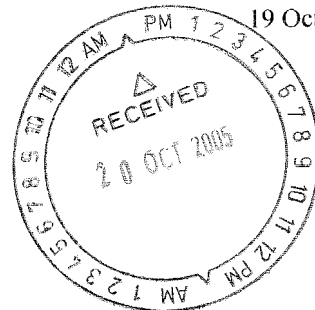




The Secretary  
Senate Economics Legislation Committee  
Suite SG.64  
Parliament House  
CANBERRA ACT 2600



Dear Secretary,

**Re Energy Performance Contracting and EEOP**

Further to your email of 12 October we submit the following comments for your consideration.

There is adequate evidence that simply requiring a business to quantify usage, identify and prioritise savings opportunities will not be sufficient – of itself – to motivate them to spend often scarce capital on implementation. Indeed, past experience has shown that many businesses will delay implementation activities while these plans are evaluated and hence the EEOP could – in the worst case - in fact become another barrier to action.

The Energy Performance Contracting Industry through AEP/PCA and BCSE can deliver significant energy, water, cost and greenhouse savings through Energy Performance Contracts throughout all sectors and locations in Australia. For International experience regarding the contributions of EPCs to DSM please see the attached appendix, especially the IEA Task X report summary. Properly structured, EPC not only provides risk free outcomes, it actually has a negative cost; once the capital is repaid all savings accrue to the customer. In virtually every EPC signed to date the NPV is positive after 5-7 years. EPC is also cost effective in initial capital terms; the case studies on the AEP/PCA web site indicate an average initial capital cost of just \$7.30 per 10 year lifetime tonne of CO<sub>2</sub> abated.

This key role for EPCs is because they address the market barriers of failures of risk, knowledge, access to capital and aggregation. According to the Energy Efficiency Action Plan of the South Australian Government, EPCs:

- Reduce risk through guaranteed outcomes and savings
- Create certainty – energy costs are known in advance
- Smooth expenditure – by funding capital upgrades through energy savings
- Provide upgrades that can be budget positive from day 1
- Ensure evaluation and verification of the work is done as part of the contract
- Provide ongoing audited records of savings in greenhouse gas emissions available for emissions trading purposes
- Improve end user services (e.g. improved lighting or indoor air quality)
- Provide environmental benefits (and meeting environmental requirements)

In addition EPCs

- Aggregate multiple sites and multiple technologies
- Maximize savings
- Guarantee implementation
- Provide Guaranteed Peak and Demand savings



AEP&CA has been able to offer various Australian governments a total of \$450m in private sector funding for implementing energy efficiency and embedded generation projects. As such EEOP could very effectively leverage private sector funding of energy and water (both ongoing and demand) reduction projects. Guaranteed outcomes and annual M&V also provide certainty for the customer and the DM Funds, as well as ensuring that opportunities identified in the facilities studies are implemented.

The promotion of EPC case studies can also change the behavior of end-users. Typical of such changes has been the uptake of EPCs by local council governments. From initial small scale demonstration 5 years ago, today more than 25 councils have invested over \$20m in EPCs and the program is continuing to expand. Similarly in the hospital sector - today hospitals in most states have invested tens of millions of dollars in energy efficiency through EPCs from the initial hospital EPC projects piloted in NSW by SEDA.

Water Savings have been included in EPCs now for several years. The initial demonstration of this form of delivering water savings has now led to the first Water only EPC let in Australia with an estimated value in excess of \$1m.

EPCs also deliver innovations and allow new products to be commercialized. A number of such products in both the water and energy savings area have been commercialized by AEP&CA ESCOs. These include innovative control systems, storm water and grey water systems, air-conditioning systems and solar thermal systems. By demonstrating the effectiveness of such technologies through a guaranteed EPC outcome, deployment is faster through the use of demonstration sites that can be accessed by future potential customers.

Finally EPCs provide higher levels of savings than standard audits as they are not constrained by a lowest common denominator approach that standard audits provide. Typical of this dilemma is Hornsby City Council where an energy audit identified \$30,000 in annual savings while an EPC is currently providing over \$190,000 in annual savings.

### **EPCs and EEOP**

It is important for the growth of the EPC industry that the requirements of EEOP do not create additional uncertainty and time delays for EPCs.

AEP&CA therefore recommends:

1. Provision should be made for Detailed Facility Studies (DFS) to fully qualify as the identification and reporting obligations of EEOP. It is important to note that a DFS contains a contractual obligation to implement recommendations, which the EEOP currently lacks, and hence are actually more effective than the EEOP requirements alone.
2. Capacity Building is also an essential element of successfully growing the energy efficiency and embedded generation markets if the EEOP is to be successful. Limited capacity exists today in the market and the expertise of ESCOs will be a key resource if EEOP objectives are to be met. Program funds should effectively build industry capacity and programs such as facilitator and M&V Specialist training and accreditation should be given a priority.
3. EPCs should not require a break down of individual ECMs in order to avoid cherry picking the low hanging fruit during implementation.
4. EEOP could also be used to provide benchmark data from EPCs across a large range of facilities.

### **Verifying Outcomes from EEOP**

AEP&CA, with funding from DITR, has produced a unique resource for the Energy and Greenhouse industries, namely "A Best Practice Guide to Measurement and Verification of Energy Savings". This Guide is available free of charge on the AEP&CA web site [www.aepca.asn.au](http://www.aepca.asn.au).



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It is a comprehensive resource based on internationally accepted methodologies to measure and verify savings from all types of project; note it is not specific to EPCs. A major failing of most, if not all, previous savings programs has been the lack of a consistent and robust methodology of verifying outcomes; this lack was the major driver in DITR providing the funds for this Guide. Since it has been developed with Commonwealth funds, we expect that EEOP will require this Guide to be used by all participants in the program. AEPCA members, providing EPC outcomes, now use the Guide as a matter of course.

We trust the above is useful,

Signed

David Mountseer  
President  
Australasian Energy Performance  
Contracting Association

Peter Szentel  
President  
Business Council for Sustainable Energy



## APPENDIX A

### European and Californian Experience

The California Energy Commission has released a paper that describes trends in funding and savings for energy efficiency programs over the last 5 years. The report finds that the state's 3 investor owned electrical utilities spent \$1.4b on energy efficiency programs between 2000-2004.

It was found that meeting energy demand with efficiency was vastly cheaper than power generated from power plants. Levelised cost for electricity generation on weekdays between noon and 7pm was 16.7cents per kWh, more than FIVE TIMES the averaged levelised cost of energy efficiency at 2.9cents per kWh. More interestingly by 2004 the cost of energy efficiency had dropped to the lowest point in 5 years at 1.1 cents per kWh.

The EU experience is similar to the US experience. The cost for saving 1 kWh is EUR0.22, less than half the cost of supplying the kWh at EUR0.46.

### Energy Performance Contracting

Lawrence Berkeley National Laboratory has analyzed the results of over 1600 projects completed for government agencies by ESCOs and found that the projects were overwhelmingly costs effective. Key findings include a net economic benefit of \$1.7b from 1000 public and institutional ESCO projects with median annual energy savings of between 15-20%.

**APPENDIX B****IEA Implementing Agreement on Demand-Side Management  
Technologies and Programmes****(AN EXTRACT BY AEPCA FROM)****TASK X-2 Performance Contracting – Competitive Energy Services****Draft Task Work Plan GEA\_27/07/2005****1. Motivation****Towards the energy policy targets**

The success of further increasing energy efficiency will play a vital role in coping with the challenges of our common energy future. Avoiding energy consumption by increasing end-use efficiency, still is the single most effective way to meet all three key targets of energy policies: Security of supply, affordable costs of energy services and environmental soundness. Initiatives worldwide, like the proposed EU Directive on Energy End-use Efficiency and Energy Services, with an objective to increase energy efficiency by 1% per year, underline this perspective.

**Win-win-win through EPC and ESCO**

Energy services like performance contracting (EPC) have successfully proven to be an effective DSM instrument. If designed and implemented properly, they create a win-win-win-situation: Guaranteed energy and cost savings for the facility owner, a business opportunity for energy service companies (ESCOs) and less emissions into the environment.

Energy performance contracting is a promising instrument for promoting the installation and operation of energy efficient building equipment and systems. Facility owners and ESCOs enter into agreements to perform retrofit installations of equipment that can save money on building operations. The savings in energy and maintenance bills due to the more efficient equipment are shared between the facility owner and the ESCO under the terms of the agreement. Most importantly, the ESCO takes over the project's performance risk by guaranteeing a specified level of energy savings compared to a set baseline. Realised



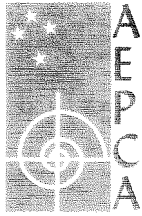
projects typically show cost-effective energy savings in buildings between 20-35 %. The ESCO's compensation is directly tied to the achievement of these savings or to a defined performance of the building.

The financing of the measures that are contracted can be provided either by the ESCO or by an outside financing institution (bank) - or a combination of both. In many cases the investments can be paid out of the future savings, thus, enabling modernisation of facilities and the building without a need for the owner (landlord) to find own investment capital. Shortage of investment resources is an often met barrier especially in the municipal sector.

#### **Recommendations from the work done**

The results achieved in Task X so far give the indications for further needs and make a good basis for the continuation on this subject. Capacity building and an exchange of experiences took place, and we see at least some EPC-activity being generated in most of the countries that participated in the previous stage. However, there are several reasons to take the work further:

- Firstly, new variations and combinations of energy services such as innovative financing schemes like leasing, the link to facility management, new quality standards for energy services and the question of verifying savings are all highly relevant topics that should be elaborated further. For instance, pilot EPC-projects including comprehensive refurbishment measures show a promising potential and energy savings of up to 50%.  
The task should take a more product oriented approach; meaning that the knowledge gathered should be transformed in concrete products (manuals, trainings etc.). This will support the dissemination of information of innovative energy services and financing models.
- Secondly, know-how and market penetration of energy services have not yet reached the desired levels. The success of EPC in different IEA member countries is not spread equally. Thus, the proposed task work programme aims at enhancing the market success of energy services. It will build on the foundations laid in phase I of Task X to develop and carry out market development and project initiation activities addressing specific target groups. The joint effort within this task will support the countries in their efforts and deliver benefits through mutual feedback, coaching and experience exchange.
- Thirdly, we see considerable interest in the work of the DSM IA in the recently established contacts with CTI, REEP and others. To make best use of the results achieved and to be of benefit for those organisations, useful products must be delivered. This could lead to new services provided to the outside world "enriching of DSM-capacity in the world" (training, consultancy etc.). And this would also be a contribution to "a DSM-Centre of Excellence" by the DSM IA (see Draft Action Plan for the IEA DSM-Programme discussed at the Finland EXCO meeting in April 2005).



## APPENDIX C

AEPCA

Energy Performance Contracting (EPC) is a well established industry that has achieved noteworthy successes in delivering energy reductions for customers. It is a successful methodology as it provides guaranteed outcomes. It is a no risk approach to energy reduction and greenhouse abatement. It is referred to in the Prime Ministers 1998 Kyoto statement as one of the delivery methodologies recognized by the Commonwealth to achieve Australia's target greenhouse gas emission reductions. It is also referred to in the nine elements of the National Framework for Energy Efficiency policy proposals (2004) being implemented by the MCE.

AEPCA, formed in 1997, is the peak body representing the EPC industry in Australia, and members include the major firms and customers operating in the EPC industry. The mission of AEPCA is to act as the Peak Body to support the commercial growth of the industry, its members and their market through education, industry promotion, self-regulation and industry standards.

To date the EPC industry has invested millions of dollars in market development activities nationally. The table below summarizes more than \$200m of energy efficiency projects which have been delivered in Australia via EPCs.

Sector	Capital Value	Annual Savings	Ghg reductions tonnes CO2
Health Care	\$52.39	\$7.70	52,320
Education	\$8.50	\$0.60	12,680
Office Buildings	\$12.88	\$1.66	12,848
Other Buildings	\$12.31	\$2.49	24,568
Industrial	\$104.07	\$21.37	160,392
Local Gov	\$15.47	\$2.09	18,502
Defence	\$0.15	\$0.05	632
<b>Total</b>	<b>\$205.80</b>	<b>\$35.97</b>	<b>281,941</b>