *Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013*, the CEFC highlighted three potential Budget impact scenarios of abolishing the CEFC incorporating the costs incurred by the Australian Office of Financial Management (AOFM) to fund the CEFC portfolio and using varying assumptions around income yields achieved by the CEFC. See table 2 below:

Table 2: Modelling the full impact of CEFC abolition on the Budget

(\$million)														
				Annual Income			Annual Expenses					Net Annual Impact		
Scenario	Invested Principle	Average CEFC Yield Rate	Average 5 year LTGBR	CEFC Interest Income	Concessional unwind of expense	Total Income	~Interest expense (AOFM)	Operating Costs	Concessional Charge	Allowance for Impairment	Total Expenses	Net Surplus p.a.	Fiscal Balance	Underlying Cash Balance
Scenario 1	\$5,000	7.33%	3.11%	\$367	\$200	\$567	-\$156	-\$25	-\$200	-\$15	-\$396	\$171	\$186	\$171
Scenario 2	\$5,000	7.50%	4.00%	\$375	\$200	\$575	-\$200	-\$25	-\$200	-\$15	-\$440	\$135	\$150	\$135
Scenario 3	\$5,000	6.50%	3.50%	\$325	\$300	\$625	-\$175	-\$25	-\$300	-\$15	-\$515	\$110	\$125	\$110

The CEFC estimated that the AOFM cost to fund the CEFC portfolio as the average of the 5 year government bond rate (consistent with the Benchmark Rate included in the CEFC Investment Mandate). On an indicative investment base of \$5 billion, the annual impact of abolishing the CEFC means the Government's annual Fiscal Balance will be worse off by between \$125 million and \$186 million per annum and the Underlying Cash Balance would be worse off by between \$110 million and \$171 million per annum (based on the assumed yields and the AOFM cost of funding the CEFC, which factors in public debt interest).

Figure 2: Diagram Modelling the full impact of CEFC abolition on the Budget



It is evident therefore from the modelling undertaken that there will be a significant cost to taxpayers from the abolition of the CEFC.

Impact of the abolition of the CEFC and the loss of the CEFC project pipeline on the energy sector and the financial markets

The CEFC has realised significant achievements in the short space of time it has been operational. It has been particularly successful in attracting projects to the market and making them cash flow positive from day one.

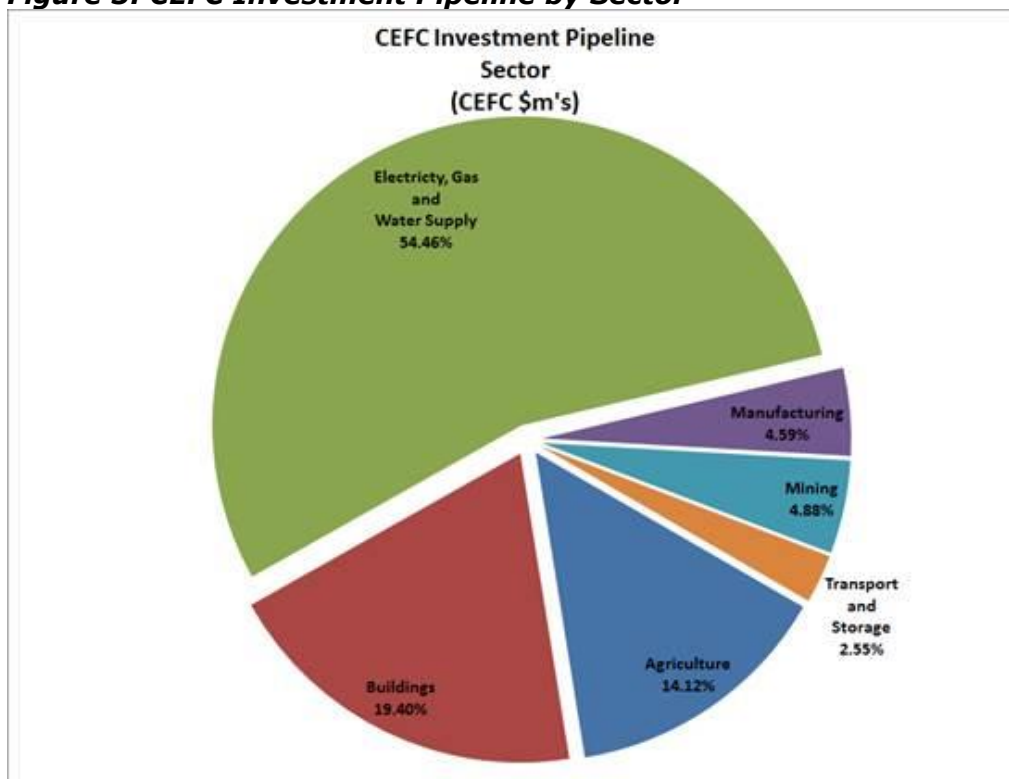
For some projects, the CEFC has represented a cornerstone investor, enabling the recipient to concentrate on raising market finance. For other projects, the CEFC financed the construction phase, taking a longer term, or taking a security position that enabled a market gap to be closed. Further, the CEFC's government-owned imprimatur has proved the catalyst to bring foreign banks to the table when they otherwise may not have participated.

The absence of the CEFC in the market and cessation of its financing programs and convening power in the market place will ensure the continued negative impact and barriers to investment facing potential projects in the renewable energy and energy efficiency sectors and it is also likely that the sector becomes a less attractive proposition for foreign investment.

As at 20 August 2013, the CEFC had active discussions underway with circa 37 project proponents, who were seeking CEFC finance of over \$2 billion (total project costs of over \$4.5 billion) and had received proposals at varying stages of development from over 170 project proponents seeking CEFC finance of over \$5 billion (with total project costs of an

estimated value over \$14.9 billion). This project pipeline covers a range of industry sectors as demonstrated in Figure 3.

Figure 3: CEFC Investment Pipeline by Sector



In addition, since August 2013, the enquiries and deal pipeline has continued to increase. The CEFC has received an additional 81 pipeline leads.

- In aggregate, requiring a total of more than \$9 billion and seeking CEFC finance contribution of more than **\$1.7 billion**;
- 20 projects have progressed to consideration by the CEFC Executive Investment Committee, seeking CEFC finance of more than **\$600 million**;

Given that the CEFC has been able to mobilise \$2.2 billion of total investment from its \$536 million commitment, then it is possible to conclude that in the absence of the CEFC, significant opportunity to achieve the emissions reductions to meet the 2020 target will be lost because the economy will no longer benefit from a policy driver that is generating \$2.90 of private sector investment from every \$1 invested. This will clearly negatively impact not only on the clean energy sector but also on those sectors shown in Figure 3.

The momentum from the demonstration effect, the move down the cost curve and the leverage from and learnings to CEFC's co-financiers will be unlikely to continue without the CEFC.

With the usual long development time frames of clean energy projects, delivery of effective emissions reductions takes a number of years. The various stages of design, permitting, construction and commissioning all require long-term commitment on the part of an investor. If as expected there were, possible further significant delays and uncertainties in financing due to the abolition of the CEFC, this is would likely impact on achievement of the 2020 abatement task and the success of the Direct Action Plan in an environment where time frames are already extremely tight.

And more broadly, the underlying fundamentals of the energy market are changing presenting new challenges in respect of further development of a reliable system of energy supply in our sparsely populated continent-sized country.

The days of commissioning monopoly state-owned generators to build coal fired power plants to meet demand are gone.

The choices being made now will affect Australia's energy mix for the next twenty years and beyond. It is important that policy supports achievement of an efficient pathway to the optimum strategic long-term energy mix. Fluctuation in policy settings adds cost because they add risk. This is in addition to the ordinary risk levels that are inherent in the sector.

The CEFC has a unique financing role and ability to take a long-term risk position and provide depth and diversity in the financing of infrastructure as Australia implements its energy choices. The CEFC is playing, and can continue to play, a supportive role in the finance market into investment into any energy technology; that is, it lowers the carbon intensity of the current energy mix. The CEFC plays this role responsibly and cost effectively.

The CEFC has received proposals for finance from all sectors of the economy as they grapple with the challenges this fundamental structural change. Project proponents need access to finance in areas which are not yet well established and the CEFC can play the role of catalyst and convener to work with traditional financiers to ensure that these financing needs are met on terms which maintain competitiveness and achieve lowest cost emissions reduction outcomes.

Achieving Lowest Cost Abatement

The CEFC is achieving direct Australian abatement efficiently and at a much lower budget cost to many other programs including those likely to be delivered through the Direct Action Plan. The CEFC investment model is generating abatement which is delivering a financial return for the CEFC, for the Government, for business, for the taxpayer and the economy.

The CEFC has achieved an estimated annual abatement of 3.88 million tonnes CO₂e. Importantly, this abatement is delivered at a positive return to taxpayers. The CEFC has achieved cost of abatement at negative \$2.40/tonne – that is, inclusive of government borrowing costs, the CEFC actually returns money while abating carbon.

Based on estimates of the abatement challenge from the Climate Change Authority, Treasury and the former Department of Industry, Innovation, Climate Change, Science, Research, and Tertiary Education (DIICCSRTE), this 3.88 million tonnes represents about 3% of the 131Mt emissions reduction required to meet the 5% below 2020 target (see Figure 1 above).

The cost-benefit of the CEFC investment model compares most favourably with many other programs (including Direct Action as proposed), in terms of its cost to Government of emissions abatement. All the investments undertaken by the CEFC so far exceed the five-year Australian Government bond rate. The CEFC investments to 20 August 2013 carry an average yield of 7.33 per cent. The five-year bond rate across the portfolio was 3.11 per cent. The CEFC's portfolio of emissions reduction investments returns money to government net of operating expenses and government cost of capital. In this regard, the CEFC model has demonstrated its capacity to deliver low cost abatement which is a positive for the economy.

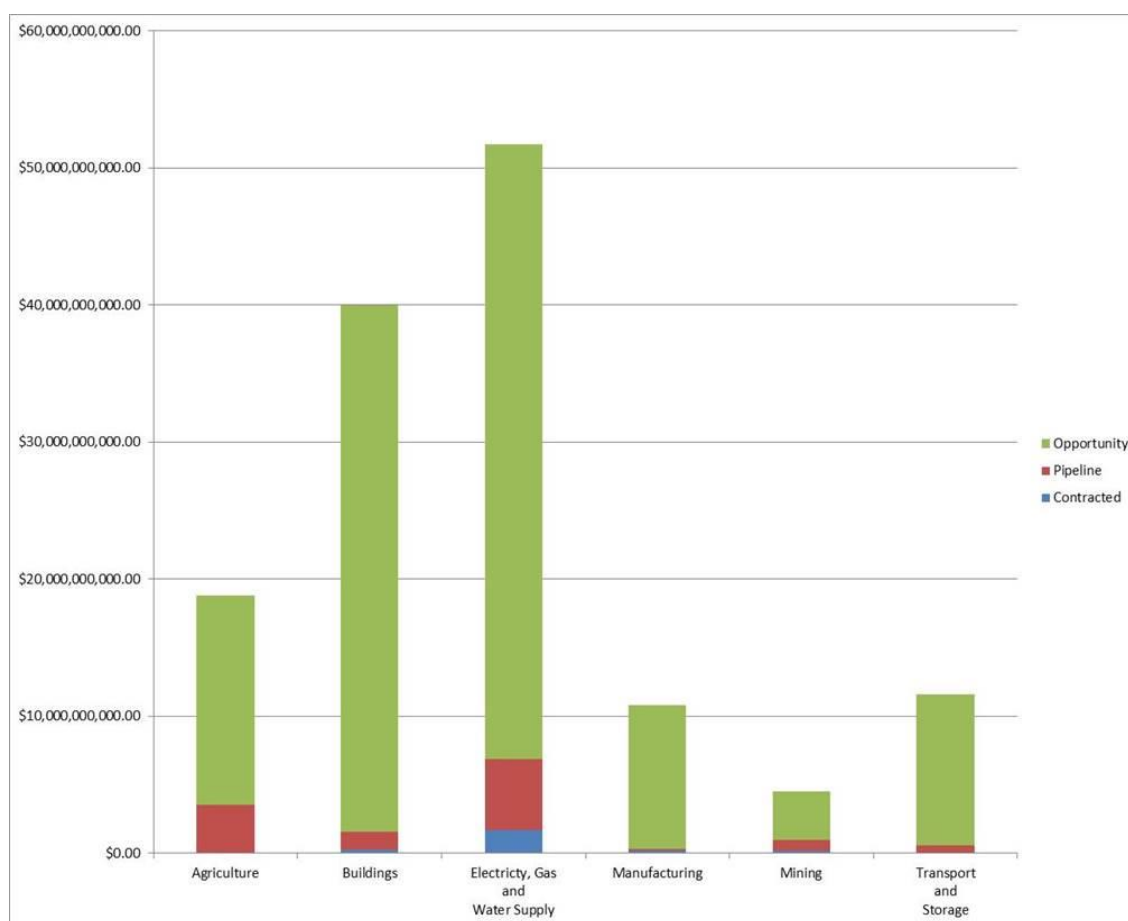
Delivery of Abatement under Direct Action

The CEFC recently undertook analysis of what its continued activity could potentially contribute to achievement of the 2020 abatement target under the Direct Action Plan. Based on the existing CEFC portfolio mix, if the CEFC invested \$10 billion over the next 4 to 5 years in a like portfolio mix of projects (to its current portfolio), this could *theoretically* achieve 64 Mt CO₂e of emissions reductions in the year 2020, which represents about half of the total required to meet the 2020 abatement target (i.e. an estimated reduction of 131 MTCO₂e). Note that this assumes fully \$10 billion invested.

Whilst some levelling off could be expected, by being conservative and applying a heavy discount to this assumption, the contribution the CEFC could make is still substantial and this abatement could be achieved at a positive return to the taxpayer (i.e. lowest cost of emissions reductions even net of Government borrowing costs and operational costs).

Figure 4 plots currently identified CEFC pipeline opportunity against the estimates required to achieve the 2020 target (in the diagram the green is what is said to be required, the red is what the CEFC has already identified and the blue is what the CEFC has already contracted).

Figure 4. CEFC Investment Portfolio and Current Investment Pipeline against Total Identified Investment Opportunity Required to achieve 2020 Emissions Reduction Target



Loss of Expertise

Abolition of the CEFC would mean that Australia no longer is able to benefit from this sophisticated sector-focused financial institution that provides market based support and long-term financing for a public good.

The CEFC is a professional and functional operation with a flexible, high performing team of 44 staff. The CEFC is unique in the Australian market in its combination of experienced financiers and knowledge of energy technology and markets. The organisation has built extensive experience and skill-sets in investments, portfolio management, finance, corporate treasury, energy markets, legal, human resources, marketing and communications, risk management, governance, corporate affairs and government.

These skills enable the CEFC to work with the market to develop opportunities and to shape commercial projects that otherwise may not proceed. As a specialised organisation, the CEFC has access to the latest market intelligence and works across the clean energy and low carbon sectors, including with agencies like ARENA and the CSIRO to tap Australia's leading minds to tackle the assessment of complex technical and engineering risk. The abolition of the CEFC would mean loss of this centre of expertise, loss of the intellectual property and knowledge base it has established, with consequent loss of value to the taxpayer and loss of potential benefit to the economy.

Industry and media commentary on the value of the CEFC

There has been significant public commentary about the potential abolition of the CEFC both in the media and through Senate Committee processes in relation to consideration of the *Clean Energy Finance Corporation (Abolition) Bill 2013*. Some examples from the Senate inquiry are at Appendix 1 of this submission and demonstrate overwhelming support for the work of the CEFC and its valuable role in the marketplace.

10. The impact of repealing the Clean Energy Package on international efforts to reduce carbon pollution (Term of Reference a.x)

KEY POINTS:

- **Internationally other states are setting up entities similar to the CEFC to deal with climate change**

Mitigating dangerous climate change is an international problem that will require the resources of the global community to address. The Direct Action policy focuses on reducing emissions within Australia as a means to effect Australia's contribution to this global problem. This is also CEFC's core mandate.

The Direct Action scheme will need to be carefully designed to ensure success. Ideally, Australia would continue to attract foreign investment into our renewable energy sector, as well as providing a model for other countries seeking to grapple with their own global commitments.

A range of other international governments have chosen to supplement their policies with a green investment bank like the CEFC (e.g. the Green Investment Bank established as a bipartisan initiative in the United Kingdom). Abolition of the CEFC will increase the government's cost of complying with its stated abatement targets and will be interpreted as a negative signal by the international community on Australia's approach in mitigating climate change. Direct Action will need to be carefully crafted to maximise chances of success and ensure that Australia is positioned to meet its 2020 target, and by taking a strategic long-term view, minimise the cost for the Australian Government and taxpayers in meeting future targets.

For example, according to a recent report released by the American Council for an Energy Efficient Economy (ACEEE), 'One Small Step for Energy Efficiency: Targeting Small and Medium Sized Manufacturers', the small to medium enterprises (SME) sector makes up about 90% of manufacturing establishments but only accounts for about 50% of the energy consumed by the industry. Despite using less energy than larger counterparts this sector remains a good target for energy efficiency programs because of the market barriers such organisations face. These include a lack of staff resources, capital constraints, and a lack of expert information on energy efficiency opportunities (for example they are unlikely to have dedicated on-site energy managers on staff). Addressing these barriers, several leading energy efficiency programs both in Australia and overseas specifically target smaller manufacturers, use innovative financing options, and leverage existing resources.

The ACEEE paper found that two financing program types show potential for increased energy efficiency activity in the SME market: these include on-bill financing and property-assessed clean energy (PACE). Note the CEFC offers both of these types of finance:

On-Bill Financing

On-Bill financing allows customers to pay for energy efficiency upgrades when high upfront costs are a significant barrier. Customers can take advantage of existing utility rebates and incentives to lower the first cost of a project, and then use the On-Bill Financing option to spread that cost over the life of the measure. Benefits of the On-Bill Financing model include:

- Leveraging existing billing relationships, simplifying the process for the customer

- Low risk of default
- The ability to tie the obligation to the property so it can be transferred to new owners, making the transaction more flexible for resale
- Scalability

On-Bill financing has been successful in several US States according to ACEEE. Two examples cited by the ACEEE paper are as follows:

“Connecticut. The Connecticut Small Business Energy Advantage program is run through Energize Connecticut, the state-wide energy efficiency and renewable energy initiative. The program offers a comprehensive solution for energy efficiency in small businesses including small to medium sized manufacturers. It includes a free energy assessment, recommendations with detailed cost and savings estimates, incentives (up to 50% of installed cost), and zero-interest financing. Eligibility is limited to small commercial and industrial customers with 12-month peak demand between 10 and 200 kW (Energize CT 2013b). As of the third quarter of 2013, the program had 112 projects in the pipeline representing \$70 million in project costs (Sherman 2013). Of these projects, 64% included energy efficiency upgrades, the rest being renewable energy systems.

California. In 2009, the California Public Utilities Commission directed the investor-owned utilities (IOUs) in the state to develop on-bill financing programs targeting small business. Currently at least four IOUs offer on-bill financing on the same basic terms. The programs are available to any business (i.e., non-residential) customer in good standing; customers must have had an active account with the utility for at least two years. While customers who receive government funds or are government agencies have different terms, general business customers may receive a loan of between \$5,000 and \$100,000 for projects with a three- to five-year simple payback. The loan period cannot be more than five years, and loans must be coupled with rebates, which help shorten the payback period (Bell, Nadel & Hayes 2011).

While these programs do not target the small to medium sized manufacturing market specifically, at least one utility has run a successful pilot program targeting other small business customers. In 2008 and 2009, Southern California Edison (SCE) ran an on-bill financing pilot which targeted grocery and convenience stores with a monthly peak demand of less than 500 kW (Dodenhoff 2011). SCE made over \$700,000 worth of loans to 73 customers. While it is difficult to compare default rates with other programs due to different loan terms and conditions, the pilot was successful. From March 2008 through February 2011, less than 1.5% per year of the loan portfolio value was written off compared to a 14% annual small business write-off rate for Bank of America, 4.7% for JP Morgan/Chase, and 6.8% for SBA “7a” loans in 2010.”

Property Assessed Clean Energy (PACE)

Like on-bill financing, PACE programs allow customers to reduce up-front costs associated with energy efficiency investments. Investments are then repaid through a property tax assessment. PACE financing is generally overseen by a local government or municipality rather than by an energy utility, and it is often run through a state-wide administrator. Advantages of PACE include:

- Immediate positive cash flow with no upfront costs to the consumer
- Low interest rates
- Transferability (although this is less likely to be applicable in the industrial sector)
- Absence of obligation on the owner’s balance sheet

The ACEEE pointed to a PACE program run by Energize Connecticut called C-PACE as a strong example of a successful PACE program. The ACEEE paper stated: “This program is available to commercial and multi-family property owners as well as to industrial sites. Eligible measures funded through C-PACE include lighting, HVAC, chillers, boilers,

furnaces, water heating, building envelope, building automation systems, and small renewable energy systems. In addition to capital implementation costs, C-PACE funding may also be used for audits and project measurement and verification. Energize Connecticut notes that the program generally works better for projects over \$150,000. The Energize Connecticut database of successful projects lists five industrial sites. Three of them received financing for installing solar arrays, one for a combined heat and power project, and one for a suite of energy efficiency upgrades and ENERGY STAR equipment. This last example is particularly relevant to the SME market because it demonstrates that PACE financing can be applied to a bundle of measures.”

11. The impact of cuts to funding for the Australian Renewable Energy Agency (Term of Reference a.xiii)

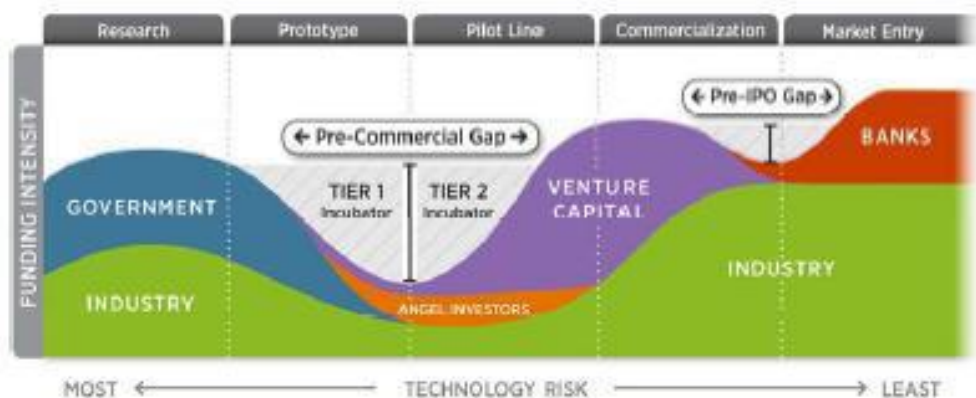
KEY POINTS:

- **The CEFC works well with ARENA**
- **ARENA could be funded in future by CEFC receipts**
- **This funding is at risk if the CEFC is abolished**

In abolishing the CEFC, the Australian Government is losing the CEFC's financial returns - a potential revenue stream to fund ARENA. The CEFC has worked closely with ARENA as was envisaged in the report of the CEFC Expert Review Panel.³¹ The lived experience shows there are significant complementarities in the work of the two organisations:

- ARENA can support earlier stage technologies and research that is non-financeable to the CEFC. The diagram below is from the USA (US DoE: 2011) but is indicative of the funding intensity required at different stages of technology development, the associated level of technology risk, and who is able to provide the finance at an economic level.

Figure 5: Technological Development, Capital Intensity, and Typical Source of Capital in the US



ARENA is oriented towards the 'Pre-Commercial Gap' (also described in both financial and technology industries as the 'Valley of Death'). The CEFC's role in contrast is focused more towards commercially available technology - directed at the Commercialisation and Market Entry component of the Pre-IPO Gap.

- However, in Australia an aspect of the financial market is that there is also a paucity of venture capital. The CEFC and ARENA have an overlap in function and are able to work together (indeed have done so) to provide both equity (grants) and debt (loans) to worthwhile and financially sound projects. The CEFC and ARENA have been flexible and sophisticated enough to employ a range of structures which, as well as making a profit on the Government's cost of funds, even claw back some of the 'granted' money for government through options or 'super profits' where a Government backed project has been spectacularly successful.

³¹ Australian Government (2012) *Clean Energy Finance Corporation Expert Review: Report to Government* March 2012.

Under the *Clean Energy Finance Corporation Act 2012*, revenues from investments received by the CEFC are paid into the Corporation's operational accounts and the surplus in those operational accounts is paid back to the Special Account. Upon an application to the Minister, the CEFC can make a payment to ARENA.

Both the Treasury *Portfolio Budget Statement 2013-14* and the *Pre-Election Economic and Fiscal Outlook 2013* included forward estimates which showed that by 30 June 2015 the CEFC was forecasting to have accumulated earnings (excluding non-cash concessionality charges and the associated income from the unwind of these charges) of approximately \$47 million.

Moving further into the out years, the CEFC could reasonably expect these returns to grow and in the context of first ensuring it has enough funds for lending and its own ongoing operations, it should be noted the Board's 2018 Portfolio vision as established in the *CEFC Investment Policies* includes the target of a 'steady flow of dividends to ARENA'.

Therefore, in abolishing the CEFC, the Australian Government is losing the CEFC's financial returns - a potential revenue stream to ARENA. Combined with substantive budget cuts to ARENA, the removal of this potential additional revenue stream would have a significant impact on the emergence of home-grown clean energy and energy efficiency technologies and commercialisation of new activities in Australia.

Appendix 1. Commentary about the CEFC made during the Submission Process to the Senate Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013

Organisation	Source	Comments
Australian Youth Climate Coalition	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'The abolition of the Clean Energy Finance Corporation would undermine crucial efforts to foster the solution to climate change and greenhouse emissions: renewable energy.</p> <p>The CEFC can enable new technologies to get into the market such as solar thermal with storage. This diversifies the renewable energy space with technologies that would not be completed with just the Renewable Energy Target scheme.</p> <p>The CEFC has been working. Its work so far has been providing carbon abatement at negative cost to the government. Australia needs to be shifting to renewable energy as quickly as possible and one barrier is the ability of renewables to obtain finance. The CEFC is able to play this role.'</p>
EPURON	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>Entire submission dedicated to the retention of the CEFC</p> <p>http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Clean_Energy_Legislation/Submissions</p> <p>'Epuron believes that a market-based approach to the reduction of greenhouse gas emissions is the most cost effective approach to reducing Australia's emissions. The CEFC can be an important institution in achieving the emissions reductions to which the Abbott Government has committed.</p> <p>Our own experience in securing funding for projects underlines the key role of the CEFC. Epuron has secured ground-breaking commercial lending facilities with a major Australian bank for the solar power stations we operate in the Northern Territory. To achieve this both parties have been on a long journey because, despite the high quality nature of the projects and established track record of solar PV globally, such projects constitute a new asset class for the Australian banking community and the transaction sizes can be relatively small. Globally the market for financing of renewable energy markets, including solar and wind, is mature whereas the debt terms we have been able to achieve for our Australian projects are comparatively conservative.</p>

		<p>The role of the CEFC is pivotal in enabling renewable energy projects, particularly solar PV, to reach financial close so that more are built and the market in Australia matures at a faster rate. In our own experience, the CEFC has not been providing concessional loan finance that undercuts the market but rather debt that fairly reflects project quality on market terms from a global perspective and in a way that does not crowd out the local banking community. In this way it appears that the CEFC has consistently exceeded its statutory benchmark lending rate.</p> <p>Epuron respectfully suggests that the CEFC be retained and, in line with its current practice, tasked with providing non-concessional market based loans to enable renewable energy developments and accelerate market maturity. This will provide the investment confidence the industry needs, the investment experience the banking sector seeks and assist the government to achieve or better its election stated emissions reductions goals. Achieving these goals will further reduce the cost of solar energy.'</p>
Professor John Matthews - MGSM Macquarie University	Made in his submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p><i>Entire submission dedicated to the retention of the CEFC</i></p> <p>http://www.apf.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Clean_Energy_Legislation/Submissions</p> <p>'While the country was absorbed in a fruitless debate over a carbon 'tax' – a policy which has nowhere proved itself to be efficacious in shifting energy investments from fossil fuels to renewables – it was allowing opportunities for real investment in a renewables future to pass. But the setting up of the Clean Energy Finance Corporation (CEFC) reversed this trend, and facilitated a round of investments in a green future that were long overdue.'</p> <p>'Australia has an institution in the CEFC that is proven to be effective in pump-priming serious investment in a renewable energy future. It is to be hoped that the Senate Committee will play its role in ensuring that the CEFC be allowed to continue its good work.'</p>
Climate works	Made in their submission to the <i>Senate Environment and Communications</i>	<p>'In addition to the institutional expertise within the Federal Government Departments which have been administering the Clean Energy Future package, organisations such as the Climate Change Authority and the Clean Energy Finance Corporation have</p>

	<i>Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	developed highly valuable expertise, relationships, momentum and track record in relation to emissions reduction policy and program design. This expertise will help deliver least cost emissions reductions, and there is a strong case for retaining the existing knowledge and skills in organisations such as these in order to avoid the cost involved in setting up new organisations to perform these functions.'
Investor Group on Climate Change	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	'IGCC considers the Climate Change Authority (CCA) and the Clean Energy Finance Corporation (CEFC) to have been effective and important elements of the climate policy framework in Australia. Independent analysis and advice on emissions reduction ambition in what is likely to be a period of rapid policy change globally will support appropriately ambitious policy in Australia. On co-financing, financial institutions such as the CEFC are playing a key role in attracting private capital to low carbon opportunities globally. The ability of co-financing organisations (such as CEFC) to achieve emissions reductions with a positive financial return to government warrants their inclusion in the Government's climate change policy suite.'
Responsible Investment Association Australia	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'An important part of the response to the risks imposed by climate change has been the desire by responsible investors to begin to allocate capital to low carbon assets to offset and mitigate high carbon exposure across a portfolio. The Clean Energy Finance Corporation has been supported by the responsible investment community since its inception as an important vehicle for enabling a flow of private sector capital into low carbon assets.</p> <p>Not only in Australia, but internationally, such a public finance vehicle has been strongly supported by governments and investors for a number of reasons. In particular, the CEFC co-investment model is a prudent and cost effective way to allocate limited public funds to leverage private investment to do the heavy lifting in the investment into a low carbon transition.</p> <p>Indeed, this is a co-investment model that is quite familiar in the Australian context, being very similar in practice to the Export Finance and Insurance Corporation (EFIC), an important Public finance body to support Australian companies do business internationally. Like EFIC, the CEFC is established to overcome clear market failures and investment barriers.</p> <p>A testament to this model is that global trend by many countries to put in place such public finance institutions to help catalyse investment flows into</p>

		<p>low carbon assets, including the UK Green Investment Bank, Germany's KfW, China's Development Bank, the US Department of Environment's Loan Program Office, the New York Green Bank, California Clean Energy Fund, European Investment Bank and many of the multilateral development banks such as the Asian Development Bank.</p> <p>Our observation is that to date, the CEFC has been an effective vehicle for translating limited government funds into strong commercial returns, cost effective emissions abatement and leveraging private sector investment.</p> <p>For example, to date the CEFC has delivered emissions abatement at a positive return on investment to the Australian government, with a cost of abatement of negative \$2.40/tonne, whilst achieving a private sector leverage of nearly \$3 for every \$1 of public funds invested.</p> <p>It is hard to imagine another public vehicle or program that could achieve emissions abatement at such a cost effective level. However, this has been a very limited trial of this model of co-investment with strong early success and as such we are regretful to see such early success stopped in its tracks by the CEFC (Abolition) 2013 Bill. It is particularly concerning at a time when private investment in infrastructure more broadly is undoubtedly needed to be ramped up to meet future needs of a growing population, with the CEFC providing one such strong example of how this can be achieved.'</p>
World Wildlife Fund	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'On the proposed repeal of the Clean Energy Finance Corporation (CEFC), WWF-Australia is calling on the Government to reconsider its position.</p> <p>The energy sector is the major contributor of Australia's greenhouse gas emissions and will also need to do more of the heavy lifting as some sectors like agriculture may struggle to meet required emissions reduction targets. This means the energy sector will need to undergo massive transformation over the coming decades if we are to meet our global and domestic targets. Given that energy projects have long lifespans of between 15 and 30 years, investments made now have repercussions for how the energy market will look in 20-30 years' time.</p> <p>The CEFC helps overcome capital market barriers that hinder the financing, commercialisation and deployment of renewable energy, energy efficiency and low emissions technologies. The CEFC also helps</p>

		<p>to reduce risk for private investments and increase capital flows. A well designed CEFC could unlock billions of dollars in private finance for a range of projects and develop a range of renewable technologies and resources.</p> <p>While the RET is a crucial policy to transform the energy sector, it favours a least cost approach and has to date primarily supported wind farm development. Whether Australia retains a price and limit on pollution or implements an alternative scheme like the proposed Emission Reduction Fund, a gap will still exist for currently feasible large-scale technologies such as large-scale solar PV and building integrated PV, and emerging technologies such as solar thermal, geothermal and wave. Investing in these technologies and resources now with the help of the CEFC will help provide experience that can reduce the cost or risk of future deployments at scale; drive competition; improve market reliability and security; accelerate transition and create new jobs.</p> <p>To this end WWF supports retaining the CEFC and improving its integration with the RET.'</p>
Australian Conservation Foundation	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'ACF recommends that the Clean Energy Finance Corporation is retained.</p> <p>The Clean Energy Finance Corporation (CEFC) is a low/zero cost way of promoting development of important, catalytic clean tech in Australia, providing finance across the clean energy sector - spanning renewable energy, low-emissions technologies and energy efficiency, with a focus on clean tech projects and technologies at the later stages of development. A key role that the CEFC plays is that of leveraging private sector investment in clean energy. The CEFC has achieved private sector leverage of \$2.90 for every \$1 that it has invested.</p> <p>The CEFC is not a drain on treasury, with net CEFC Portfolio Investment Return expected to make a positive contribution to the Budget from 2015-16 onwards. The CEFC is designed specifically to correct for certain well-known market failures that lead to capital drying up for start-up clean tech companies - the so-called 'valley of death' - the research phase after proof of concept but before commercial production - when companies often need continued funding to survive. Similar finance and support schemes exist in other countries - for instance, the UK's highly successful Green Investment Bank, the Korean Green Climate Fund, the China Development Bank, the German government KfW, the European Investment Bank,</p>

		<p>while in the USA, the US Department of Energy runs a similar program, while state-based schemes include the New York Green Bank, the California Green Energy Fund, and the Connecticut Clean Energy Finance and Investment Authority.</p> <p>In the dynamic and intensely politicised context of contemporary climate policy, it is worth considering just how cheap the GHG pollution reduction is achieved by the CEFC. The CEFC in 2012-2013 produced annual abatement of 3.88 million tonnes CO₂e, at a cost of abatement per unit of minus \$2/40 per tonne (that is, profit to Treasury) – considerably less than the \$8-10 figure that is being used in estimates of the cost of achieving abatement using the Emissions Reduction Fund mechanism.'</p>
Pacific Hydro	Made in their submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'In 2013, ahead of the election, Pacific Hydro successfully gained financial support from the Clean Energy Finance Corporation for two projects – the 56MW Moree Solar Farm (in which we are a joint-venture partner with Fotowatio Renewable Ventures) and the last 47MW stage of our Portland Wind Farm.</p> <p>In our experience, the CEFC adds a new dimension to the Australian project finance landscape, increasing competition and leverage for project lenders. The nature of agreements between a developer, such as ourselves, and the CEFC are similar to others we would have with other financial institutions providing debt, with the CEFC ranking in the 'middle of the pack' in the provision of project finance. In a good news story for the Australian community, the conditions on finance provided by the CEFC make a return at rates substantially better than the 10 year bond rate. Thus, in contrast to a grants scheme, CEFC finance delivers ongoing returns to the Government. While we acknowledge the government intends to abolish the CEFC, our experience shows that its operation and practice will provide a benefit to the Government, the renewable energy industry and to the community at large.'</p>
Dr Frank Jotzo, Centre for Climate Economics and Policy, Crawford School of Public Policy	Made in his submission to the <i>Senate Environment and Communications Legislation Committee Inquiry into the Clean Energy Legislation (Carbon Tax Repeal) Bill 2013 and related bills.</i>	<p>'The institutions that have been created – in particular the Climate Change Authority And the Clean Energy Finance Corporation – are suitable to support Australia's climate change policy irrespective of whether there is a carbon price.'</p> <p>'The Clean Energy Finance Corporation can fulfil an important role in leveraging private capital for investment in new technologies, using a limited amount of public financing to overcome hurdles to private investment. Public co-investment in low carbon technologies could occur irrespective of the</p>

		carbon price. It is important to note that government financing for the CEFC is not a net cost to the public purse, but an investment that may yield significant financial returns. Such co-investment models are increasingly seen as a crucial part of governments' activity in facilitating the shift to lower carbon energy systems, including by organisations such as the OECD.'
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