

Ms Lisa Peterson
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AusIndustry
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Dear Ms Peterson

The Department of Innovation, Industry, Science and Research (DIISR) released a discussion paper on the Government's proposed 'Clean Technology Programs' in September 2011. This letter sets out the Energy Efficiency Council's initial response to this discussion paper.

The Energy Efficiency Council brings together Australia's expertise in energy efficiency to support the development of policy and programs. Incorporating expert advice into the design of energy efficiency programs significantly improves their effectiveness and reduces program risk.

The Energy Efficiency Council strongly supports the intent of the Clean Technology Programs to help Australian companies become more globally competitive by adjusting to rising energy prices and growing markets for low carbon products and services.

Australian energy prices are rising rapidly for a number of reasons, most notably expenditure on electricity networks and rising global prices for oil, gas and coal. When energy prices rise it makes economic sense to invest capital and labour to reduce expenditure on energy use. Given the largely untapped potential for improved energy efficiency in Australia, energy efficiency and cogeneration in industry could potentially save companies \$2 billion per annum by 2020¹.

Improved energy management can also deliver a range of other benefits to companies, including:

- Reduced maintenance costs and modernisation of equipment
- Reduced input and labour costs due to improved total process efficiency
- Fostering a culture of efficiency and continuous improvement

When companies invest in energy efficiency, cogeneration and other demand-side measures it can also deliver wider social benefits by reducing expenditure on the electricity network, which would reduce electricity prices for all consumers. For example, the Townsville Solar City project has managed to reduce peak demand on Magnetic Island by over 20 per cent, deferring \$17 million investment on an undersea cable by at least eight years.

Although companies are largely motivated to invest in energy efficiency by cost-savings, energy efficiency (including cogeneration) is also the largest source of greenhouse gas abatement available over the next decade. The International Energy Agency estimates that, with the right policies, energy efficiency could deliver 65 per cent of global abatement to 2020.

However, there are a number of barriers that prevent companies from investing in the level of energy management that is privately or socially optimal. These include:

- Information, skill and culture barriers that prevent companies investing in opportunities that are already privately cost effective. Decades of low energy prices means that Australian companies lack the skills to respond to rising energy prices, including engineering and management skills. This has fostered a culture of underinvestment in energy efficiency.
- Spill-over benefits from research and development (R&D) that result in sub-optimal investment
- Energy market rules that impede privately cost-effective investment (e.g. processes that substantially increase the cost of connecting cogeneration to the grid) and fail to reflect the social benefits of demand-management in private price signals.
- Environmental externalities from energy use that have serious economic and social impacts. The Energy Efficiency Council strongly supports the introduction of a carbon price to address this barrier. However, additional policies are needed to address energy market issues and the R&D information, skill and cultural barriers to energy management.

¹ ClimateWorks 2010, *A Low Carbon Growth Plan for Australia*, ClimateWorks Australia, Melbourne.

The Energy Efficiency Council supports the use of the 'Clean Technology Programs' to boost Australia's global competitiveness by addressing:

- Information, skill, culture and capital barriers that result in sub-optimal investment in energy efficiency that is privately cost effective (the *Clean Technology Investment Program* and the *Clean Technology Food and Foundries investment Program*)
- Research and development barriers (the *Clean Technology Innovation Program*)

However, the Council notes that manufacturers are often conservative due to the cost of disruptions to production, and so seemingly 'established' technologies may not be established in specific industries. An energy efficiency upgrade that involves the novel application of a technology could involve higher costs and/or the trial of a technology on a small production line or a test facility. These types of innovation are critical, but as they do not involve commercialisation they would fall between the Investment Programs and the Innovation Program.

The Energy Efficiency Council strongly recommends that AusIndustry consider funding these types of programs either through the Innovation Program or through higher rate grants (e.g. 1:1) under the Investment Programs. To be eligible for funding, these types of project would need to meet the merit criteria for the Investment Program and demonstrate that they are genuinely novel in the sector.

Critical to all these programs will be the right mix of experts on the assessment panels. The Energy Efficiency Council recommends that energy efficiency specialists and academics be invited to participate in the assessment panels. The panel for the Innovation Program will likely need a different mix of skills to the panels for the Investment Programs.

The Council strongly has set out its specific recommendations on these programs in the attached papers:

- Appendix A: Investment Programs – general comments
- Appendix B: Innovation Program – general comments
- Appendix C: Investment Programs – responses to specific questions
- Appendix D: Innovation Program – responses to specific questions

Finally, the Council notes that a number of critical sectors, such as the health sector and some parts of the mining sector, will receive no support under the Emissions-Intensive, Trade Exposed support program, the Clean Technology Programs or the proposed Tax Break for Green Buildings. The Council strongly recommends that companies in these sectors should receive support under the Clean Technology Program or other assistance mechanisms.

The Council looks forward to working through these issues with the Department. Please contact me on 03 8327 8422 should you require further information on any of the issues raised in this submission.

Yours sincerely



Rob Murray-Leach
Chief Executive Officer

Appendix A: Investment Programs – General Comments

The two Investment Programs (*the Clean Technology Investment Program* and the *Clean Technology Food and Foundries investment Program*) should be transitional programs that focus on:

- Boosting the viability of Australian businesses
- Investments in energy efficiency that are ‘additional’ (beyond business-as-usual)
- Fostering skill development and cultural change, in order to create permanent improvements in the efficiency of Australian industry

This has important implications for program design, in particular implying that the programs will have much greater cost-benefit if they focus on projects that foster long-term change in the skills and culture in Australian industry, rather than simply delivering the greatest short-term cost-benefit ratio. Therefore, the Council recommends that the programs focus on encouraging companies to invest in the maximum level of energy efficiency that is cost-effective, rather than just short payback projects that they may invest in anyway.

As an overview, this would suggest that the program would only support projects that have an ROI of 10 to 66 per cent, and then would prioritise projects:

- That deliver substantial reductions in energy use (percent reduction in energy use of either a specific process (e.g. refrigeration) or the whole site)
- In companies that are highly exposed to energy prices (e.g. energy spend is a higher percentage of sales revenue)

The Energy Efficiency Council supports the proposal to use a ‘continuous approval’ process, where small grants are considered by an AusIndustry or Departmental Committee within around four weeks and larger grants are considered by an Innovation Australia committee within an eight week period. This will reduce the delays for projects, increase applicant certainty and improve the implementation rate for effective projects.

It is critical that the Government define very explicit merit criteria for the approval process, including minimum thresholds for approval. This will help guide companies in developing applications and reduce wasted effort by both applicants and the department. As the Government is proposing to use a continuous approval process there will be fewer applications considered at any one time, which means that very explicit merit criteria and thresholds will be essential to provide a level playing field across the multiple application rounds.

Merit Criteria

The Energy Efficiency Council recommends the following merit criteria and thresholds:

- **Percentage improvement in energy / carbon intensity**

Projects should aim to deliver a substantial improvement in energy / carbon intensity. The Council recommends that projects should deliver a minimum improvement of 10 per cent at either the process level (sub-metered) or the site level, although consideration should be given to projects that deliver smaller percentage improvements in very energy intensive processes (e.g. smelting). This means that a project may reduce the energy intensity of a part of the manufacturing process by more than 10 per cent (e.g. machining) but not the overall energy intensity of the product by 10 per cent.

Energy savings will need to be measured in energy costs or greenhouse gas reductions, to allow for fuel switching and off/on-site generation. Estimates for energy savings from projects that involve a shift from electricity to on-site generation (e.g. cogeneration) need to incorporate off-site energy losses to be accurate estimates, and these are most accurately reflected by energy costs and greenhouse gasses.

- **Payback periods**

The program should focus on funding projects that are cost-effective but additional to business-as-usual. There is a tension between these two requirements, because projects

that are very cost-effective (e.g. projects with payback periods shorter than 18 months) are generally business-as-usual.

The Council recommends that the program should only fund projects that have a return on investment (ROI) between 10 per cent and 66 per cent (roughly equivalent to payback periods between 18 months and 10 years) with a focus on projects that have an ROI between 14 per cent and 50 per cent.

The Council notes that ROI is generally a more accurate measure than simple payback period, because it can accommodate more factors. The Department should set clear requirements about what should to be considered in determining ROI. This guidance would boost companies' skills in energy management by requiring them to consider a wide range of factors in businesses cases, including:

- Energy savings
- Reduced maintenance costs
- Reduced labour and other resource costs

The Council notes that companies can incorporate or exclude multiple factors to adjust their estimated payback periods. Nevertheless, setting clear expectations around payback periods, assessing grants through a competitive process and including experts on the assessment panel should encourage companies to put forward projects that are roughly in the desired ROI brackets.

- **Companies' exposure to energy prices**

- The Australian Government has indicated that the Investment Programs should boost the viability of Australian industry. This suggests that, in a competitive process, it might make sense to focus grants on companies that are highly exposed to energy prices (e.g. energy spend is a higher percentage of sales revenue).

- **High quality energy assessments**

The Energy Efficiency Council notes that the quality and cost-effectiveness of an energy efficiency project is significantly increased by carrying out a high quality energy assessment that identifies and develops businesses cases for the project. The program must encourage good design, which will generally be associated with higher proportion of labour costs.

The Council notes that the Investment Programs will not provide retrospective grants for energy assessments that precede grant applications. Therefore, the Council recommends that the Department establish merit criteria that applications are accompanied by high quality energy assessments that identify energy savings with a ± 10 per cent confidence level, with increasing detail in applications as grants increase in size.

For example, despite a number of flaws with the current audit standard (AS/NZS 3598), grant applications under \$65,000 should be accompanied by a Level 1 audit and grant applications over \$250,000 should be accompanied by a Level 2 or 3 audit, or an audit compliant with the Energy Efficiency Opportunities (EEO) Act.

- **Measurement and Verification plans and independent assessment**

All grant applications should include an appropriate measurement and verification plan in line with the International Performance Measurement and Verification Protocol (IPMVP). Projects over a certain size should involve independent verification by a third party.

- **Viability**

All projects should be able to demonstrate financial and technical viability, although the level of stringency would need to increase for larger projects. Including experts on the assessment panel would ensure that

Innovation

As noted in the cover-letter, manufacturers are often conservative due to the cost of disruptions to production, and so seemingly 'established' technologies may not be established in specific industries. An energy efficiency upgrade that involves the novel application of a technology could involve higher costs and/or the trial of a technology on a small production line or a test facility.

These types of innovation are critical, but as they do not involve commercialisation they would fall between the Investment Programs and the Innovation Program.

The Energy Efficiency Council strongly recommends that AusIndustry consider funding these types of programs either through the Innovation Program or through higher rate grants (e.g. 1:1) under the Investment Programs. To be eligible for funding, these types of project would need to meet the merit criteria for the Investment Program and demonstrate that they are genuinely novel in the sector.

Other Considerations

The Council recommends that 50 per cent of funding should be provided in advance of the project and 50 per cent of funding should be provided after measurement and verification is complete.

The Energy Efficiency Council further recommends that the Department should consider the significant experience of Australian State and international grant programs, such as the *New York State Energy Research and Development Authority's* Industrial and Process Efficiency Grants (www.nyserda.ny.gov)

Appendix B: Innovation Program – General Comments

The Energy Efficiency Council strongly supports the development of an innovation program for energy efficient technologies and services. The Council notes that the proposed program design is similar to many former innovation grant programs. As such, discretion will have an important role to play in allocating innovation grants, and the Council strongly recommends that the assessment panel for this program involve private sector and academic experts in energy efficiency research and development.

As noted in the cover-letter, manufacturers are often conservative due to the cost of disruptions to production, and so seemingly 'established' technologies may not be established in specific industries. The Energy Efficiency Council strongly recommends that AusIndustry consider funding these types of programs either through the Innovation Program or through higher rate grants (e.g. 1:1) under the Investment Programs. To be eligible for funding, these types of project would need to meet the merit criteria for the Investment Program and demonstrate that they are genuinely novel in the sector.

Appendix C: Responses to specific questions on Investment Programs

A1. It is conceivable that there may be applications for very large projects of value in excess of \$400 million. Should there be a maximum total of funding provided to any one business under this program? If so, what amount? Please provide justification.

- The Energy Efficiency Council recommends a maximum grant level in the region of \$25 million (i.e. total maximum project size of \$100 million) in order to maximise the number of projects supported by the program. Programs above this level should be considered only in very well justified cases.

A2. It was announced that there would be an average of 3:1 funding contribution for the program which implies that some grant rates could be higher and some lower. What mechanisms can be used to achieve this average?

- The Energy Efficiency Council recommends that projects achieving deeper levels of energy savings with longer payback periods should receive higher levels of support. For example:
 - o Projects with ROI of over 40 per cent would receive a maximum level of 1:4 support, irrespective of the percentage improvement in energy intensity
 - o Projects with ROI of 25 to 40 per cent that improve energy intensity of a process or site by at least 10 per cent would receive 1:3 support
 - o Projects with ROI below 25 per cent that improve energy intensity of a process or site by at least 15 per cent would receive 1:2.3 support

However, as noted elsewhere, projects with innovative components should be considered for higher levels of funding (e.g. 1:1)

B1. Are there any gaps in the above definition of a manufacturing business that should be included as well?

- No comment

B2. Are there any energy sources, other than electricity and gas, which could be considered for threshold consumption?

- The Energy Efficiency Council recommends that the threshold for energy consumption should consider electricity, gas, coal/coke and diesel. The threshold should account for multiple types of fuel on a single site, which means that the threshold should be expressed in GJ or total annual energy spend.

B3. Should the energy consumption threshold include distribution activities? Please provide justification.

- The Energy Efficiency Council recommends that the energy consumption threshold should include on-site transport (e.g. haul-packs and conveyor belts) and stationary energy used in distribution (e.g. warehousing and refrigeration) but not energy used in off-site transport on public roads or rail. This will allow for the optimization of these onsite distribution activities.

B4. Are applicants with a mixed business model able to report on energy consumption associated only with manufacturing activities?

- The Council notes that companies with appropriate sub-metering should be able to report on energy consumption associated only with manufacturing activities.

B5. What evidence of energy consumption can be provided by applicants who generate their own energy?

- The Council notes that companies that generate their own energy should be able to provide evidence of generation through fuel purchase (gas, coal/coke and diesel) and should have sufficient sub-metering to demonstrate on-site consumption versus export.

B6. What type of supply chain and other collaborative activities should be eligible for funding? Please provide examples and justification.

- No comment

Questions C1. and C2.

- See answers to Questions A1 and A2

D1. Although this program is directed at food manufacturers, should supply chain and other collaborative activities be eligible for funding (e.g. projects involving a manufacturer in combination with transport and/or cold storage providers)? Please provide justification.

- See answer to B3

D2. What constraints, if any, should be applied to supply chain and collaborative activities (e.g. can the supply chain/collaborative component be the major focus of the project proposal)?

- No comment

E1. Are there any gaps in the above definition of an eligible foundry and metal forging business that should be included as well?

- No comment

E2. Are applicants with a mixed business model able to report on energy consumption associated only with the foundry and/or metal forging activities?

- The Energy Efficiency Council notes that companies with appropriate sub-metering should be able to report on energy consumption associated only with foundry and/or metal forging activities.

F1. What other activities, beyond what is identified above, could be undertaken to achieve a reduction in energy consumption or improvement in carbon efficiency?

- The Energy Efficiency Council notes that the activities on page 6 are reasonable examples of the types of projects that can reduce energy consumption, but the list is not exhaustive and projects are very site specific. In particular, the programs should also support demand-management programs (e.g. peak energy demand reduction) that can reduce companies' energy bills and deliver benefits to the energy network.

The Energy Efficiency Council reiterates that services, including process optimisation, are absolutely critical in energy efficiency projects, and that the programs should fund services and encourage applicants to invest sufficient internal and/or external labour to design effective energy efficiency upgrades.

F2. What collaborative projects including supply chain activities could be undertaken to achieve a reduction in energy consumption or improvements in carbon efficiency?

- There is the potential for partnership projects between energy retailers, building owners and Energy Service Companies to provide intelligent billing and reporting which would allow customers to better understand their usage each month and reduce their energy usage.

F3. Are there additional activities that should be ineligible activities?

- No comment

G1. Should changes to, including the construction of buildings directly associated with, facilities used solely or predominantly for eligible manufacturing be eligible?

- The Energy Efficiency Council strongly recommends that retrofitting of industrial buildings used for manufacturing activities should be eligible as part of grants. Lighting, heating and ventilation can be a significant component of manufacturing sites' energy use.

G2. Should funding from other State/Territory/Local government programs be allowed as part of the matching contribution if directed at new activity?

- The Energy Efficiency Council does not see any reason why co-funding from other organisations, including other State/Territory/Local government programs, should not be allowed as part of the matching contribution if directed at new activity.

G3. What other expenditure should be considered as eligible?

- The Energy Efficiency Council strongly recommends that labour involved in the design of energy efficiency retrofits and optimisation and commissioning be eligible.

G4. Should costs related to exiting contracts using black/brown energy be included? If so on what basis?

- No

G5. Should there be a threshold for overseas expenditure (e.g. purchase of foreign made capital equipment)? Could this be sourced locally?

- While the Energy Efficiency Council strongly supports local manufacture of energy efficient equipment, it is neither possible nor desirable to set any threshold for overseas expenditure. First, there are many types of specialist equipment that can only be obtained from overseas. Second, it is virtually impossible to determine the proportion of equipment that is sourced from overseas, given that locally produced equipment typically includes overseas components. Third, there is significant global expertise in energy efficiency, and excluding this expertise would stifle the development of a local energy efficiency industry.

H1. What is a reasonable period in which to achieve predicted improvements in energy and/or carbon intensity?

- The Energy Efficiency Council recommends that predicted improvements in energy and/or carbon intensity should be easily achieved within 2 years of the commencement of a project. It is important to note that this may be later than 2 years after a grant is awarded, given that manufacturing sites may need to wait until an appropriate down period before undertaking initial works, and then wait again for an opportunity if equipment needs to be optimised.

While measurement and verification (M&V) periods in buildings need to be one year long to account for a 'production cycle' of the building (comfortable space at different times of the year), M&V periods for manufacturing will vary significantly depending on the production cycle of the site. An appropriate M&V period could be very short if this accounts for the variations that would affect the project (e.g. many lighting projects), but may need to be longer if there are multiple factors that affect energy use on a site.

H2. Can applicants accurately predict the changes in energy consumption to be generated by the project?

- The Energy Efficiency Council notes that applicants should be able to predict the impact of a project on energy consumption by at least ± 10 per cent in their applications. The Council recommends that the Government should set this as a requirement in order to encourage sufficient investment in upfront design.

However, there are multiple changes that can occur on a site that influence energy use that are outside the control of an energy saving project. For example, increases or decreases in production volume can significantly affect metrics like GJ of energy per unit of production. The Council notes that the International Performance Measurement and Verification Protocol (IPMVP) can account for many of these changes, and therefore recommends the IPMVP for verification of energy savings. Some changes may be outside the scope of the IPMVP, and the government should allow for discretion if it can be demonstrated that energy savings are lower than predicted for good reasons that do not relate to the energy saving project.

H3. For projects related to improvements in carbon intensity of products, can applicants accurately predict levels of improvements in carbon intensity of the product (compared to current product)?

- The Energy Efficiency Council notes that applicants should be able to predict the changes in greenhouse intensity of a product by ± 10 per cent in their applications, but that multiple other factors may also affect the carbon intensity of products, such as production volume (see answer to H2).

H4. What evidence can applicants provide to support their claimed reduction in energy and/or carbon intensity?

- The Energy Efficiency Council recommends that applicants provide a range of evidence to support their claimed reduction in energy and/or carbon intensity, including energy bills, product output levels and engineering reports.

The council strongly recommends that projects, particularly larger projects, should have independent measurement of verification undertaken before and after the project.

H5. What are the most appropriate business measurements to apply in calculation of energy or carbon intensity indicators (e.g. electricity bill)?

- See answer to H4

H6. What tools can be used to calculate applicant's benchmark data and predicted improvements in energy and carbon intensity?

- The Energy Efficiency Council recommends the use of the International Performance Measurement and Verification Protocol (IPMVP) and the protocols adopted by the Energy Efficiency Opportunities (EEO) program.

H7. Could the National Greenhouse and Energy Reporting System (NGERS) Calculator be used?

- The Energy Efficiency Council notes that NGERS could provide part of the data for measuring and verifying energy and/or greenhouse savings, but other forms of data will be required to adjust raw reductions in energy and/or greenhouse gas emissions for other factors (e.g. output of product and, in some cases, changes in weather).

H8. Should payback periods be considered in assessing the merit of projects?

- The Energy Efficiency Council recommends that the program should focus on funding projects that are cost-effective but additional to business-as-usual. There is a tension between these two requirements, because projects that are very cost-effective (e.g. projects with payback periods shorter than 18 months) are generally business-as-usual.

The Council recommends that the program should only fund projects that have a return on investment (ROI) between 10 per cent and 66 per cent (roughly equivalent to payback periods between 18 months and 10 years) with a focus on projects that have an ROI between 14 and 50 per cent.

The Council notes that ROI is generally a more accurate measure than simple payback period, because it can accommodate more factors. The Department should set clear requirements about what needs to be considered in determining ROI in order to boost companies' skills in energy efficiency. This includes:

- o Energy savings
- o Reduced maintenance costs
- o Reduced labour and other resource costs

The Council notes that companies can incorporate or exclude multiple factors to adjust their estimated payback periods. Nevertheless, setting clear expectations around payback periods, a competitive process and the use of experts during assessment should encourage companies to put forward projects that are roughly in the desired ROI brackets.

H9. Can minimum target benchmarks be set for relative improvements in energy and carbon intensity?

- The Energy Efficiency Council recommends that the program set minimum target benchmarks for relative improvements in energy and carbon intensity. The Council recommends that projects should deliver a minimum improvement of 10 per cent at either the process level (sub-metered) or the site level, although consideration should be given to projects that deliver smaller percentage improvements in very energy intensive processes (e.g. smelting).

Energy savings will need to be measured in energy costs or greenhouse gas reductions, to allow for fuel switching and off/on-site generation. Estimates for energy savings from projects that involve a shift from electricity to on-site generation (e.g. cogeneration) need to incorporate off-site energy losses to be accurate estimates, and these are most accurately reflected by energy costs and greenhouse gasses.

H10. What would be the basis for selecting a target benchmark?

- The Energy Efficiency Council recommends that the target benchmark should aim to encourage companies to invest in project that substantially improve energy efficiency in a cost-effective way. With the exception of some very energy intensive sites, almost all sites have the capacity to cost-effectively improve their energy intensity by 10 per cent.

H11. Would target benchmarks vary across different manufacturing industries?

- The Energy Efficiency Council recommends the use of a simple minimum target benchmark, rather than setting different targets for different industries. However, very energy intensive sites should be eligible for grants if they can demonstrate that they have undertaken an in-depth analysis and the maximum energy saving possible within a reasonable payback period (e.g. 5 years) is less than 10 per cent.

I1. Should prior investment in reducing the carbon footprint of a business be used as evidence of capability to undertake the project?

- No comment

J1. What activities could be undertaken by the applicant to demonstrate project outcomes?

- The Energy Efficiency Council recommends that companies seeking grants over \$1.5 million should provide written explanations of why their projects will have demonstration value. The assessment panel should include experts in energy efficiency engineering that can review this material.

J2. Should the impact of investment from a project on the local community, including the possible multiplier effect of program monies being spent in the local community, be included in the merit criteria for this program?

- Calculations of multiplier effects and impacts on the local community should not be core parts of the merit criteria, but could be included as supporting information.

J3. How would the impact of the project on the business – and regional community – be demonstrated by the applicant?

- The Energy Efficiency Council notes that all substantial energy efficiency projects should involve the development of a business case for the project. A company seeking a grant should be able to provide this information to indicate the impact on the business. The Council does not recommend that applicants be required to demonstrate impact on the regional community.

J4. Are the proposed eligibility and merit criteria suitable for the scope of projects anticipated?

- The Energy Efficiency Council notes that the eligibility criteria are appropriate, and recommends that projects should have to meeting the following merit criteria:

- **Percentage improvement in energy / carbon intensity**

Projects should aim to deliver a substantial improvement in energy / carbon intensity. The Council recommends that projects should deliver a minimum improvement of 10 per cent at either the process level (sub-metered) or the site level, although consideration should be given to projects that deliver smaller percentage improvements in very energy intensive processes (e.g. smelting). This means that a project may reduce the energy intensity of a part of the manufacturing process by more than 10 per cent (e.g. machining) but not the overall energy intensity of the product by 10 per cent.

Energy savings will need to be measured in energy costs or greenhouse gas reductions, to allow for fuel switching and off/on-site generation. Estimates for energy savings from projects that involve a shift from electricity to on-site generation (e.g. cogeneration) need to incorporate off-site energy losses to be accurate estimates, and these are most accurately reflected by energy costs and greenhouse gasses.

- **Payback periods**

The program should focus on funding projects that are cost-effective but additional to business-as-usual. There is a tension between these two requirements, because projects that are very cost-effective (e.g. projects with payback periods shorter than 18 months) are generally business-as-usual.

The Council recommends that the program should only fund projects that have a return on investment (ROI) between 10 per cent and 66 per cent (roughly equivalent to payback periods between 18 months and 10 years) with a focus on projects that have an ROI between 14 per cent and 50 per cent.

The Council notes that ROI is generally a more accurate measure than simple payback period, because it can accommodate more factors. The Department should set clear requirements about what should to be considered in determining ROI. This guidance would boost companies' skills in energy management by requiring them to consider a wide range of factors in businesses cases, including:

- o Energy savings

- Reduced maintenance costs
- Reduced labour and other resource costs

The Council notes that companies can incorporate or exclude multiple factors to adjust their estimated payback periods. Nevertheless, setting clear expectations around payback periods, assessing grants through a competitive process and including experts on the assessment panel should encourage companies to put forward projects that are roughly in the desired ROI brackets.

- **High quality energy assessments**

The Energy Efficiency Council notes that the quality and cost-effectiveness of an energy efficiency project is significantly increased by carrying out a high quality energy assessment that identifies and develops business cases for the project. The program must encourage good design, which will generally be associated with higher proportion of labour costs.

The Council notes that the Investment Programs will not provide retrospective grants for energy assessments that precede grant applications. Therefore, the Council recommends that the Department establish merit criteria that applications are accompanied by high quality energy assessments that identify energy savings with a ± 10 per cent confidence level, with increasing detail in applications as grants increase in size.

For example, despite a number of flaws with the current audit standard (AS/NZS 3598), grant applications under \$65,000 should be accompanied by a Level 1 audit and grant applications over \$250,000 should be accompanied by a Level 2 or 3 audit, or an audit compliant with the Energy Efficiency Opportunities (EEO) Act.

- **Measurement and Verification plans and independent assessment**

All grant applications should include an appropriate measurement and verification plan in line with the International Performance Measurement and Verification Protocol (IPMVP). Projects over a certain size should involve independent verification by a third party.

- **Viability**

All projects should be able to demonstrate financial and technical viability, although the level of stringency would need to increase for larger projects. Including experts on the assessment panel would ensure that

J5. Are there any other issues that should be considered?

- The Energy Efficiency Council strongly recommends that companies that provide energy efficiency services be allowed to submit applications on behalf of manufacturers with manufacturers' consent. This will address the substantial information barriers that manufacturers face.

K1. Is allowing two years for completion of projects appropriate?

- The Energy Efficiency Council recommends that predicted improvements in energy and/or carbon intensity should be easily achieved within 2 years of the commencement of a project. It is important to note that this may be later than 2 years after a grant is awarded, given that industrial sites may need to wait until an appropriate down period before undertaking initial works, and then wait again for an opportunity if equipment needs to be optimised.

L3. Are you likely to apply for a grant? If so, from which program, what amount of funding and when would you be seeking it (e.g. approximately \$1 million in 2013-15 from the *Clean Technology Investment Program*)?

- The Energy Efficiency Council will not apply for a grant. The Council's members will deliver energy efficiency services to manufacturers. As noted above, the Council recommends that companies that provide energy efficiency services should be able to apply for grants on behalf of manufacturers with the manufacturer's consent.

Appendix D: Responses to specific questions on Innovation Program

N1. Should there be a restriction on the size or type of business that can access the program? If yes, on what basis (i.e. financial earnings, or energy consumption, or sector)?

- The Council does not recommend any restrictions on the size or type of businesses that can access the Innovation Program, given that innovations for energy saving could come from almost any sector.

N2. Are there any other issues that should be considered when determining whether a business should be eligible for support?

- No comment

N3. How can collaboration be promoted and stimulated through the program?

- Collaboration could be encouraged in a number of ways, including:
 - o Requirements for applicants to demonstrate that they have considered and addressed collaboration issues, such as documentation on risk sharing, IP ownership and charge out rates between collaborators.
 - o Requiring applicants to demonstrate that they have engaged with the target market e.g. through an industry association or user
 - o An online forum that would allow applicants to register their interest in innovating in particular areas, enabling other prospective applicants to seek partners.

O1. How should 'R&D', 'proof of concept' and 'early stage commercialisation' activity be defined? What activities should be supported? Is there a need to be more specific about the eligibility of projects?

- The Council recommends that the grants support all phases in the product innovation lifecycle.

O2. The program will compliment existing support for clean technologies. What programs across governments do industry currently access for these activities?

- No comment

O3. Should the program have an aspirational target for energy/carbon saving projects? What would be an appropriate impact (e.g. a 25 per cent saving)?

- The program should aim to support innovations that either:
 - o Have the potential to substantially reduce energy in a particular process (e.g. at least 15 per cent more efficient than standard practice)
 - o Have the potential to substantially reduce total energy use (e.g. a 2 per cent improvement in the efficiency of aluminium production would deliver substantial energy savings).

For products that are about to enter untested markets, estimating take-up is often arbitrary and hard to validate. Nonetheless, attempts to quantify these should be mandatory as part of the application process.

P1. Should the eligibility of expenditure be more specific? How could this be done?

- No comment

P2. Should funding from other State/Territory/Local government programs be allowed as part of the matching contribution, if directed at new activity?

- No comment

Q1. Could, for example, the National Greenhouse and Energy Reporting System (NGERS) Calculator be used to calculate applicant's benchmark data and predicted improvements in energy and carbon intensity? Are multiple tools comparable or should one tool be the standard? Is use of such a tool, or calculator, too difficult to apply to innovation projects on clean energy solutions?

- Given the significant gaps in energy-use data in Australia and the complexities in determining the energy savings arising from an innovation, it is preferable to put the onus on applicants to develop a business case for the innovation. This would enable applicants to draw from multiple reputable data source, rather than restrict their data options. However, it is appropriate that the Government should validate the data using data from sources like NGERS.

Q2. What other measures of 'impact', or success, could be used?

- No comment

R1. Is the proposed funding period of 2 years appropriate/sufficient?

- The Council notes that two years should be sufficient for most late stage R&D, proof of concept and early stage commercialisation that have a foreseeable market opportunity. However:
 - o Flexibility around starting dates should be taken into consideration given that lead times for project/funding commencement from acceptance of application can often be six to nine months.
 - o Consideration should be given to worthwhile projects that require funding over a longer period.

S1. Could the application and timing of assessments be flexible in line with the size of the grant requested and the needs of the company – if yes, how?

- We strongly advocate an assessment process that is commensurate with the risk (i.e amount of funding being sought, and the complexity of the innovation). This will make it more viable for applicants for smaller, focused innovations with more market certainty, and where time to market to support the forthcoming carbon pricing is a major commercial issue.

S2. Do applicants prefer an online application (e.g. use a smart form)?

- Given the diversity of information that would be required for applications, the restrictive nature of 'smart forms' (i.e. pdfs) could increase the effort of providing submissions. The Council recommends a simple coversheet for applications and an email address to allow the coversheet and attachments to be simply submitted.

S3. How long after completion of the project should applicants provide post project reporting? In addition to written reports, are there other means by which data can be collected to monitor the impact of the grant funding on innovation, growth and productivity activities of the firm?

- No comment.