ENVIRONMENT AND NATURAL RESOURCES COMMITTEE

Inquiry into energy services industry

Melbourne — 3 April 2006

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Dr A. Gargari, Director, EEP Management.
The CHAIR — I declare open the Environment and Natural Resources Committee hearing on the energy services industry. I note that Mrs Coote and Mr Drum have sent their apologies for this hearing.

I welcome Dr Assad Gargari, director, EEP Management. All evidence taken by the committee is taken under the provisions of the Parliamentary Committees Act and is protected from judicial review, but if you make comments outside the precincts of the hearing then they are not covered by parliamentary privilege.

Dr GARGARI — I understand and I agree with that.

The CHAIR — All evidence taken today is being recorded by Hansard and you will receive a proof version of the transcript in a couple of weeks. I will hand over to you for your presentation, and I ask you to leave us 10 minutes or so for questions at the end.

Dr GARGARI — Okay, I will try to be as quick as I can. If we want to continue in depth I need three days, never mind 10 minutes.

The CHAIR — Okay.

Overheads shown.

Dr GARGARI — I appreciate your invitation to make a presentation today. My name is Assad Gargari. I was born and educated in Iran. I moved to the United Kingdom and did my postgraduate study over there. I have worked in the energy efficiency industry for more than 20 years. Energy efficiency is with us today and we have to upgrade our commercial, industrial and domestic buildings so they are energy efficient.

People ask me all the time: what is energy efficiency? Energy efficiency means sensible design, sensible operation and sensible management. If we do this — because nearly all industrial processes and the mechanical services in buildings use most of the energy — then we have no problem. Over the years technology changes, and authorities and directors do not respond to those technological changes, and bad maintenance slows the operation of the industry and commercial building becomes less and less energy efficient.

I have done more than 300 energy audits in Victoria and other states, especially in the industrial sector, from very large units to very small units. I have brought three reports with me on different companies on a confidential basis, and if you wish you can look at them and you will see that there are immense opportunities. As a minimum, 20 per cent of the energy used by industry is wasted. The payback period on capital expenditure is usually under three years.

Why is it that people do not want to implement energy efficiency in industrial and commercial buildings? Look at the situation here. In 20 years we have had a commonwealth government energy audit scheme and a Victorian government energy audit scheme. They paid 50 per cent and sometimes up to $15 000 or $20 000 per client. Why have they all failed? The reason is that there is no driving force to make industrial and commercial buildings energy efficient. It is worse in commercial buildings. In 20 years I could not make one building owner improve the operation of their mechanical services. They say, ‘It costs money. It is not my problem. I collect the rent; that is my money. But energy costs and all of that are the tenant’s problem’. If you go to the tenants they say, ‘It is not my problem. In six months time I will be out of here. Why should I spend my money?’ And they are right.

As a result of that it will take too long to go step by step; it is very difficult. We have to think differently. In order to think differently I will show you the next slide. I am not saying that the Victorian government or the commonwealth government have not taken any action. I will give you one example. When I arrived here about 18 years ago I worked with Professor Potter at Monash University. Professor Potter is an authority on the technology used in Gippsland for drying brown coal and using it for the generation of electricity. He became the founder of that technology which is now used worldwide for the production of petrochemicals and chemicals, and many others use that technology for producing electricity from green waste — trees, cuttings and that sort of thing.

I heard in the last two months there has been another technological breakthrough and we are proud of it. I believe that introducing gasification technology and using brown coal opens up enormous opportunities for Victoria, which means it can produce methanol, diesel fuel and ammonia. Ammonia is used for fertilisers and methanol is used for plastic manufacturing, fuel and many more products could be made. This is as a result of good research. This has happened, and Victoria will benefit from this enormously.

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I submitted all these papers earlier. Before coming here I said it is better if I simplify it for the government. If it wants to bring in a few measures, it has to be simple; this is too much. Let us consider proposed procedures for energy efficiency and greenhouse gas reduction programs. We have got a domestic sector. Simply, what could we do for the domestic sector to improve the impact? One thing we could do for domestic is just educate the public.

Turning to the next page, other issues are that with new buildings and old buildings we start improving mechanical services. That means, airconditioning units and also other facilities used at home. Then, if people cannot find it in the market, they will not buy it. They will always buy a better product. At the moment a huge amount of the product is coming from Asia. Some of them are very bad with energy ratings, and some of them are very good. I have written that all of that could be investigated and said that these programs have to be gradual. You cannot bring a program to the public and say, ‘Tomorrow you have to do this’. It will not work. It has to be slowly, for the public to be able to afford, to understand and to implement. For example, you did a very good program for the new buildings; they have to be energy efficient. I am saying that we have to extend that somehow to the older buildings too, because every so often a plan is submitted for the modification or extension of a house, and we say, ‘All right, it is the time; you have to consider the energy rating of the building’. This is the way we slowly work for the improvement of the energy in the domestic sector.

Commercial buildings is a very difficult area. So far really nobody has been successful. It is the time that we have to carry out energy audits according to Australian Standard 3598, 2000. This should not be. ‘Yes, once we did an energy audit for government’. It has to be at time intervals — every five years or every four years — and then an action plan has to be prepared and reported to the relevant authorities, and they have to be responsible for implementing energy audit findings. Also we have to create an industry to be able to do that. We have energy auditors today, but unfortunately today they do the energy auditing and tomorrow they go and do the other work to be able to survive. I cannot rely on energy auditing myself; I have to do the factory designing and other things to be able to survive, simply because with the energy audit it is for one year, two years, and then after that there is nothing.

At the moment the New South Wales government has a good program on the energy audit side. I am not 100 per cent sure it will give a result for the implementation of the energy audit findings. They are the types of programs that I believe the government should consider carefully, which may help bring some energy efficiency measures to the commercial sector.

Another thing I would like to mention is that we have sizeable manufacturing, especially in the production of hot-water services, airconditioning units. Helping them produce energy-efficient mechanical services creates employment and also an opportunity to export their product, and they do not go bankrupt because the competition from overseas countries is immense. Sometimes they do not know how they are going to survive the next two months.

Let us move on from the commercial building to the industrial sector. This sector is very complex. Sometimes energy audits really help to bring new technology for them, never mind improving the energy efficiency and production processes. Twenty or 40 years ago, when somebody had a production process producing a simple product or multiple products — fine; they were selling everywhere they liked. But times have changed. Nowadays product is becoming like a fashion. People buy today, but tomorrow they go and buy other things. Bringing in energy efficiency technology will help them immensely.

I have an example of a client here which I brought to look at. They were going to go to cogeneration at 50 megawatts. This is an immense gas consumption. They wanted to go and do it, and I said, ‘Look here, please hang on; do not do that. There is a new technology on the way’. One company in the United States did the gasification of black liquor produced in the paper industry, and it is investigating that. Is it possible to implement that technology here in Australia?.

Yes, there are ways — always there are ways — for improvement, and we have to find a workable condition to be able to help industry and to be energy efficient. Unfortunately Australian industry is under pressure from Asia. Three or four of my major clients have closed their doors in the last two years, and nearly 1000 jobs are gone. I ask them why they closed, and they simply said, ‘We cannot compete with them’. Some of these clients were exporting to northern Europe. After 22 years of exporting to them, they found a market from China, which provided it at half the price. They said, ‘I can’t do that’, and they closed their factories.
You know very well what happened to the footwear industry, what happened to the textile industry and what happened to the tile industry. Now only one tile manufacturer is left in the country, and that is the minor one; the major one finished. They are imported for $2.50 a square metre, and in this country that does not even pay for the gas bill.

In conclusion, I am saying here that Australian industry and commercial buildings are energy inefficient through technological changes, and through many other issues involved. They are very slack in implementing energy efficiency technology. Bringing in new measures could help, such as domestic, commercial and industrial improvements for energy efficiency. Thank you very much. I am ready to answer any questions you have got. If I am able to answer, it will be a pleasure. If not, I will come back!

Mr SEITZ — You kept saying ‘Australia’, but we are Victorian. How much is influenced by the states competing for industry, and people shift to other states. If we have more stringent laws, whether it be for our huge office blocks — they are energy eaters rather than conserving energy — through to the major manufacturers, how much difference will there be? If we become stricter and they move to other states? Does it need an Australia-wide approach with the commonwealth and state governments implementing it, or do you think the states alone can actually change it?

Dr GARGARI — That is one of things I agree with you on. Some states do not pay respect to any environmental loss. I do not want to name them; I know who they are. Some states are very progressive, like Victoria and New South Wales. Yes, this is a major issue here. I do not know what to do with that. That is not my expertise. But how long are we going to wait? Today we need sustainable development. That means everybody has to be responsible for protecting the environment. One person or two people cannot do it. Through domestic, commercial and industrial — we have to manufacture, we have to do business, but without harming the environment. Who is going to pay? Floods happened in Queensland; and it happened in Western Australia. There was drought in Victoria and drought in New South Wales. Who is going to pay for all of that? You have to compensate for it and work it out. Is it economical to bring in emissions laws? If we do that, six companies from Victoria might say, ‘We will go to another state’. I am not a specialist on that.

Mr SEITZ — As you know, state governments and sometimes commonwealth governments pay subsidies to keep some of these companies manufacturing and working in Australia. But the states also contribute to attracting businesses to establish their firm headquarters in individual states. Sometimes this is through cheaper electricity, cheaper natural gas or through other ways to attract them, rather than encouraging these companies when they design the plans for their buildings and everything else to be energy efficient. Should the government actually be promoting having energy audits for those companies to look at and assist them when they are building a plant, before the actual planning permit is done and before they can get a grant from the government so they can show how much energy will be saved in terms of the greenhouse effect and anything like that —

Dr GARGARI — I apologise for interrupting you. It is pointless bringing in conservation measures when all the resources are finished. You have to have conservation measures when you have got them. When I do not have this jacket, what will be the point of worrying about it? As I said, today we need sustainable development. The whole world is going that way. Why do you not have any objection given the safety issues? If in a factory one safety issue has been neglected, the licence will be taken away from them, and the insurance company will not pay them. This is another safety issue. Let the EPA look after emission control. Give the EPA mandatory things, give it the authority to be able to handle that. Not everybody wants to look after their production processes and their emissions. Many people have told me many times, ‘I won’t implement all this. My hands are tied’. It goes to the director’s accountant — and they call them bean counters; I apologise to anybody here with an accounting background. That is the terminology they use. They look at it and say, ‘I can save $100 000. Peanuts!’, and they put it in the bin, or they say, ‘Come back next year’, but next year never comes. They say, ‘If they bring in such a law, I would able to implement all of this’. It is not so difficult. I will give you one example. I have got a company, a major company, which pays $1.5 million to produce compressed air, and half of that just goes to the leakage. For five years they said to me as the production manager, or maintenance manager, ‘Try to fix all of this’. In the end it failed.

Mr HILTON — What you are saying is not new to this committee.

Dr GARGARI — Of course not.
Mr HILTON — A number of other witnesses have said similar things, but it is very hard to convince the accountants, the people who control the purse strings, to invest in the technology. If we advocated accelerated depreciation for technology which improved energy efficiency, would that be a possibility, do you think?

Dr GARGARI — I would have to investigate that a little bit and come back to you in detail. Everything is possible. I have carried out some energy efficiency in the last 20 years, but I knew and the government knew — I got huge amount of money from the Victorian government: $60 000 for one client; $100 000 for another client; $50 000 for another; you name it! None of them did it for energy efficiency; they did it to improve production. They did it because it was necessary to do it; otherwise they would not have done it. It is public; I wrote an article about sustainable energy. This is on one of their web sites, and we carried out new technology. What we did at this textile company was improve the humidity in a room. They had a reject rate of 10 per cent, and by controlling the humidity we brought that down to under 2 per cent. As a result of that we decommissioned a 1.5-megawatt boiler. They did not do it for energy efficiency; they did it to reduce the wastage of this particular textile company, because it was costing it too much — 10 per cent is too much.

The CHAIR — Can I talk about the accreditation for energy auditors?

Dr GARGARI — Yes.

The CHAIR — I think in your letter to me you say there is a need for some sort of accreditation body.

Dr GARGARI — That is right.

The CHAIR — Would you see that as being organised by industry or does it need to be a joint government-industry undertaking?

Dr GARGARI — Government should really be monitoring that. I do not agree that a government has to interfere in every operation of a business and use taxpayers funds. Already tax is high. I do not agree with bringing in another tax to pay for all of this; no, I am against that. In industry everybody has to pay for their own energy efficiency. That is what I believe. Factories, which have so many millions of dollars income a month, cannot afford to spend $20 000 to carry out the proper energy audit?

I am saying accreditation is good, because you have to cut out those organisations that want to make money out of it. They need to have a proper education, be able to understand industrial processes or understand mechanical services. I will be honest with you: I have read so many rubbish reports from some organisations, and they are not even worth writing on a piece of paper because the organisations simply could not understand the operation of that particular industry. I believe accreditation is very important, not three of the [inaudible]web sites, and they just put it there and we pay $200 and that is it.

In 1990 the commonwealth produced auditors and it is beautifully done; every industry that has a speciality in that industry — and also seminars. You have to train me, too, to see what are the developments in this industry world-wide. If you do not, we become useless, so it is important to bring in those measures and to make these people responsible for what they are writing.

The CHAIR — Just leading on from there, you have said that it might take three to five years to train someone to carry out the energy audits. Do you think that is a failing in university training that our engineers are getting, or do you think the energy audits are so specialised, the industries are so different, that that is just the time it takes to train?

Dr GARGARI — Understanding industrial processes is very complex, believe me. First, I have the right education for understanding industrial processes. I am a heat transfer engineer — that is what my education has been. Without a heat transfer degree it is very difficult to understand industrial processes. Universities — I do not know, but I tell you something: training in the last 50 years, according to my friends — I asked their daughters going to university, ‘Will you study engineering?’ . They looked at me in horror: ‘Am I crazy? Study engineering! What for?’.

Do not forget that the roads have been built by engineering technologies. I am not denying the services of medical doctors, lawyers, plumbers and others, but bright people, intelligent people, have to be absorbed into the industry to bring new technology for the new century. If we do not — compare this country with the Asian countries: they
have no mineral resources, they have nothing the way they live, and we are only exporting raw materials. That is not going to continue forever. At the moment the world economy is booming while Australia — I am telling you — with such huge sales of primary products, 150 million tonnes every year, and others, we still do not have the balance of trade. If tomorrow a little bit of a hiccup happens, what is going to be here?

Ms DUNCAN — I am sorry I missed the start. I have just had a quick read of some of the recommendations. Would I be right in assuming that you believe the solution basically relies in regulation?

Dr GARGARI — Maybe. I do not know because I am not a politician, I am a technologist. You have to find a way of bringing in a law and how that law is going to work. I cannot judge; I am not a lawyer.

Ms DUNCAN — You said industry needs assistance but that it should be self-funded by industry. From a government point of view, what sort of assistance would that take?

Dr GARGARI — It is not only the money; it is going to industry, identifying where are the inefficiencies, persuading them. If you do that, you are going make a profit of it, and what we do — they have their own worries, and those are China and India. I prepared a document to submit to government — $100 000 to do a waste heat recovery — just three weeks ago. We had to submit it before the end of March, and the director of the company rang me and said, ‘Thank you for preparing all of this, but I am not submitting it any more’. I said, ‘Why not? We worked very hard on that’. He said, ‘It is just that our headquarters in Belgium told me not to spend any more money’; and I do not blame them. I will be honest with you: they bought a patent, they spent $6 million in the last three years to upgrade their facilities. I helped them. I do not know how, but within three months the Chinese got the patent, produced, and are selling it at half the price this man was going to sell it at. There are problems.

The CHAIR — Thank you very much. I am sorry we kicked off a bit late, but thank you very much for your time today.

Dr GARGARI — Thank you. I appreciate that.

Witness withdrew.