



Submission:

**Clean Technology Programs
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by the
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Clean Technology Programs Overview

SEA supports the introduction of the new Clean Technology Investment and Innovation Programs as a mechanism to increase adoption of less polluting technologies and to generate investment in a decarbonised manufacturing sector in Australia.

The *Clean Technology Investment* program is appropriately set with a funding ration of 3;1 private to government investment as there is little technological risk in the adoption of existing technology but it provides a mechanisms to overcome some of the issues facing the adoption of more energy efficient manufacturing measures.

In both the *Clean Technology Investment* and the *Food and Foundries Programs*, we believe that a single project cap should be introduced into both of these schemes to maximize the potential for wide spread adoption across the manufacturing industry. We do not necessarily believe that in either of these programs a specific cap on company turnover should be included, but projects should have a maximum allowable funding.

The *Clean Technology Innovation* program is appropriately set at a 1:1 funding ratio which SEA views as appropriately reflecting the risk of early stage technology development. However, we also believes that there should be a cap on the size of businesses applying for these schemes.

The following submission provides SEA's position and comments in regards to the design of the Clean Technology Programs and potential issues with facing the schemes in implementation and monitoring.

Clean Technology Investment program

Funding of projects

Maximum funding limit

The funding of projects under the Clean Technology investment program should be limited in its size of grant that is allowed to be applied for. With a limit on the funding available over the life of the program, the capping of funding for individual project would allow the maximizing of diversity of opportunities for GHG reduction across the manufacturing sector. Furthermore, without a cap on the funding of projects there lays the risk that the maximum diversity in energy reduction will not be achieved and that a few large manufacturers will be seen as being advantaged in the obtaining of funds over the broader manufacturing base.

Considering that some manufacturers in Australia such as car companies have already received significant funds through other mechanisms (Green Car Innovation Fund for example) will also be able to access these funds, there is a significant issue of apprehension of bias against the SME sector.

The Clean technology investment program should have a cap for any single applicant over the life of the program. This would be consistent with the principle of managing risk of investment in a small number of projects. However, as significant emitters could reduce their emissions based on this program, large projects must be considered. Based on the large number of possible applicants for this grant, SEA believes that a cap of 2.5% of the total grants pool (\$20 million) for any 1 company over the life of the program would be appropriate.

Funding leverage ratio of 3:1

Without the inclusion of a cap on funding, the 3:1 average funding model is impractical as this is likely to advantage early applicants over later ones. The reasoning is that it is more likely that earlier applicants will request funding above the cap if that is possible as there is no disincentive to not ask for more. If these projects are then funded at a higher rate, then the 'average' of 3:1 funding will subsequently have to lower funding for other projects at a later date to ensure the average is met. This creates uncertainty for businesses that are submitting applications later in the program cycle as it creates a situation where they may not receive the desired level of funding which may then place additional risk in the project succeeding with a reduced level of funding, or not going ahead at all.

With a funding cap in place a 3:1 averaged funding may work where larger projects (which have company contributions exceeding the 3:1 ratio) but again is problematic in justifying why one company's application receives a higher ratio than 3:1 when another similar application may not do so. The conditions to achieve this would be difficult to justify in any manner that does not seem completely arbitrary.

The Program should cap the funding to a maximum of 25% of the total project cost up to the cap amount noted above. If companies wish to spend more on the project than this amount

Eligibility criteria

Overall, with the program specific and general exclusions of various applicants who are eligible under other programs, SEA agrees with the overall thrust of inclusion and exclusion of the businesses based on their energy consumption and ANZSIC code.

However there are questions on whether there is a significant cross over between the ANZSIC divisions where companies that undertake mining activities also manufacture. The typical case of this is where there is mining activities and subsequent processing of the ore into a highly improved (beneficiated) product or it is refined into a final metal product. Technically, these latter instances may fall within the definition of ANZSIC Codes 2723 and 2729. The key point here being how these businesses are defined within the ANZSIC code.

Acknowledging that there are exclusions within ANZSIC codes of what does and does not fall within various classifications, a definitive determination of the point at which there is eligibility or otherwise under this program needs to be made for the sake of clarity amongst potential applicants, particularly for those involved in the resources industry.

Distribution activities and supply chain initiatives

On the issue of the inclusion of distribution activities, SEA is of the view that distribution activities should not be included within the schemes (with the exception of food industries as noted below). It is difficult to see how a project about distribution would significantly improve carbon emissions energy efficiency in most circumstances without the replacement of the actual distribution / delivery vehicles.

In relation to this the issue of collaborative supply chain projects under the manufacturing industry sector has also been identified. SEA does not believe that in the majority of manufacturing instances (excepting the food industry as noted below) that this is appropriate as there is no central 'locus of control' of the project.

Supply chain projects should only be eligible where the supply chain is within a vertically integrated business where total or substantial control of the supply chain is held within a corporate group structure.

Mixed business model eligibility and self-generation

From our consultations with members, it is highly likely that companies who are applying who have manufacturing as part of their business will have undertaken some form of energy auditing and assessment in respect of how they can improve their energy efficiency in order to plan the project and make an application. Therefore, it is reasonable to expect that companies can identify their manufacturing elements' energy consumption and the concomitant GHG emissions factors.

Similarly, where a company has self-generation capability, normal business practices would expect that there are business records that would substantiate the generation of electricity use for self-consumption. Furthermore, if any energy was exported from the operations, agreements and transaction documentation with the off-take retailer / trader should be available to substantiate the energy transfers.

Clean Technology Food & Foundries program.

Funding of projects

Under this program, similar to the Clean Technology Improvement program, there should be a cap on the total project value that is eligible to be funded under this scheme. In the previous section we noted that a cap of \$20 million (2.5%) of the program would be appropriate, creating a maximum of 40 projects funded at the highest level, or more if substantially smaller projects were chosen. Considering that the pool of potential projects / companies that are eligible in the *CT Food & Foundries* program is likely to be smaller, and some significant reductions opportunities may exist with larger companies, a higher percentage of allocation would be more appropriate. As such, we believe that a project cap of \$10 million of funding per company over the life of the program would be appropriate. This would still allow significant projects (\$40 million) to be implemented by companies who could afford their contribution.

In respect of the averaged funding mechanisms noted in the section on the *CT Investment Program*, the comments there in response to the average 3:1 ration apply also to this program.

Project eligibility

Food businesses

Unlike in the CT Investment Program, supply chain projects in the food industry are a critical part of the process of minimising the generation of waste through spoilage etc. and the management of the cold chain should be included in this. Supply chain / cold chain projects should be able to include all points up to the but excluding the point of retail sale of the food stuffs. On this note however, we must recognise that the eligible project funding that includes supply chain / cold chain management should be only open to those manufacturers whose goods are perishable or may be rendered unsafe without appropriate temperature management.

Metal forging and foundries

SEA does not have familiarity or experience in this sector to make relevant comment on eligibility.

Common program elements

Eligible and ineligible project activities.

In respect of the eligibility of projects, the examples given need greater clarity / explanation at some points as listed under the *Examples of eligible project activities* on page 6 of the Discussion Paper. Our feedback on these issues is outlined below.

There needs to be greater clarity on the eligibility of what constitutes “...new facilities that replace eligible manufacturing facilities;” (point 2) and how these will be assessed in respect of their carbon impact and energy intensity in the project. For instance does the facility include a building which houses the ‘facility (units of plant, process etc.)’ SEA suggests that if these brownfields redevelopments are to be included, then:

- The energy and carbon impact of decommissioning and any remediation of the old site / units of plant must be included as part of the carbon and energy cost of implementation of the project.
- The organisation decommissioning old sites must scrap, rather than on-sell old equipment / plant etc. What is the point of reducing one company’s emissions when a second company will acquire and use the same polluting plant & equipment?
- That the energy performance of a potentially eligible commercial building envelope (see below for further discussion of this point) must comply with current best practice in building energy performance and management of the built environment should they be eligible; and
- A better definition of what falls within the definition of “facilities”

At point 6, retooling to make products that are more efficient in-use is included; however, if the process to make these is more energy intensive and greater GHG emissions, then these should not be included. Additional energy intensity is acceptable provided it is offset by zero-emissions energy and is not avoidable. Furthermore, the justification for decreased end user emissions needs to be carefully detailed and substantiated through independent consumer research that verifies that the claims of usage patterns (upon which avoided energy consumption would be made) are appropriate and justified. Furthermore, to quantify the actual versus proposed carbon savings over the use period would need to be subsequently reported using the same methodology.

At the final point, there is the comment on the “...implementation of energy efficiency opportunities” it needs to be made clear whether this refers to energy efficiency opportunities under the Energy Efficiency Opportunities program managed by the Department of Resources Energy and Tourism or refers to a more general internal energy efficiency program undertaken by an eligible organisation.

Eligible expenditure

As noted in the section above, buildings are a potentially problematic issue as they may or may not directly constitute part of the “facility”. SEA recognizes that in some instances buildings may be integral to the energy efficiency and performance of a manufacturing process, however, this is a less than common circumstances. Typically the building is not integral to plant operation and energy consumption. The view from SEA is that only where the thermal or energy performance of the building envelope is integral to the construction and operation of the process and that it impacts the overall energy efficiency / GHG footprint of the process should these costs be allowed.

The inclusion of matching project funds from State and Territory programs should not be considered as eligible contributions to the project. The inclusion of such funds is effectively ‘double dipping’ from government funding mechanisms. In the circumstances of these projects, where one would

expect that the businesses will derive energy savings, carbon obligation or other commercial / financial benefits that one source of supporting funding should be adequate to support it.

SEA supports the grant funding applying to the costs of exiting brown / black energy contracts, assuming this refers to specific coal sources of energy. This support is predicated on:

- If the contract is for brown coal energy, the new contract cannot be black coal based, it must be based on either natural gas or renewable energy;
- The contract does not have an expiration date which falls within the first 12 months of the completion of the project;
- There is a minimum GHG emissions reduction of any new energy contract over the previous contract. The amount of this reduction should be significant and achievable. The exact quantum of reduction should be based solely on the emissions relative to the State's Type II emissions profile under NGERS. That is businesses in high emissions States such as Victoria should have to achieve higher reductions than those for states with lower emissions profiles such as WA or Tasmania.

SEA's view on the issue of locally sourced versus overseas equipment acquisition under this grant is that we recognise that the placement of an artificial limit on overseas content may be detrimental to the maximizing emissions reductions in some projects. While we fully support efforts being made to maximise Australian sourced goods and materials, it must be accepted that the best and most effective equipment is not always available in Australia at an acceptable price. However, in many cases there are strong arguments for the incorporation of Australian manufactured goods and in many cases (such as pumps, compressors, motors etc.) there are also good reasons to encourage then use of quality remanufactured goods / plant that can reduce the overall carbon footprint and embodied energy of the project.

Merit criteria

Project measurement

Companies should be able to assess the effectiveness and achievement of many of the merit criteria within 12 months of completing the project. The 12 month period is necessary to account for the potential of seasonal variations to production. These merit criteria would include:

- Overall energy consumption and greenhouse emissions;
- Energy intensity; and
- Carbon intensity.

One issue not addressed in the criteria is the differentiation between fixed and variable energy costs that can be identifiable in the businesses operations. That is those energy costs which are independent of the operation of any direct production processes (fixed energy) and those that are related to direct production operations. Without clearly identifying and differentiating between the two, then the issue of determining the potential and actual overall energy and emissions savings may be problematic.

In respect of the determination of the baseline, project and post-project energy and emissions profiles of businesses, we believe that the use of the NGERS system is appropriate and that any NGERS based calculations should be independently verifiable by a third party.

Prediction of outcomes

In relation to the prediction of improvement of energy and carbon intensity of processes, these predictions can be made if a suitable, well developed plan for energy management is in place and that the comparative energy savings of replacement systems over the existing ones is known. The level of any such energy or emissions reduction should be clearly stated and the methodology and calculations to achieve this targeted reduction are also disclosed and should account for both fixed and variable energy components as noted above.

Previously it was noted that that a clear and independently verifiable method for assessing end-user energy savings from improved products is necessary to know what potential for improvements in carbon emissions could result from the funded project. In order for the project proponent to then subsequently prove this later, it would be rather more problematic without undertaking verifiable research on consumer / end user energy consumption directly related to the product. Without this direct evidence, then claims on end user savings are unverifiable, unlike the internal process improvements which would be far less difficult to verify.

On this issues regarding payback, this should not be part of the merit criteria as it is a commercial issue for business on what is an acceptable payback period for their operations.

Baselines, benchmarks and previous activities.

SEA supports the necessity for companies to provide a baseline of improvement provided that the process for the determination of the baseline is set as a uniform and accepted standard such as the NGERs reporting process. The evidence used to demonstrate this base line (energy consumption and generation data from existing business records) can also be used to verify the internal improvements in energy and emissions profiles after the completion of the project.

As noted in the *Eligible Expenditure* section above, it is difficult to set definitive carbon or energy benchmarks across Australia, even within the same industry code, with the variations in carbon intensity of grid based electricity can make it difficult to set both energy and carbon based reductions. Furthermore, business who already have lower energy consumption than their competitors through already having undertaken energy improvements are disadvantaged as their achievement of a particular 'benchmark' compared to their 'baseline' faces diminishing returns as the easiest efficiencies will have already been achieved.

In respect of the issue of a company having previously undertaken energy efficiency and reduction measures, this needs to be recognised within the capability of the organisation to deliver on projected outcomes. However, should a business not have undergone the process before, the utilisation of suitable qualified and experienced external personnel or consultants who have been involved in energy efficiency should also be considered.

Demonstration of outcomes.

The requirement for the demonstration of various benefits and changes is a complex one and to some degree has previously been noted above in respect of the prediction of carbon savings etc. for smaller projects. The larger projects, however, would require consequently more details of that these benefits may be. In determining the merit of these benefits / outcomes of a project:

- All potential benefits should be identified across the three sustainability metrics of economic, environmental and social;
- These can be achieved through projections and modeling showing the potential triple bottom line costs and benefits and identifying by whom the costs are incurred and to whom these potential benefits accrue;

- For significant projects economic impact analysis (EIA) may also be appropriate;
- Where companies are producing a product that will reduce the carbon footprint over the lifetime of the product's use, a full life cycle assessment of the product's carbon impact should be demonstrated based on known usage patterns for the product. This would include both the embodied energy of the product and its in use energy consumption;
- Modeling and estimation of the demonstration of intended outcomes and benefits should be undertaken independently or through a standardized and accepted common methodology;
- It should be acknowledged that there are instances where cost or benefits cannot be quantified due to a lack of an acceptable method to measure or estimate them or where the relevant information would be impractical to obtain.

Other matters –.

One issue that has been raised is the potential taxation impact of the grant, assuming that the grant will be taxable income in the hands of the recipient. It has been highlighted that:

- if the income is taxable; and
- the company does not have revenue deductions or capital allowances (depreciation) available to in in the year of receipt in relation to the grant;

then the recipient company will effectively have the value of the grant reduced in the year of receipt. As in many cases of capital improvement / creation of a unit of plant, the cost of services provided directly in relation to the creation of the unit of plant are capitalized as part of the cost of the plant. So if the company does not have the relevant revenue deductions and the cost of services etc. is capitalized, there are situations where the recipient company may in fact be effectively taxed at 30% on the grant. This would reduce the effective rate of the grant by 7.5% (25% x 30%) to an effective rate of 17.5% support in that year.

Even in years where the company potentially receives grant income and has some form of deduction (revenue or depreciation) then on the assumption that the depreciation on the capital will likely exceed 4 years, then the recipient company will still have a tax liability in respect of the grant income effectively reducing its value to them, although at less than the rate noted above.

SEA is curious how companies and the Government will deal with this issue and maintain the integrity and effect of the grant in supporting the program's goals and believes that this issue needs to be addressed to maintain the integrity of the grant program.

Clean Technology Innovation Program

Program eligibility

The issue of program eligibility should be based around two factors; the eligibility of the applicant and the eligibility of the project being applied for. SEA has views on both of these matters:

In respect of the eligibility of entities:

- There should be an upper limit for revenue of the entity that is entitled to apply for the grant. Based on our experience, the SME sector in the clean tech space is at a disadvantage in applying for the innovation grants against larger entities who have greater resources to apply for grants and often have greater difficulty in demonstrating the opportunity for matching funding. Based on the experiences related to SEA, past R&D grant schemes have often been seen as “You almost have to be at a point where you don’t need the funding in order to qualify for it”;
- The maximum turnover allowable for applicants should be **\$500 million** in the applicant and in related entities or company group;
- The eligibility for the types of businesses (their main business activities) that are eligible should not be a limitation as long as the project is eligible under the project eligibility criteria and that they would have the potential capability of achieving the desired project outcomes.

The best mechanism to encourage collaboration under the program is to:

- a) Allow collaborative projects to be undertaken; and
- b) Depending on the circumstances of the collaboration and where it involves a University / institution, allow other government grants programs (ARC Discovery / Linkage) to be leveraged by the non-company partner. The company applicant under the CT Innovation Program does not receive any ARC funding (only the partner) but the University partner would benefit by access to these programs to leverage and potentially accelerate the capability development.

Supported activities

SEA supports the scope of eligible activities and projects within the CT Innovation Program and agrees that the definitions in existing funding and support programs (R&D Tax Concession, Commercialisation Australia programs) should be aligned to provide a consistent position across different schemes. This provides greater certainty and reduces confusion for potential users of the various funding programs.

Probably the most important point here is the any products, processes, service etc. that are developed with funding under this program must have end users who are external to the applicant(s) for the funding. That is it should not support internal improvement projects. Projects / activities that cannot clearly demonstrate this should be ruled as ineligible.

While complimentary programs such as the Enterprise Connect support program are available, there is currently a broad but potentially confusing raft of Government support mechanisms for companies involved in commercialization of clean energy technology, and there is a lack of clarity on which program is the best or most optimal for companies in selecting which program to pursue. SEA has also noted that this diversity of selecting a program can be confusing for professional services which provide advice to companies with the clean energy space as there are similar eligibility criteria across many programs.

For example, a clean energy or technology company's project may be eligible under this program or the Commercialisation Australia *Proof of Concept* and *Early Stage Commercialisation* programs as well as for the *R&D Tax Incentive*. Which should be pursued and why should it be pursued is a common question amongst businesses.

The issue of the 'aspirational target' concept for energy / carbon savings, this is a very difficult one to get right if it is included in the project merit criteria, or if in fact it is included as an overall program target. While there is the intention to maximise energy and carbon emissions reductions, the questions of a 25% energy / carbon reduction should be seen in light of:

- Who will actually benefit from these targets (one business, every business, Australia's emissions profile?)
- How can this target be measured if the majority (or exclusively) the savings on energy and emissions will be from outside the applicant companies?
- What is the 'baseline' emissions that the 25% will be achieved from and how is it determined i.e. what will be the benefit from the 25% target; and
- When would this target be achieved by?

Eligible expenditure

SEA sees that the scope of eligible expenditure is appropriate and consistent with other innovation programs project. In the eligible expenditure section it needs to be made more clear:

- What constitutes 'support staff' within the scope of the project;
- The expenditure areas eligible under '*direct costs (consumables)*' and whether this includes:
 - Third party consultants and specialists required for the project, including professional services such as IP, market / end user research etc.
 - Energy and other inputs, where these can be identified;
 - IP licensing fees for any inbound licensing of technologies needed for the project (e.g. if the project involves software, commercialisation / use of a patented technology); or
 - Other as yet unclassified expenditures.
- Where the program funding excludes costs for "...existing staff and other resources." Does this mean existing non-research support staff, or does it mean staff not employed at the time of the grant application, it is very confusing;

Other than clarification of these points noted above, SEA is in general agreement with the scope of eligible expenditure.

Uptake and impact

In assessing the outcomes and impact of the project, there are possibly significant issues in the estimation of energy or carbon emission reduction outcomes of the project. As noted in the section on Project Eligibility above, if the projects are to be for products, services and technologies that are for end-users outside the applicant's business, the impact of the development will depend on:

- Uptake rates of the technology;
- Utilisation or usage patterns of the existing systems / product / process by end users and how this differs from the proposed replacement;
- Comparative advantage in energy intensity over the existing system; and

- Sources of energy currently used for power generation e.g. depending on the location of use, the emissions intensity of any electricity used can vary within and across state borders – there is no single emissions factor which can account for this.

Based on the points raised, each determination of the energy / greenhouse impact may well not fit in easily under the existing NGERS assessment framework. SEA is unaware of any standardized framework or method for making such assessments without detailed end-user research that supports answering these questions. Even then the practicality of estimations in energy and emissions reduction based on this may be problematic in some circumstances due to the factors noted above.

In some cases an alternative fair and reasonable methodology for the estimation of the energy and carbon impact of the project may need to be agreed with the department in order to approximate or estimate the impacts of a project. In addition to this, companies should also be assessed / report on impacts such as:

- Export opportunities / import replacement;
- Increased employment;
- Commercial success with this criteria to be determined; and
- Other measures substantially identical to other innovation programs.

Companies should be required to report on an annual basis for at least 2 years after the project against the various reporting criteria agreed with the Department and as noted above.

About the Sustainable Energy Association of Australia (SEA)

The peak body for sustainable energy

SEA promotes the development and adoption of sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA 2030 VISION

‘On behalf of the people of Australia, the Association will vigorously promote the development and adoption of sustainable energy so that by the year 2030 more than 30% of Australia’s energy use in and across all states and territories is displaced by sustainable energy practices so that energy demand is more than 30% below that measured in the year 2000, and that more than 30% of energy use is derived from sustainable sources.’

About SEA

SEA is a chamber of businesses variously promoting, developing and/or adopting sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA is building relationships with businesses that aspire to be more sustainable in their own energy use, are providing the commercial solution to climate change through their products and services, or indirectly through their actions adopting more sustainable energy practices in their own business. Many businesses are acting to support the development of the best policy outcomes for the industry by becoming SEA members.

The role of governments is to build frameworks of governance that establish clear market signals for change and growth, and allow Australia’s innovative businesses to respond and deliver market-based solutions.

A key role of SEA is to offer policy options to governments building those frameworks.

SEA supports action on sustainable energy in every region and in all sectors of Australia’s economy.

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