

Mr Trevor Power
Emissions Reduction Fund Submissions
Department of the Environment
GPO Box 787
Canberra ACT 2601

5 March 2014

Dear Mr Power

This submission sets out the Energy Efficiency Council's position on the Emissions Reduction Fund (ERF) Green Paper. The Energy Efficiency Council is the peak body for energy efficiency in Australia, and brings together our nation's top experts in this area to support the development of policy and programs.

Supporting investment in energy efficiency would deliver on several of the Government's major priorities, including:

- Keeping energy affordable and addressing cost-of-living concerns
- Boosting Australia's competitiveness and growing GDP by an extra \$8 billion by 2020; and
- Delivering up to 37 per cent of the greenhouse gas abatement required to meet the Government's target to reduce emissions by 5 per cent from 2000 levels by 2020¹.

However, there are a number of barriers to increasing investment in energy efficiency, which include:

- The benefits of reduced greenhouse gas emissions associated with reduced energy use do not accrue to energy users unless there is an ERF or carbon price.
- Distortions in Australia's energy markets, which were clearly identified in 2002 in the review led by the Hon Warwick Parer², but have still not been resolved.
- Barriers such as imperfect information and information asymmetries. While these occur in numerous markets, they are serious impediments to investment in energy efficiency because they interact with the distortions in our energy market.

There is no single policy tool that can address all these barriers. Our advice is that:

- On its own, an ERF could deliver a modest but beneficial proportion of the economic potential for energy efficiency in Australia (potentially up to 9 MtCO₂-e). However, key design features of the ERF will need to be adjusted to deliver this.
- If the ERF is combined with a set of complementary policy measures, including existing energy efficiency policies and energy market reform, the Government could deliver over 50 MtCO₂-e of abatement and significant economic benefits.

The Council recommends that the ERF focus on providing a price signal that internalises greenhouse gas externalities. This would complement existing policies, such as energy efficiency ratings for appliances and state energy efficiency certificate schemes, and policies that are currently under consideration, such as time-of-use pricing.

¹ Based on the ClimateWorks Australia estimate that end-use efficiency could reduce Australia's greenhouse gas emissions by 58 MtCO₂-e by 2020

² Commonwealth of Australia (2002) *Council of Australian Governments Energy Market Review: Towards a Truly National and Efficient Energy Market*

These complementary policies are generally focussed on improving energy market efficiency (Pareto optimality) and/or energy affordability, and are not intended to provide a price signal for abatement. However, the success of the ERF depends on these programs addressing other barriers to energy efficiency. Without the existence of complementary policies, the ERF will either undershoot or require substantially more funding to help the Australian Government meet its stated emissions reduction target.

Design of the Emissions Reduction Fund

The Energy Efficiency Council supports a number of design features for the ERF proposed in the Green Paper. In particular, we support the proposal that the ERF should focus on providing a price signal that reflects the benefit of greenhouse gas reduction and deliver additional abatement, leaving complementary policies to address other issues.

However, we believe that a number of key changes need to be made to the design of the ERF to make it effective.

First, the incentive provided by the ERF needs to be enhanced by providing payment for at least 5 years of abatement as soon as a project is complete and savings have been established through robust measurement and verification (M&V). Annual payments provide limited incentives due to transaction costs, uncertainty and cash-flow issues.

Second, investors and energy users need a high level of certainty about both the bidding process and the ongoing future of the scheme in order to make significant investments to develop internal systems and bid into the scheme. This will require a number of features:

- The benchmark price must be announced before each bid round and basic details of successful bids (e.g. a cost-curve of price per tonne and volume) must be released after each round to improve investor confidence and price discovery.
- While the Council recommends regular reviews to improve the operational aspects of the ERF (e.g. accreditation and audit processes), the first major review of the ERF should be held in 2018, rather than 2015.

Third, the Government should make participation in the ERF as simple as possible in order to reduce transaction costs and encourage bids into the scheme. This is particularly critical in the early years of the scheme. This includes:

- The methodologies developed under the ERF must be simple and, where possible, based on existing methodologies like the International Performance Measurement and Verification Protocol (IPMVP).
- Restrictions on bid types should be simple and limited. For example, the proposal discussed in one of the methodology working groups that a project would need to reduce a building's emissions by at least 40 per cent to be eligible to bid into the ERF would eliminate many projects, and the proposal for minimum bid sizes is redundant. Our experience is that excessively complex rules about 'additionality' will significantly reduce bids and, perversely, limit bids to projects that would most likely have happened even in the absence of the ERF.
- The Government must build the ERF on the existing structures of the NSW Energy Saving Scheme and Victorian Energy Saver Incentive and draw on these programs to generate bids for the ERF. It has taken several years for the NSW and Victorian government to develop robust systems and for the market to respond to these systems and bring forward deep energy saving projects. If the ERF does not draw on these schemes it will likely receive very few bids in its early years.

Summary

The Energy Efficiency Council believes that a combination of an ERF and complementary policies to address energy market distortions would deliver more affordable energy services, economic growth and over 50 MtCO₂-e of abatement by 2020. The Council notes that a number of modest but important changes to the proposed design of the ERF will be required to ensure that it delivers its potential.

However, equally important will be growing bipartisan certainty around energy and energy efficiency policy. Australia could become a major exporter into the growing markets for energy efficiency services and products in the Asia-Pacific region. However, the Council's members have been adversely impacted by repeated and pointless 'complementary policy reviews' driven by interest groups with limited understanding of energy service markets.

The Council looks forward to working with the Australian Government as it finalises the design of the ERF. If you require any further information on the issues set out in this submission please contact me at any time on 0414 065 556 or ceo@eec.org.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Rob Murray-Leach', is placed over a light grey rectangular background.

Rob Murray-Leach

Chief Executive Officer



energy efficiency
COUNCIL

***Submission on the
Emissions Reduction Fund
Green Paper***

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1. Abatement and other benefits of energy efficiency

Green Paper question: Views are sought on the opportunities for large-scale, low-cost emissions reductions, including estimates of potential reduction

As stated in our submission to the Issues Paper, internal industry estimates are consistent with the estimate from ClimateWorks, that energy efficiency could deliver 58 MtCO₂-e by 2020, or 37 per cent of the abatement required to meet the Government's target. The ClimateWorks research also indicates that around 52 per cent of this potential is in commercial buildings, residential and smaller manufacturing, and 48 per cent in large sites.

Sector	Large sites (MtCO ₂ -e)	Small sites (MtCO ₂ -e)
Industry	21	8
Residential	0	9
Commercial	7	13
Total	28	30

Table 1 Approximate abatement opportunity in MtCO₂-e, by sector
Analysis by Common Capital of data in the Low Carbon Growth Plan for Australia

On its own the ERF could access a modest proportion of this abatement, potentially in the region of 9 MtCO₂-e per annum. However, combining the ERF with existing energy efficiency policies and sensible energy market reforms could access over 50 MtCO₂-e of abatement per annum by 2020.

Along with greenhouse gas abatement, tapping into this potential would:

Keep energy affordable

A recent survey found that households' biggest cost-of-concern is electricity, with 84 per cent of households concerned about electricity³. Energy efficiency was by far the most popular policy to address this issue, with 79 per cent of households wanting governments to help homes and businesses save energy. Energy efficiency reduces energy bills by helping homes and businesses get more out of each unit of energy that they use, and can also reduce electricity prices.

Boost competitiveness

Helping Australian businesses to get more out of each unit of energy would improve their global competitiveness. Research by Vivid Economics suggested that improving Australia's energy efficiency by an extra 1 per cent a year would generate an extra \$8 billion in GDP by 2020 and \$26 billion in GDP by 2030⁴.

Manage the change in energy markets and technologies

This creates a difficult environment for investing in long-lived electricity infrastructure. Addressing the market failures that decrease energy efficiency will help energy users adapt and reduce the need to invest in supply-side assets during this period of uncertainty.

Creating jobs

Boosting energy efficiency will create a thriving domestic and export market with thousands of jobs including builders, engineers and manufacturers.

³ CHOICE, Brotherhood of St Laurence and Energy Efficiency Council (2013) *Survey of Community Views on Energy Affordability*

⁴ Vivid Economics (2013) *Energy Efficiency and Economic Growth*, Report prepared for the Climate Group, Vivid Economics, London.

2. Barriers to energy efficiency and complementary Measures

Green Paper question: Views are sought on regulatory reform opportunities that would complement the Emissions Reduction Fund

2.1 Barriers to optimum investment in energy efficiency

Investment in energy efficiency reduces greenhouse gas emissions, which delivers a benefit to society. Unless the benefits of emissions reductions flow through to energy users through an ERF or price on carbon, the level of investment in energy efficiency will be sub-optimal. However, there are also other barriers to energy efficiency.

In an ideal market, energy users would maximise their wellbeing by balancing investment in energy (supply-side) and appliances (demand-side). For example, homeowners would warm their homes at the lowest cost by balancing investment in energy, efficient heaters and insulation. However, market failures that interact with distortions in the energy market result in over-investment in supply and under-investment in demand reduction.

Firstly, price signals for consumers do not reflect the true cost of delivering electricity at particular times and locations. For example, it could cost \$7,000 of cross-subsidised network investment to provide enough power for a household that pays just \$1,500 to install an air-conditioner. As the cost of this network infrastructure is smeared over consumers, there is little incentive to improve individual investment decisions.

Secondly, consumers do not have perfect information and face transaction costs and limits to capital to invest in energy efficiency. While consumers face these issues in most markets, the highly regulated energy market addresses these barriers for energy supply, but not for energy efficiency, inhibiting the emergence of services to address these issues.

Expanding on the previous example, homeowners that wish to increase the amount of cooling in their home do not choose between investing in a more efficient air conditioner or expanding their energy supply. Rather, network service companies anticipate that households might want to increase their cooling and augment the network just in case. In effect, the networks make decisions on behalf of households and provide an aggregated supply-side solution that smears the cost of capital over multiple years and across all energy users, putting upward pressure on energy bills. Similarly, energy retailers manage purchases from the wholesale energy market on behalf of households. Retailers perform a valuable and mandated role to correct imperfect information on the supply side.

However, while there are mandatory structures to address barriers to investment on the supply side, there are no comparable structures in energy markets to address these market failures on demand side. As a result, the NEM distorts investment to focus on supply-side rather than demand-side solutions, resulting in sub-optimal outcomes for consumers. This comes at a substantial societal cost – network companies spent \$45 billion on grid expansion over the last five years, almost doubling national energy prices and putting huge stresses on homes and businesses. In contrast, sensible investments in energy efficiency have a negative cost over their life.

These problems are well known. In 2002 Warwick Parer (Coalition Minister for Energy and Resources from 1996 to 1998) chaired a review into the National Electricity Market (NEM) that concluded:

“[There] is a relatively low demand side involvement in the NEM because

- the NEM systems are supply side focussed*
- the demand side cannot gain the full value of what it brings to the market*
- residential consumers do not face price signals.”*

However, the challenges of the energy market reform process mean that, to date, these issues have not been resolved.

2.2 Complementary Measures

To unlock the abatement in energy efficiency, we need to address the multiple barriers to energy efficiency. There is no single policy tool that can address these multiple barriers, and a suite of cost-effective, complementary measures is required. The table below is not comprehensive, but highlights the roles of key policies, particularly the ERF (orange) and state energy efficiency certificate schemes (blue).

In summary, the Council recommends that the ERF focus on internalising greenhouse gas externalities. This would complement the role of other policies, particularly the role of energy efficiency schemes in addressing imperfect information, bounded rationality, energy market distortions and distortions in other markets. Without these complementary policies, the ERF will need significantly more funding to drive energy efficiency.

Issue	Policy options
Externalities	The ERF, or a carbon price, incorporates the societal benefits of energy efficiency in the price signals faced by energy users, raising the level of investment in efficiency.
Energy Price Distortions	Energy market reforms are the best way to address the lack of time-of-use pricing and site-specific (nodal) pricing for electricity and other forms of energy.
Information Asymmetries	Where buyers and sellers don't have information about the quality of a product, it can cause adverse selection ⁵ . The existing rating schemes for appliances and commercial buildings are highly effective at addressing this problem.
Misaligned incentives	Where energy users (e.g. tenants) and those responsible for energy efficiency (e.g. building owners) don't have the same incentives, it can cause underinvestment. Minimum standards, and policies that re-align incentives (e.g. Environmental Upgrade Agreements), are effective in addressing this issue.
Imperfect Information	The state energy efficiency certificate schemes address imperfect information by linking energy users with specialists that have the knowledge to help them make decisions. Direct information provision can complement this approach.
Bounded rationality and organisational heuristics	Energy efficiency certificate schemes can address bounded rationality by linking SMEs and households to specialists that help them to make decisions, and provide a salient signal to overcome heuristics in both smaller and larger energy users. Standards and programs like the Energy Efficiency Opportunities program can assist with bounded rationality.
Energy market distortions	Some energy market distortions should be addressed directly (e.g. distorted energy prices). However, there are multiple factors that lead to supply-side bias in the NEM (including supply-side aggregation) that must be balanced by fostering demand-side aggregation through energy efficiency schemes.
Distortions in markets for demand-side products and services	Energy efficiency certificate schemes can overcome the multiple market failures that have restrained the growth of markets for demand-side services and products.

⁵ Akerlof, G.A. (1970). "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism". *Quarterly Journal of Economics* (The MIT Press) 84 (3): 488–500.

The Council recommends the following priority policies to support the ERF:

1. Energy Market Reform

The rules of the National Electricity Market (NEM) determine how we generate, transmit, sell and use electricity. The energy market reforms of the 1990s delivered many benefits to Australians, but the reform process isn't complete and this is pushing up electricity prices. To keep energy affordable we need to accelerate NEM reform, focusing on:

- Completing the reforms that COAG agreed to in December 2012, particularly the establishment of a mechanism to allow energy users to sell demand-response during periods of peak demand, which the Hon Greg Hunt MP supported in 2012.
- Ensuring that network companies are as cost-effective as possible. Some reforms have already been agreed to, but governments should look at:
 - o Ensuring that network incentives encourage cost-efficiency, and decoupling network profits from the amount of energy that is consumed.
 - o Measuring distribution companies' investment in demand-side and supply-side initiatives and encouraging them to optimise their investment patterns. Network companies have a lot of experience in building infrastructure to meet demand, and very little history with peak-reduction projects that can be much cheaper. On their own, incentives will take a long time to change this.
- Reviewing the system for charging energy users for using the network, and for charging large and small-scale generation to connect to, and use, the network, to ensure the system is fair and cost-effective. A well-designed system of charges will result in better investment decisions, ultimately saving all end-users money. Conversely, moving to fixed network charges for energy users would be inequitable, highly inefficient and lead to rising energy costs.

2. Energy Efficiency in Australian Government operations

The Australian Government spends well over \$450 million a year on energy and water. The Government could cut its gas and electricity bills by at least 30 per cent, saving well in excess of \$2 billion over the next two decades. The Australian Government's current program to improve the efficiency of agencies should be remodelled on the new Victorian and NSW programs. The Victorian Government uses loan facilities and private sector delivery to save \$2.5 billion in operational costs and create 620 private sector jobs.

3. Build off the existing state energy efficiency certificate schemes

NSW and Victoria have 'energy efficiency certificate schemes' and South Australia and ACT have similar schemes that don't use certificates.

4. Strengthen and streamline the Energy Efficiency Opportunities Program

The Energy Efficiency Opportunities (EEO) Program was introduced by the Howard Government in 2005-06. The EEO Program helps large energy users save energy and improve their productivity. The program has helped energy users find over \$323 million in annual savings, which each dollar spent on the program delivering 2.9 dollars of benefit.

The Executive Director of the International Energy Agency recently stated that the EEO program is world's best practice in industrial energy efficiency. If the program focussed more on results and its paperwork components were reviewed it would deliver even more benefits.

5. Strengthen the Commercial Building Disclosure Scheme, performance labels for appliances and minimum standards for appliances

The Commercial Building Disclosure (CBD) scheme was introduced in 2010 with bipartisan support. The CBD scheme requires office building owners to provide an energy efficiency rating (NABERS Energy rating) when they are put on the market for lease or sale. This system enables tenants and buyers to compare the efficiency of buildings in a fair and transparent way, addressing a well known market failure identified by Nobel-prize winning economist George Akerlof. The CBD scheme could be strengthened by expanding it to more classes and sizes of buildings, and the NABERS scheme strengthened by the Australian Government requiring all agencies to display NABERS tenancy or whole-building ratings in their foyers.

Similarly, energy rating labels for appliances help consumers determine how much various products will cost to run. Without labels, consumers would be completely unable to distinguish between products that are cheap and expensive to run.

Australia has also had minimum standards for buildings and appliances for many years. These programs act as a form of consumer protection, because the companies that manufacture products and construct buildings do not have to pay for the ongoing running costs of buildings and appliances. Minimum standards are exactly that - they provide consumers with a guarantee that goods meet a minimum quality, and then rating schemes allow them to balance upfront costs and ongoing running costs for higher performance.

6. Invest in Skills and Facilitation

Australian businesses are still relatively unfamiliar with managing their energy use, and as energy prices rise this reduces their global competitiveness. Programs like energy efficiency certificate schemes will partly address these issues, but complementing them with targeted investment in training and best-practice guidance will substantially increase their effectiveness. The Government should allocate \$90 million over 5 years to the Department of Industry in order to:

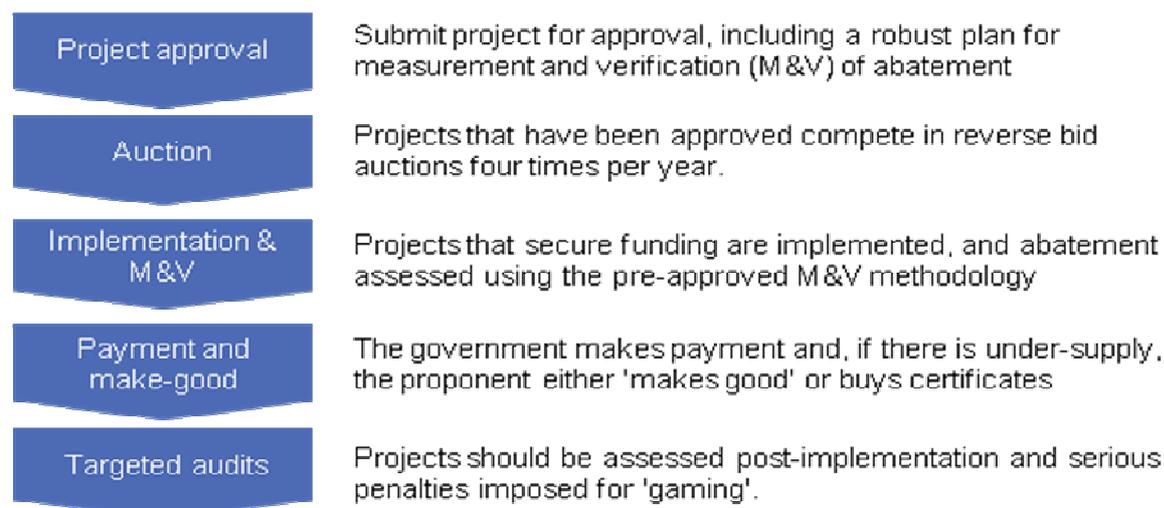
- Support the Energy Efficiency Opportunity program to help large and medium energy users manage their energy bills;
- Invest in skills, training and accreditation programs to improve the capability of Australia's workforce; and
- Develop a program to help building owners and SMEs upgrade their energy efficiency, which would include a suite of best-practice guides, standard contracts and funding for facilitation services.

3. Crediting Emissions Reductions

Green Paper question: *Views are sought on how best to*

- *ensure that emissions reductions are genuine*
- *develop methods for calculating emissions reductions from priority activities*
- *facilitate the aggregation of emissions reductions across projects and activities*

The Energy Efficiency Council recommends a simple design for the ERF that builds on existing systems:



Additional Abatement

The Energy Efficiency Council strongly supports the proposal that the ERF should drive additional abatement. Energy service providers only benefit when the ERF increases the number and scale of energy efficiency projects, and will not benefit if the ERF simply funds abatement projects that were already going to take place.

Extensive global and local experience demonstrates that additionality should be determined through project-based rules (e.g. retrofitting a building beyond a certain standard counts as additional). Attempting to assess the additionality of individual projects (e.g. assessing the 'financial additionality', or payback period of a project with and without an ERF grant) is exceptionally difficult in practice and administratively burdensome.

Experience also demonstrates that it is critical that project proposals must include a 'measurement and verification' (M&V) plan that specifies how the government will be assured that the quantity of greenhouse gas abatement from a project is genuine. Different types of abatement (e.g. carbon sequestration, renewable energy generation and energy efficiency) will require different M&V protocols.

Therefore, the Council recommends that the first stage of the ERF should be a 'pre-bid' stage which assesses whether a project proposal:

- Accords with one of the categories of accepted 'additional activities'.
- Includes an M&V plan that is suitable for robustly demonstrating abatement.

There are already well-established protocols for M&V of energy savings, and the globally accepted standard is the 'International Performance Measurement and Verification Protocol' (IPMVP). The IPMVP was developed by the US Department of Energy in collaboration with energy users and energy service providers so that energy users could be assured about the volumes of savings from commercial energy saving projects. This

protocol has been refined over the years, and now forms the basis of the M&V protocols in the NSW Energy Savings Scheme. This is discussed in more detail in Section 5.

Any M&V methodology developed by the Australian Government to determine whether liable entities under the ERF have exceeded their baselines and should pay a penalty will not provide a robust assessment of whether they have delivered additional abatement:

- Firstly, liable entities may reduce their emissions for reasons that are unrelated to additional abatement. For example, a coal generator's emissions may decrease because of displacement by another generator or reduced energy demand.
- Secondly, it is likely that the methodology used by the Australian Government to determine penalties will be set in a way that minimises the risk of a false assessment that a liable entity should pay a penalty, which increases the risk of a false assessment that a liable entity has reduced their emissions.

Therefore, we strongly recommend that, if a liable entity seeks funds through the ERF, they must bid a proposed abatement project into the ERF auction in accordance with a category of approved project (an 'Activity Method'), such as investment in improved generator efficiency, and must use an appropriate M&V protocol to determine the volume of additional abatement.

While abatement from specific or multiple projects is often best measured at the facility level, the Council recommends that all projects to reduce facility-wide emission must still specify the abatement measures and abatement must be measured and verified using appropriate protocols.

A 'facility method' that enables emitters to generate certificates by reducing their emissions, but does not require them to specify what actions were taken to reduce emissions nor estimate the relative contribution of the various measures, would be open to rorting. Therefore, the Council does not support a 'facility method' under which the mechanisms for abatement have not been specified and there isn't an appropriate M&V protocol.

Simplicity

The Government should make participation in the ERF as simple as possible in order to reduce transaction costs and encourage bids into the scheme. This is particularly critical in the early years of the scheme. This includes:

- The methodologies developed under the ERF must be simple as possible. This includes building off existing methodologies (such as the International Performance Measurement and Verification Protocol (IPMVP)) and limiting restrictions.
- Limitations on bids should be as simple as possible. The tentative proposal that commercial building upgrades must reduce emissions by at least 40 per to be eligible to bid into the ERF would knock out almost all bids from the commercial building sector.
- There should be no minimum bid size. The transaction costs of bidding into the ERF will provide a clear price signal that will discourage small bids.

4. Purchasing Emissions Reductions

Green Paper question: Stakeholder views are sought on how best to:

- facilitate early participation in the Emissions Reduction Fund
- operate an efficient auction process to secure lowest cost-emissions reductions
- provide funding certainty for businesses
- provide confidence that projected emissions reductions will be delivered

Ramp-up time and state energy efficiency schemes

It takes many years to establish effective schemes like the ERF, and for the market to respond with genuinely additional projects. If the ERF is developed as a stand-alone program there is a significant risk that it will either fail to deliver substantial abatement, or deliver non-additional projects. This risk is exacerbated by the low level of industry confidence that the ERF will last beyond three years, due to announcements by the current Government and lack of bipartisanship around the ERF.

However, the Australian Government has a major opportunity to utilise the existing state-based energy efficiency schemes, both as mechanisms to deliver abatement and as sources of experience. The well-publicised problems with the Home Insulation Program largely stemmed from the former Government's rapid development of a stand-alone scheme and its failure to learn from the states' considerable experience in insulation.

Therefore, we recommend that the Australian Government:

- Allow organisations in states with an existing energy efficiency scheme, that are eligible to use those schemes, to bid proposals into the ERF auction to generate certificates under those schemes. The certificates would then be retired;
- Allow organisations in states without existing energy efficiency schemes to bid proposals into the ERF auction using M&V protocols from the NSW Energy Savings Scheme (ESS) to demonstrate additional abatement; and
- Develop broad M&V protocols for projects that aren't eligible under relevant state scheme rules (e.g. gas efficiency projects in NSW).

Linking with State Energy Efficiency Schemes

The Energy Efficiency Council's earlier submission to the Department of the Environment looks at interaction with state energy efficiency certificate schemes in detail. In summary:

- There are schemes in NSW, ACT, Victoria and South Australia
- Economically, the ERF and state energy efficiency certificate schemes are complementary. While they both drive 'additional' energy efficiency, the purpose of the ERF is to provide a price signal to internalise the benefits of abatement activities, whereas the state energy efficiency schemes aim to address a range of market failures, including energy market distortions.
- Without the state energy efficiency certificate schemes, the Australian Government will risk failing to reduce emissions by 5 per cent below 2000 levels by 2020.
- The state energy efficiency certificate schemes represent a significant opportunity as a channel to deliver abatement through the ERF.

There are four options to build on these existing state programs:

1. **Explicitly allow joint project funding** - allow projects to both generate certificates through state schemes (reflecting energy market benefits) and bid into the ERF (to capture the positive externality of abatement).

2. **Attempt to passively prohibit joint funding of projects** - passive requirements that projects cannot be funded by both the ERF and state schemes would be administratively complex. Options 3 and 4 would be a more effective way of achieving this outcome.
3. **Use the schemes to focus on different sizes** - the ERF could focus on energy efficiency abatement projects on large sites, while the state energy efficiency certificate schemes could continue to support energy efficiency projects among households and SMEs.
4. **Allow the ERF to buy certificates from state schemes** - proponents can generate energy efficiency certificates under the state schemes and bid them into the ERF, where they would be retired. This would allow the market to deliver energy efficiency above and beyond the targets set in the state schemes. In states without schemes, parties could directly bid into the ERF using the M&V methodologies of the NSW Energy Savings Scheme, and projects that aren't eligible under state schemes could bid in under new, broader M&V methodologies.

The Energy Efficiency Council recommends Option 4, as this would:

- Enable the ERF to ramp up rapidly and deliver substantial abatement over the three years of allocated funding, as energy service providers already have the processes and market offerings in place to work under existing schemes.
- Provide a robust framework for ensuring additionality by leveraging the existing certificate registries and accreditation processes. In addition, where certificates are bid into the ERF they would be retired, eliminating the chance that they could be double-counted toward state scheme targets and the ERF.
- Allow Federal administrators to focus their limited resources on compliance in states without schemes (Queensland, Western Australia, Tasmania and NT).
- Contribute towards electricity affordability, as allowing parties to bid state energy efficiency scheme certificates into the ERF would act as a price stabiliser for those certificate scheme. If parties can bid certificates into the ERF it would increase the number of certificate buyers and frequency of buying, which would lead to greater market liquidity, market efficiency and lower prices.
- Address issues of inter-state equity. Immature energy service markets can deliver low-cost energy efficiency opportunities through mechanisms such as low-flow showerhead roll outs. These opportunities have already been accessed in NSW, Victoria, South Australia and ACT, which would put Queensland, WA, Tasmania and NT at an advantage in the ERF auction. Allowing NSW, Victoria, South Australia and the ACT to use their schemes to tap into more complex opportunities would place all regions on an even footing to benefit from the ERF.

Operating an auction process

Investors and energy users will need a high level of certainty about both the bidding process and the ongoing future of the scheme in order to make significant investments and bid into the scheme. This will require a number of features for the auction.

- The Government must make the maximum 'benchmark price' explicit, particularly in early years. If the ceiling price is hidden, bidders may assume that it is much lower than it is (e.g. \$10 per MtCO₂-e) which would substantially reduce the volume of bids.
- The Government would ideally release the details of successful bids post-auction to improve bidding behaviour. However, at an absolute minimum, the Government must release a cost curve of successful bids in each round (i.e. a curve of volume of abatement and price per volume) to boost investor knowledge and confidence.

Provide funding certainty and confidence about delivery

The Council supports the position in the Green Paper that the Government should have confidence that a project is delivering abatement before payment is made. However, our members have advised that they would be very unlikely to bid into the ERF if bidders only get paid for abatement on an annual basis, even with a contract, as:

- This would substantially raise transaction costs;
- Parties and their financiers would have low confidence about future payments; and
- The time-gap between investment in projects and ERF payments would cause cash-flow problems.

However, the Council does support the proposal that payment should only be made after a project is completed and the savings have been established. Furthermore, our extensive experience suggests that once the savings from the first year of an energy efficiency project are verified, they can be extrapolated forward with some confidence.

Therefore, we recommend a balanced system where organisations that bid projects into the ERF are paid for five years of abatement as soon as a project is completed and abatement been established through suitable measurement and verification (M&V) processes.

We also recommend that the ERF include a strong audit process that combines random audits with targeted audits of activities or organisations where non-compliance is deemed of significant risk. Rather than being paper-based, audits should focus on measurement and verification of results. Applicants found to be acting fraudulently should be subject to significant penalties. A strong audit and penalty system regime will result in minimal delays to projects and reduce administrative burden relative to an extensive pre-project check-list.

A similar system is used by the NSW Energy Savings Scheme, where the NSW Government ensures that it only pays for genuine energy savings by setting robust M&V processes, extrapolating measured savings and ensuring that savings are delivered through spot audits.

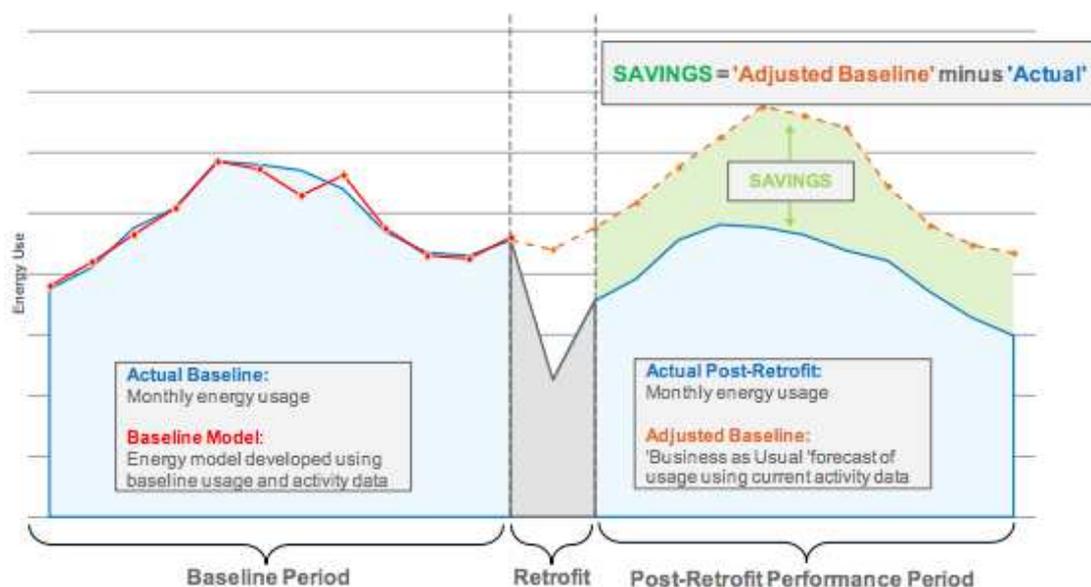
5. Measurement and Verification in Detail

Accurate measurement and verification (M&V) of abatement is a critical challenge for baseline-and-credit schemes like the ERF, as it involves measuring what occurs after a project is implemented and comparing it with a prediction about what would have occurred if the project had not been implemented (business as usual).

Fortunately, in the case of energy efficiency M&V is relatively straightforward as:

- Accurate metering equipment is available; and
- There is a well-established global M&V protocol, the IPMVP.

The eight generic steps for calculating abatement from energy efficiency projects are illustrated by the following chart and outlined below⁶.



Before the abatement project is implemented

1. A period of time prior to the project implementation is selected and measured – this is the 'baseline period'.
2. During the baseline period, data is also collected for 'independent variables', which change on a regular basis, and have a direct effect on baseline energy usage patterns (e.g. changes in weather).
3. An energy model is developed to describe the relationship between baseline energy use and the independent variables affecting energy use.

After the energy savings project is implemented

4. Once the energy savings project is implemented, data over a suitable period is once again selected and measured. This is called the 'post-retrofit' performance period.
5. Data is also collected for the same independent variables for the post-retrofit period.

Calculating energy savings

6. A 'business as usual' forecast of energy use or demand is determined by adjusting the developed baseline energy model with data for independent variables from the post-retrofit period. This is known as the 'adjusted baseline'.
7. Finally, savings are determined by subtracting the measured actual usage from the adjusted baseline.

⁶ Adapted from NSW Office of Environment and Heritage (2012) *Measurement and Verification Operational Guide - Best practice M&V processes*

Calculating abatement

8. Savings are then converted into abatement by applying a conversion factor from energy (eg. gigajoules or megawatt hours) to carbon (tonnes of carbon dioxide equivalent). Conversion factors should be appropriate to the location where the savings occurred and consistent for all abatement projects of a given fuel type.

Adapting IPVMP to baseline and credit schemes

The IPVMP will need to be adapted for the ERF. Normally, energy service providers and energy users mutually agree on a plan to measure and verify savings that is in accordance with the protocols of the IPVMP.

Where governments choose to fund an energy savings project, they will also want to ensure that the M&V plan is robust. This is normally done by adopting a suite of guidelines that specify what must be in the M&V plan. Fortunately, that the ERF can build on the experience from the NSW Energy Savings Scheme (EES) and its predecessor the NSW Greenhouse Gas Reduction Scheme (GGAS).

EES and GGAS have demonstrated how the IPVMP can be adapted to monitoring and verifying abatement in a baseline-and-credit framework like the proposed ERF. IPVMP has effectively underpinned the EES and GGAS methodologies for measuring savings for larger commercial and industrial energy efficiency projects since 2003.

6. Safeguarding Emissions Reductions, Carbon Farming and Administration

The Council has no comment on these matters at this time, apart from the very clear requirement that companies should not receive any payment for reducing their emissions unless they bid an activity into the ERF auction under an 'Activity Method'.

7. Consultation and Review

Green Paper question: *Views are sought on the timing and conduct of a review.*

Investors and energy users will need a high level of certainty about the ongoing future of the ERF scheme in order to make significant investments in their internal processes and individual projects.

Holding a major review of the ERF in 2015 will create significant uncertainty and, moreover, will be difficult given the limited data at this time. This would significantly discourage organisations from participating in the ERF.

Therefore, we recommend that the first major review of the ERF should be held in 2018, rather than 2015. While the Government should carry out regular reviews focussed on improving the operational aspects of the ERF (e.g. accreditation and audit processes), frequent reviews of major design features of the ERF, including the continuation of the ERF, will create huge uncertainty that will stymie investment.