CORRECTED VERSION

ENVIRONMENT AND NATURAL RESOURCES COMMITTEE

Inquiry into energy services industry

Melbourne — 5 December 2005

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Mr M. Bourke, Chairman; and
Mr D. Jones, Senior Policy Officer, Atmosphere and Noise Unit, Environment Protection Authority.
The CHAIR — I formally welcome Mick Bourke and Damon Jones from the Environment Protection Authority (EPA). Thanks for your time. All evidence taken by the committee falls under the provisions of the Parliamentary Committees Act and is protected from judicial review, but if you make comments outside the precincts of this hearing they are not protected by parliamentary privilege. Hansard is recording all evidence that is being given today, and you will receive a proof version of the transcript within the next week or so. We would appreciate your making a presentation and leaving a couple of minutes for some questions.

Mr BOURKE — It is great to be back before the committee again on another topic. From an EPA perspective we put in a short submission and we will speak to that in fairly quick time today and leave room for any questions you may have. Taking a broader look, business focused largely on labour force reform in the 1980s and 1990s as part of getting better efficiency and better productivity in business, and while that is still important and we still see the remnants of that today, we believe the economy and the environment will benefit very strongly from greater efforts in resource productivity.

Government currently, in its sustainability framework, has a significant focus on increased resource efficiency. At the EPA we have been talking for some time about resource efficiency being the new productivity, and Damon will talk shortly about some of the statutory processes we have been using in energy efficiency. Many of the cleaner production initiatives bear out the fact that there is a good deal of low-hanging fruit in terms of resource efficiency, materials efficiency and in this case energy efficiency that we can continue to yield.

Therefore the scope of our submission is much narrower than the terms of reference that your committee has. We will focus largely on some of the statutory programs that we have been involved in and how they have a strong underpinning through a vibrant energy services sector. One of the big focuses we will have is on how our statutory programs and a strong energy services sector can promote and develop an uptake of commercial energy efficiency programs across the state.

I will now hand over to Damon, who will run through two particular statutory programs we have in the energy efficiency area.

Mr JONES — As Mick said, I will focus on two particular EPA initiatives which really illustrate the capacity for working with, particularly, industrial and commercial sectors in ways which help create those drivers for the development and uptake of energy efficiency services. Therefore we will really be focusing on that driver element within, I think, the fourth paragraph of the terms of reference, and at the conclusion Mick will round off with a couple of comments in relation to potential barriers.

Firstly, an example of a statutory-based program that is proving to be very successful is the EPA industry greenhouse program. Its success really centres around working with industry and its focus on the industrial sector in particular to identify and deliver energy efficiency improvements that provide the public benefits associated with substantial greenhouse gas reductions as well as the net economic benefits that the program provides to its participants. Significantly it is also providing an additional market, particularly for industrial energy auditors and the uptake of energy efficiency products through the audit and action plan process, which I will explain in a second.

By way of background in relation to that program, the EPA industry greenhouse program is the first regulatory greenhouse gas abatement and energy efficiency program for industry in Australia. It operates primarily through implementation of the State Environment Protection Policy (Air Quality Management) and its incorporated Protocol for Environmental Management: Greenhouse Gas Emissions and Energy Efficiency in Industry, sometimes known as the greenhouse PEM.

The protocol for environmental management was introduced in January 2002 to provide further guidance to industry in relation to the general obligations under the state environment protection policy in terms of greenhouse obligations and in the broader context seeks to complement a range of other government initiatives that are aimed at reducing greenhouse gas emissions and promoting the uptake of energy efficiency.

To provide just a little bit more context, the program is confined to existing EPA licence-holders and works approval applicants. In relation to licence-holders, they are required to undertake an energy audit if usage and emissions are above threshold levels. By way of example, 500 gigajoules of energy per annum and 100 tonnes of greenhouse gases annually is the first threshold in relation to the requirement for an audit, and as the thresholds increase the level of audits required correspondingly increases. All action items identified in that audit that have a financial payback of three years or less must then be incorporated into an action plan.
Licence-holders are required to implement those action plans with a deadline of the end of 2006, and they are required to annually report to the EPA on their annual energy usage their associated greenhouse gas emissions and also report in relation to the actions that have been implemented and any outstanding actions yet to be undertaken. New developments for process changes that require an EPA works approval process have to undertake a similar process to demonstrate that the proposed works that they are undertaking constitute best practice energy efficiency. As I mentioned, all action plans are scheduled to be implemented by the end of next year.

On the basis of the data that we have compiled to date the program is proving to be highly successful in relation to environmental outcomes, the uptake of energy efficiency and the economic benefits it derives for business. Just to provide some figures by way of a snapshot, the actions committed to under the program have resulted in the approval of actions that will equate to 1.1 million tonnes of carbon dioxide equivalent being reduced annually.

To put that into some context it represents an overall 1 per cent reduction in Victoria’s annual greenhouse gas emissions of 117 million tonnes based on 2002 Victorian greenhouse gas figures and correspondingly a 3.5 per cent reduction in greenhouse gas emissions by program participants compared to their 2003 baseline levels recorded near the commencement of the program in 2002.

In terms of economic benefits it is projected that the annual energy savings to business from those approved action plans will be $34 million with an average financial payback of 17 months, and that is at a total implementation one-off cost of $49 million. Significantly, in line with Mick’s comment about low-hanging fruit, some 20 per cent of those reductions are coming from actions with payback periods of less than three months.

Importantly also just to note a further 1.2 million tonnes is estimated as having been saved or being saved by industries beyond the program as part of complementary commonwealth voluntary programs, such as the greenhouse challenge for energy.

Mr DRUM — Who are the licence-holders you are talking about?

Mr JONES — The licence-holders are those businesses that are required to have licences under the Environment Protection Act in relation to their operations.

Mr BOURKE — They could be anyone from BlueScope Steel, SPC or any of the food industry companies. Any one who has a discharge or an emission from their property to water or to air that we regulate in that regard has to have a licence to have those emissions.

Mr JONES — The intent behind that is to have a system that EPA already regulates the requirements in relation to those licence-holders, and it is feeding off that information and knowledge that they have to take advantage of that to drive this process.

Mr DRUM — When those audits are carried out they would be fined would they not if they were over their emissions levels?

Mr BOURKE — Yes. The greenhouse requirements are for them to have an efficiency. If they had more discharges to air of sulphur or particles or the like they would face some enforcement action if they exceeded their licence. In this case the enforcement action that would be taken would be only if they did not do an audit and did not comply with the findings of the audit.

Mr JONES — Moving on in terms of engaging the energy services industry as part of that program, it is primarily done through that audit and action plan process. To give some more detail, in order to fulfil the audit component of that process over 500 EPA licensees have conducted those audits for relevant licence sites. In the majority of cases this has involved businesses engaging energy, commercial and industry auditors to carry out those audits, and they have been assessed against an audit report checklist developed in conjunction with Sustainability Victoria to help guide the process and to ensure that the necessary requirements are satisfied in relation to that process.

It has very much been done in terms of approving those audits in a consultative way with those licensees and the auditors to make sure that all parties are aware of the requirements and of the necessary standard that those audits must comprise.
In relation to the action plan components of the program a review of the approved action plans reveals that there has been a significant uptake of energy efficiency equipment by businesses. It has included a range of commitments — I will not list them all — but include things such as the installation of new boilers, compressed air systems, energy management systems, lighting, various manufacturing process modifications and other uptakes of equipment aimed at improving energy efficiency. To give an idea of the quantum, approximately 2500 actions have already been approved by EPA under the audit action plan program.

To sum up, the impact in terms of the uptake of those energy efficiency services is contributing to increasing an awareness of a need for increased energy efficiency predominantly amongst the industrial sector; it is creating additional market and expertise for energy auditors through the requirements under the PEM program and it is promoting the uptake of energy efficiency equipment, manufacturers and suppliers, through the action plan process and the requirement under the program to implement those actions within a required time frame.

The policy development and the greenhouse strategy action plan update released by the government in April this year foreshadowed that more programs will be delivered by the EPA to further develop the management of greenhouse gas emission reductions and those energy efficiency initiatives, so in that sense there would be an expectation that that uptake and the momentum in that field will continue. That is the end of the section on the EPA greenhouse program.

I will turn now to another set of initiatives under the banner of sustainability covenants. These are voluntary statutory agreements, again derived from provisions under the Environment Protection Act through which EPA and a group of companies, an organisation or an industry sector can explore ways of improving resource efficiency in reducing the ecological impact of products and services. The statutory power for the agreement between EPA and those companies to enter into a sustainability covenant is provided under division 1A of part 9 of the Environment Protection Act. These provisions were inserted in 2002 and there has been significant uptake of the opportunities presented by those provisions since that time.

As I said, the intention of the sustainability covenants is to promote a holistic approach to the discussion between management and the EPA in relation to a broader array of environmental considerations that impact not only upon the direct activities of the company but also its products and services through the whole life cycle and production chain. It seeks to provide recognition to leaders within different industries who volunteer to uptake those opportunities to show that they are taking that leadership and showing commitment towards the environment. I could run through numerous examples of the details of those sustainability covenants, but some have been detailed in the submission you have been provided with, so I will just touch on a couple of those briefly.

Under the VicSuper sustainability covenant its portfolio of commercial buildings is being managed to improve environmental performance including identification of various efficiency opportunities. MECU in its sustainability covenants made commitments to developing and implementing action plans to reduce energy, water use and waste produced throughout its business and to retrofit more sustainable fittings in the buildings that it owns, including things such as rainwater tanks and solar panels. The general indicator in relation to implementing those applications is based on a five-year pay-back period.

Lend Lease Property Management Australia and General Property Trust have developed programs to reduce energy consumption in the retail environment, including through innovative initiatives such as eco-leasing suites where potential new tenants of retail spaces can view the eco-suites and learn from the products provided in them to then promote the idea of taking up these energy efficiency and water efficiency appliances in relation to the fit-out of their leasing spaces.

In summation, the commitments under the sustainability covenants are creating incentives for participating businesses to increase their uptake of those energy-efficient products and also the services that are necessary to facilitate those products, and are again helping to develop a market for the energy efficiency services industry.

I will pass back to Mick to provide some comments in relation to barriers and to make some concluding remarks.

**Mr Bourke** — In short, the message out of the greenhouse PEM was that a lot of the fruit that was low-hanging was able to be taken up fairly readily and with fairly short payback periods. Where investments were required, again the paybacks were certainly within the 3 years and were 17 months on average, which for most businesses is not an unreasonable period for payback.
The unmeasured outcome is where we look at works approvals where someone is about to build a facility, we are looking at the design for that facility and we ask them to ensure that their design is in accordance with best practice in respect of energy efficiency, therefore avoiding the generation of greenhouse gases if there is no need to generate them. That front-end design issue is critical — harder to measure, but critical in terms of getting those advantages.

I was in Ballarat last Friday, and some industry players who had been working there on cleaner production were saying that being involved with the greenhouse PEM had been useful to them. They said it has a string of other benefits, that if you send someone to look for energy efficiency they are at the same time finding materials efficiency, water efficiency and labour-saving efficiencies. I come back to those opening comments about resource efficiency being the new productivity in industry and starting to be well proven in that regard. Energy efficiency is one of the most powerful drivers to bring people to the suite of integrated benefits in resource efficiency.

However, we are seeing that there is much low-hanging fruit across large industry and commercial energy areas in Victoria outside of those 1 000 premises that we have necessarily looked at as being scheduled premises. This includes 30 000 small-to-medium enterprises in Victoria and a great many commercial enterprises such as large hotels et cetera that are not touched by the PEM at the present time.

Some of the barriers we have recognised to the uptake of energy efficiency services would include a lack of pressing need or time to address an issue, so, ‘There is not a pressing need as long as I can pay the bill. I have other things on my mind so it is not on the top of my mind to address it’. There is the lack of access to relevant expertise. Throughout the PEM we found many corporations that did not know where to go for that advice. It was an immature market at that time. It has developed, and Sustainability Victoria, through the Sustainability Energy Authority, has done a lot to try and develop that market. There is simply a low level of awareness of the potential for energy savings. There is no awareness that that can occur.

I will run through some of the remedies to that. We have a couple of dozen key industries involved in the greenhouse PEM now volunteering their energy consumption greenhouse gas emissions and financial savings information and saying we should promote that if it makes people become more aware. Out of the greenhouse program we are completing a review that will provide a better range of information of where the savings came from and where the early gains can be made. Several case studies have been put out already, and I mentioned BlueScope Steel and SPC earlier, and they are available to help others understand how they have arrived at greenhouse gas reductions and energy efficiency dollar savings.

Another statistic that is of use to drive the debate is not only to relate it to greenhouse gas savings but perhaps to realise that that program is delivering a reduced need in base power capacity of around 80 megawatts. If we do that long enough, it will make our existing investments go further.

We will continue to work across the community to assist in the identification and implementation of financially viable energy efficiency opportunities. Certainly we recognise the development of strong energy efficiencies, and the energy services industry will play a critical role in overcoming some of the barriers that I have identified above.

Mr DRUM — With all these actions taking place in the industry I would like to know whether you or your auditors have to work hard in this industry to make these actions of savings and efficiency take place. Is it the economics that are already driving them or is it the agreement that you are striking up? You talk about low-hanging fruit. I am surprised that there is much low-hanging fruit in the large industries. I would have thought they would have been snapped up 10 to 15 years ago. Do you still think there is a fair bit out there?

Mr BOURKE — Yes, I am confident there is a fair bit out there. I do not think we have inefficient industries in a broad sense in this state or anywhere else. What often drives the industry is quality of product, time to market — those types of demands — rather than looking for the smaller operational savings or those other areas, so rather than dedicate their resources to those areas, they dedicate them to market issues. Certainly the investment dollars are always relatively tight.

Certainly their investment dollars are always relatively tight, and a three-year payback does not fit every industry, so they do not often look to three years. But, as the evidence showed, many of them had much shorter payback periods. I think the other issue is that industry itself has not really become highly attuned to the fact that many of the savings are simple to achieve. We have not put enough information into the market, I suppose, to give them that sort of view. I think they have also focused more critically in the last few years on materials, such as water efficiency, rather than on energy efficiency.
Mr DRUM — Do you think that any industries are driven by an environmental conscience or do you think mainly they are driven by economics?

Mr BOURKE — They are mainly driven by economics, but certainly, where they can see that they can derive a benefit for the environment and a better bottom-line outcome for the business, my experience is that they will take it almost every time. They are not unwilling to focus on environment, but they always have those internal hurdles about costs to jump. In terms of low-hanging fruit, I suppose a very good example is the office building that we are in. Standard office buildings as they were designed and built in the last decade are largely overlit by a factor of about three times the Australian standard. We were able to go around our buildings and take out something approaching 50 per cent of the fluorescent tubes and still have lighting in each area that was about half again the Australian standard. In our organisation, which has about 350 people, we saved about $35 000, and the greenhouse savings were enough to offset 12 vehicles or something of that nature. So anyone can do it in any setting.

Mrs COOTE — What is your definition of the energy efficiency services industry?

Mr BOURKE — Damon might help me out here, but I see it as being much broader than energy auditing. I think that is a segment, but we would see it as covering everything from the design end of a product to how you can have the product be most efficient for recycling and the like, so that it takes the least energy at the end of life, to the process of production and the design of facilities that use the least amount of energy possible, through to the ability to be able to go into existing facilities and assist in practical ways to get more efficient outcomes. Damon might have some more suggestions. I think it is also about the promotion of the best technology available. That seems to be a bit of an impediment in many markets.

Mr JONES — I think that is right in terms of trying to cover the whole spectrum of the cycle. It goes back to the idea of the life-cycle approach in terms of going from the product itself right through to the delivery of services and the implementation of that at the end point. I think it needs to be looked at in the broad context of each of those components.

Mr BOURKE — Just to take a simple example of that, when we did an energy audit at a large milk processing firm, the people there found the most significant savings they could find were in converting their fleet of trucks to liquid natural gas. That gave them very good financial savings and very strong $CO_2$ reductions, but it is not what you would call the traditional production-plant type of area that had to be invested in. They took the life-cycle view and said, ‘In our total operation, where are we generating $CO_2$?’ Trucks were a big focus; liquid natural gas was a good solution.

Mrs COOTE — When they asked you to do the audit, was the outcome actually a surprise to them? Were they expecting a saving to be in their production? Were they surprised that it was in the trucks?

Mr BOURKE — From my understanding, I think they had started to think about energy, so they probably led the auditors to the trucks as much as from the facility. From my understanding, they were starting to switch on — or switch off, whichever is more appropriate. But I do believe that in many organisations we went into they were quite amazed at the quick payback and the level of savings.

Mrs COOTE — I hope the word spreads.

The CHAIR — I have a couple of questions. The first one is: will the commonwealth’s new energy efficiency opportunities program impact on your greenhouse gas program?

Mr JONES — The current audit and action plans are taking place, and the scheduled completion date of those is the end of 2006. My understanding is that the commonwealth program will not be introduced in a formal sense until the middle of next year. So, in the context of those action plans, there will be minimal overlap, if any. I know the commonwealth program has significant lead times in terms of the requirement to implement any actions that are required, and in relation to those actions, there is more of a voluntary component under the commonwealth program than under the program that we have. In the context of the current program the EPA has continuing on, in a statutory sense, under the existing statutory instruments, if that continues beyond the current action plans — and the expectation is that it will — and it is developed, then obviously there will need to be steps taken to ensure that any requirements under a state-based program such as that complement and do not duplicate benefits gained under the commonwealth program.
Mr BOURKE — You would think initially that the commonwealth program turning up at those sites will find less to mine at this stage than they would have if they turned up three years ago.

The CHAIR — That leads me to my next question. At the moment all the action plans have to be implemented by midway through next year. That means that the continuation of this program is dependent upon the works permits that come through the works approval stage and that is the only continual driver for energy efficiency in your licensed industries. Is there a thought process? I know you talked about the sustainability covenant. Is that where you are thinking that the most gains will be ongoing?

Mr BOURKE — You are right in terms of, having mined the field once, there will not be as much there to mine again. That is no reason not to go back and look again, particularly with improving technology and better awareness. Also when we first started the program, the capacity in what we will call the energy services sector was not as strong as it is now, so we think that better outcomes could still be achieved, and we will be looking at running the program or continuing it through another cycle. There is also the potential to perhaps take the program a little wider into some non-scheduled or non-licensed premises. Its compelling aspect is the fact that it is mandatory and sits under statute. So wherever you can focus that, that brings the mind to bear on gaining those savings and the greenhouse savings attributable to it. So I think there is some basis to continue the program outside the existing set possibly, but even within the existing licence set.

Mr JONES — Also, although the action plan requirements are the driving component within the existing program, there are still existing ongoing obligations that survive the 2006 deadline under the SEPP and the PEM in terms of regularly reviewing requirements and acknowledging continuous improvement in relation to larger assets, looking at life-cycle approaches and looking at longer paybacks potentially, in relation to those actions. So I think, in the context of what Mick is talking about, looking at ways that program can be potentially improved, it is really feeding off the existing recognition of those ongoing commitments.

Ms DUNCAN — What impact would you say this audit program, this protocol program, has had on the energy efficiency services sector? For example, you said earlier that one of the barriers to the uptake was lack of access to expertise. Do you think requirements like the EPA’s help to broaden that sector?

Mr BOURKE — I believe so. We have had 500-plus audits conducted in a reasonably short period of time. I think that is a link to capacity in the market, and we are very thankful for the support we had from the former Sustainable Energy Authority Victoria — Sustainability Victoria, as it is now — in helping us to get that moving.

As we grew that and as there was a statutory underpinning of a certain volume of work in the market, I know that encouraged some people to specialise more in that area for a period of time. I know that at the same time Sustainability Victoria has invested in supporting training and development initiatives there. I think it has played a part in assisting that segment of the market, but I think the market for energy services is much broader than just the audit field.

The CHAIR — Thank you.

Committee adjourned.