



COMMONWEALTH OF AUSTRALIA

SENATE

**ENVIRONMENT, RECREATION, COMMUNICATIONS AND THE ARTS
REFERENCES COMMITTEE**

Reference: Commonwealth environment powers

CANBERRA

Tuesday, 30 September 1997

OFFICIAL HANSARD REPORT

CANBERRA

SENATE
ENVIRONMENT, RECREATION, COMMUNICATIONS AND THE ARTS
REFERENCES COMMITTEE

Members:

Senator Lees (Chair)

Senator Coonan	Senator Payne
Senator Hogg	Senator Reynolds
Senator Gibbs	Senator Schacht
Senator O'Chee	Senator Tierney

Participating Members

Senator Abetz	Senator Cooney
Senator Bolkus	Senator Eggleston
Senator Boswell	Senator Evans
Senator Brown	Senator Faulkner
Senator Calvert	Senator Ferguson
Senator Carr	Senator Margetts
Senator Chapman	Senator McKiernan
Senator Bob Collins	Senator Neal
Senator Colston	Senator Patterson

Matter referred for inquiry into and report on:

- (a) the powers of the Commonwealth in environmental protection and ecologically-sustainable development in Australia, including an examination of case studies;
- (b) the practicality, adequacy and application of existing Commonwealth mechanisms, including legislation, to promote the national interest in the protection of natural and cultural heritage and to achieve compliance with the principles of ecologically-sustainable development, with particular reference to:
 - (i) implementing Australia's obligations under international treaties and conventions, in particular, the Ramsar Convention and the World Heritage Convention,

- (ii) the National Reserve System and the consistency of management regimes for reserves created under the National Reserve System program,
 - (iii) environmental impact assessment in or near areas of high conservation value in which the Commonwealth has an interest, and the consistency of guidelines for assessment processes between all levels of government,
 - (iv) export controls,
 - (v) the use of the corporations power,
 - (vi) the Endangered Species Protection Act,
 - (vii) the Inter-Governmental Agreement on the Environment, and
 - (viii) the National Strategy for Ecologically Sustainable Development; and
- (c) the most appropriate balance of powers and responsibilities between Commonwealth, State and local levels of government and mechanisms for implementation of treaties, conventions and national strategies to ensure consistency between all levels of government in environmental protection.

WITNESSES

**McCOMB, Mr Ian Richard, Chair of the Environment Panel of the Canberra
Division, Institution of Engineers, Australia, 11 National Circuit,
Barton, Australian Capital Territory 2600 28**

**REEDER, Ms Lynne Joan, Senior Policy Analyst, Institution of Engineers,
Australia, 11 National Circuit, Barton, Australian Capital Territory
2600 28**

**WEBSTER, Dr John Alexander, Chief Executive, Institution of Engineers,
Australia, 11 National Circuit, Barton, Australian Capital Territory
2600 28**

SENATE
ENVIRONMENT, RECREATION, COMMUNICATIONS AND THE ARTS
REFERENCES COMMITTEE

Commonwealth environment powers

CANBERRA

Tuesday, 30 September 1997

Present

Senator Lees (Chair)

Senator Hogg

Senator O'Chee

Senator Lundy

The committee met at 7.10 p.m.

Senator Lees took the chair.

McCOMB, Mr Ian Richard, Chair of the Environment Panel of the Canberra Division, Institution of Engineers, Australia, 11 National Circuit, Barton, Australian Capital Territory 2600

REEDER, Ms Lynne Joan, Senior Policy Analyst, Institution of Engineers, Australia, 11 National Circuit, Barton, Australian Capital Territory 2600

WEBSTER, Dr John Alexander, Chief Executive, Institution of Engineers, Australia, 11 National Circuit, Barton, Australian Capital Territory 2600

CHAIR—I declare open this public hearing of the Senate Environment, Recreation, Communications and the Arts References Committee. The committee is inquiring into the powers of the Commonwealth in environment protection and ecologically sustainable development in Australia.

I welcome representatives of the Institution of Engineers, Australia. The committee prefers all evidence to be given in public but you may at any time request that your evidence, part of your evidence or perhaps an answer to a question is given in private and the committee will consider that request. The committee has before it submission No. 176 dated 18 June 1997. Are there any alterations or additions that you would like to make to that submission at this time?

Dr Webster—No.

CHAIR—The committee has authorised its publication in volume 4 of our submissions. I now invite you to make an opening statement to the committee. After that we will ask you some questions.

Dr Webster—With your leave, I think each of us might be contributing something to the opening statement but we will keep it as short and to the point as possible. To summarise the main thrust of the institution's interest in this area, we would like to see clear lines of responsibility on environmental regulation. We would like to see national standards—standards which are compatible internationally since a great many of our members are faced with the issues of designing for this country and overseas, and consistency in approach is highly beneficial. But at the very least we would like to see a high level of mutual understanding between the jurisdictions in Australia and some agreement as to what is likely to be expected of a development in any of the jurisdictions. We would like to see responsibility decentralised wherever that is practical, subject to the preceding caveat about national standards. We feel that in many cases the actual execution is better handled at the local level. People in the end have to be responsible for the environment they live in.

That having been said, where there is a key national interest we think the Commonwealth should be involved and the processes should ensure that the

Commonwealth is involved. Where there is no such interest, we do not think that the Commonwealth should be involved or need be involved, even where at present there might be perfectly valid legal powers that would entitle it to be involved. In such cases, where there is no national interest but purely a regional interest, it would be better for the Commonwealth to hand its powers to the relevant authority, normally the states, to deal with.

Consistent with the view that there should be national standards and uniform expectations of what is required, we would like to see some sensible national system for accrediting those who undertake environmental impact assessments and those who are involved in evaluating the assessments. We think there is a considerable degree of room for that.

Going a bit beyond some of the comments in our earlier statement, we feel that the time is right for a review of planning requirements, planning methodologies nationally, to take account of the greater emphasis on the need to protect the environment and to provide a greater degree of consistency in recognising that need than has sometimes been demonstrated to date. I will be asking Lynne Reeder to talk a bit about some of the directions we think we should be moving in in the field of planning.

But just to wind up my introductory comments, the institution is a fairly big organisation and, like all big organisations—we have about 67,000 members, the great bulk of whom are professional engineers—we are sometimes seen as slow to move, slow to change policy. Sometimes that is true but in the case of the environment we have had a consistent policy for a very long time. The document that I will leave with you here, *Environmental principles for engineers*, is the latest version of a document that was developed in the 1980s, long before some of the presently important issues became fashionable among the professions generally—the wealth creating professions, in particular.

I think engineers have always recognised a responsibility for the environment. Many of the works that we are concerned with have an obvious and evident impact both on the physical environment and on the social environment. These principles attempted to spell out some of those responsibilities—

CHAIR—Are you able to table those for us?

Dr Webster—Certainly we are—and they do so, inevitably, in fairly general terms, although there have been various interpretations produced from time to time.

In more recent years our members have been asking for more precise guidance that will help them to actually put some of those principles into practice. We have been working very hard at that over the last few years. We set up a task force in sustainability back in 1993 to instigate a closer consideration of the real practical, day-to-day meaning

of sustainable development and sustainability. A year or so after that we felt confident enough that we knew some of the answers, but obviously by no means all of them, to approach DEST to go into partnership on developing a document called *Implementation guidelines for sustainable development* which is designed for working engineers. That document is due to be released in a few weeks time. We got a grant from DEST of about \$50,000 and put around \$70,000 of our own money in, plus an immense amount of volunteer time, which has not obviously been costed out.

That, I think, will make a substantial contribution to helping engineers understand their responsibilities in the area and giving clear practical guidelines on matters as down to earth as erosion control, the control of water run-off from developments and matters that need to be taken into account in considering the flora and fauna of an area when contemplating development and so on.

We have produced a wide range of other documents which are related to this from our various expert committees, and I will not go into all of those. I would like to ask Lynne to comment briefly on the issue of planning because that has arisen in a quite different context. The context there has been the small business deregulation task force, which has invited input on a range of matters. When we started to explore the issues of planning, which is often seen as an impediment to doing business in Australia—we have extremely complex planning procedures and there are often a great many different agencies which have to be satisfied before any particular development can proceed—we began to understand that we were on a convergence course; that many of the things we had been examining in the issue of sustainability came down to sound planning and consistent planning. With your leave, perhaps Ms Reeder could explore that.

CHAIR—Yes, please.

Ms Reeder—Whilst this is a response to that deregulation task force it is also coming up in the context of legislation that is going through currently in New South Wales and being looked at in Queensland on planning. Again, it is coming right at the heart of the issues that you are dealing with in this Senate inquiry, looking at the cross over between states and Commonwealth and also particularly trying to get a consistent approach to these issues. The institution has supported the statement that ‘each jurisdiction should implement systems that use consistent terminology and similar assessment processes and criteria’.

As an example, the governments of New South Wales and Queensland are planning to introduce legislation for planning and development control in isolation from each other and other jurisdictions. The language and systems used in Queensland and New South Wales legislation are dissimilar, and differing control mechanisms have been instituted. Of particular relevance is the differing approach to the introduction of private certification. In line with mutual recognition principles and national competition policy, it would be highly desirable for states and territories to take a similar approach on this issue.

We have listed the major elements of a national model for planning and development control. I will table this for your information. At the moment, it is a draft and it has been stamped as such, but it is at such a stage that we are happy to put that forward.

I think one of the issues on national competition policy is that, because it is being done on a state by state basis and there are no national reviews—there are very few national reviews—in fact the state issue is actually being reinforced in that process.

Dr Webster—I could perhaps conclude by saying that one of the key concerns for a body like ours is the education of the next generation. You may be aware that we completed a major review of engineering education last year. One of the key findings of that was that the issue of sustainability should be built into engineering courses from day one and not seen, as it may have been in the past, as an add-on. That is consistent with our preference for whole of system answers rather than what we call end of pipe solutions. In other words, do not clear up the mess afterwards—prevent the mess happening. We are putting a lot of effort into working with universities to ensure that the next generation of engineers is even more aware than the present group of their responsibilities in this area.

CHAIR—Do you have any comments?

Mr McComb—No.

CHAIR—I will begin and then pass over to Senator Hogg. You talked about complexity and Ms Reeder talked about different terminologies and different assessment criteria and I think you were also meaning there were different processes for the environment impact statements between the different states. Would you be able to give us some idea of maybe one project on the ground and how that complexity causes difficulties for those trying to move ahead with the development?

Mr McComb—Obviously there are numerous examples. It comes through where you have the different jurisdictions. The Federal Highway upgrade around Lake George would be an example where you have several jurisdictions involved and, therefore, the assessment processes overlap. Where that is creating complexity, as was mentioned with the case of the planning legislation in New South Wales and Queensland, is that there are no consistent lists of what should be assessed, how it should be assessed and the process by which assessment should be done. Where there are developers or, as in this case, the government road department is very much involved, you are creating multiple hurdles to jump over.

CHAIR—Are some of those local government as well?

Mr McComb—Generally not for something like the bypass around Lake George, but for smaller projects, definitely, yes, you have the three levels of government. If you have something where at the moment the Commonwealth is involved—if there is any

Commonwealth property involved or any Commonwealth departments—there is the Environmental Protection (Impact of Proposals) Act that kicks in.

You can quite easily have three levels of government involved in the process. Purely having them all involved, and not one clear leader, is enough to create unnecessary complexity. Getting a clear authority in each particular project and then having standardisation of the process so that all the other authorities that had an interest were sure that their issues were covered would go a long way to solving that problem. Whenever you have multiple parties interested, it is obviously going to increase the workload.

There has been much discussion, with the Intergovernmental Agreement on the Environment, on moving towards getting one set of assessment processes going so that proponents of large projects do not have to talk to several layers of government sequentially. At least the people are moving towards a one-stop approach.

CHAIR—Do you also have different departments within state government involved in a project?

Mr McComb—Very much so.

CHAIR—You are not just dealing with one department—perhaps not even at the Commonwealth level with one department?

Mr McComb—No. We would almost never be dealing with one department. In New South Wales there are the EPA, the Department of Land and Water Conservation and the Department of Health—if you are dealing with any effluent disposal type problems. Almost every time you are dealing with multiple departments.

I do not think that in itself is a problem because you have got the specialists in each of those departments who know the relevant issues. To try and pull them all into one department probably would not be efficient, but obviously you need a mechanism that is going to streamline the process so there is some central point who is coordinating government to effectively respond.

CHAIR—Do you see that the Commonwealth has a role in that coordination? Where do you see the Commonwealth being able to help to overhaul the system or perhaps sitting down and looking at mechanisms to make it more efficient?

Mr McComb—The Commonwealth should be providing leadership in getting results out of the intergovernmental agreement. There is the National Environmental Protection Council that was meant to produce national environmental protection measures and a standardisation of legislation approach across the country. Very little has happened that I can perceive at the workplace level.

CHAIR—That was the Labor Party's 1992 document that basically looked at the

intergovernmental system that was supposed to be operating? You feel that on the ground it really does not work?

Mr McComb—It is looking to getting the national environment protection measures out as one product of that process. That clearly is something that has not happened and it is something which would be ideal to get the standardisation happening where you can have the governments aligned on legislation and they have got a short list of the legislation that they are looking at—like air and water quality. To my mind, there is no reason why something has not been produced.

On a practical level, there are all the practicalities of getting the nuts and bolts agreed by the governments, but I think that is where the Commonwealth should be leading, being the champion of the process and using this mechanism that has been set up to actually produce some standardisation in legislation across the country.

Senator HOGG—Why, in your view, has nothing happened?

Mr McComb—I am not aware of any national environmental protection measures that have been released.

Senator HOGG—Yes, but why? Going back to this intergovernmental agreement on the environment made in 1992, your submission, confirmed by yourselves this evening, tends to say that nothing really seems to have happened. My question is: why hasn't anything happened? Is it because people have their own little dunghills and they are protecting their own little patches? Why don't we see something happening, something moving, if this agreement is in place and obviously is a worthwhile agreement to implement?

Dr Webster—With respect, Senator, you have answered your own question. There are patches which have been developed. The people who operate in those patches are very protective of them and believe that their directions are superior to anybody else's. We meet this in just about everything we do in engineering. It is not restricted to the issue of sustainability. It is a problem that we seem to have in this country of getting true collaborative operation and getting the best out of what could be a good federal system.

We do not seem to have achieved this in areas as far apart as the one we are talking about now. In issues of professional liability and responsibility, even technical standards in some areas, there is no consistency. It is only very recently that we have begun to see a building code of Australia that actually is a building code of Australia, as opposed to a document which purported to be that and then had six or seven much longer documents appended to it, entitled *Variations from the code*. It is only very recently that it has actually become possible, as a result of that, to make building materials in one state and sell them in another with some assurance that they will actually comply with

requirements. We have a very complicated country and, as we approach the centenary of Federation, I think there is indeed a need to review some aspects of how we operate federally to get the best out of the system.

Senator HOGG—The problem that I am trying to get to is that it seems to me—and I have had the experience of another inquiry—that people are the problem as much as anything else; people not being prepared to surrender their own individuality or their own specialisation. It seems to me that the only way to overcome the difficulty is by way of legislation, where you have got some mandatory fix being imposed from above, if you like, to ensure that you break down the barriers that some individuals automatically put up. Is that a reasonable interpretation of how we can get around the problem?

Dr Webster—I am not sure that the Commonwealth has had a terribly good record of success in top-down legislation of that sort. It may be part of the answer to have a legislative framework which provides the security, if we can get some agreement to that.

I think you are absolutely right that it is about people and you only usually get the best out of people if you can create some sort of a win-win environment. Somehow that has to be crafted in this situation. It is part of the reason why we feel that there needs to be some measure of exchange of sovereignty and clarification of roles. I think that it is possible that you could persuade state environment agencies that this is in their best interests if they are seeing that they will have a high measure of implementation responsibility in their own patch. The exchange of sovereignty is to ensure they do so in accordance with consistent standards and under consistent methodologies. So the Commonwealth withdraws from all those projects, except those which truly are of national significance, or which inevitably call up issues of other international treaty links and so forth. The number of those really should be relatively limited. That, I think, would be our approach: try to develop a win-win system. But it requires a government that is committed to working with the states to achieve that. I am not sure that simply getting national legislation brought through would actually achieve that on its own.

Senator HOGG—Are we really looking at some form of code of practice or memorandum of understanding—call it what you like—which is of a voluntary nature?

Ms Reeder—That is what the intergovernmental agreement is all about, isn't it—an agreement do that?

Senator HOGG—That is right, but it does not seem to have worked.

Ms Reeder—I think one of the other things, just picking up on what John was saying, is that there needs to be clear triggers for where states kick in and where Commonwealth responsibility lies. Certainly, for example, when international treaties operate the Commonwealth involvement should be automatic. So having some of those clear triggers, where everyone is not having to define the roles each time an issue arises,

is something that needs to be looked at. The definition of 'national significance' needs to be clear enough to articulate those differences.

Dr Webster—I would just add that sometimes the carrot is more effective than the stick. We are not particularly happy with the way that national competition policy is being implemented, although we support many elements of the policy. I do not think anybody could deny that there is a great deal of feverish activity out there. People are actually trying to do many of the reviews that are called upon, and that is simply because there is a pot of money at the end of the rainbow and people are prepared to jump through hoops for that.

That is why I suggest, in this case, that I do not think there are any pots of money out there, except to the extent that states which provide a uniform, consistent and sensible environment are likely to have a competitive advantage in attracting major projects of one kind or another. I do not mean by that that there are lesser standards. In fact, the standards might be more rigorous in many cases, but they are clear. They are understood up-front, and you can deal through a one-stop shop. That kind of approach, I think, would be much more effective.

But the exchange of sovereignty approach, I think, is a carrot and could be used as such. I hope that we can resolve this cooperatively. It is our country and our future we are talking about, and we are accustomed to thinking fairly long-term in these matters. Environmental impact statements which focus on the immediate impact—what will happen now—without commenting on the total package of costs and benefits and how that might affect other aspects of development in a region are not a terribly effective way of dealing with this. We really need to get this more consistent approach that puts things in an overall framework where the costs and benefits of various prospective changes in the way we operate can be assessed with a reasonable degree of accuracy and with a reasonable degree of public acceptance of the outcomes.

Senator HOGG—Where is the real problem in the whole system? Obviously, your organisation seems to have a degree of willingness to see things happen. Is the real stumbling block government? Is the real stumbling block bureaucracy? Can you identify for us where the major problem rests?

Dr Webster—One of the problems about giving evidence is that anecdotal evidence that you might get wrong is likely to result in you feeling very unhappy about it. I cannot remember the exact number of agencies that I saw on the list of one of the projects that won an environmental award at a state excellence award ceremony that I attended in the last few weeks. It was an excellent project and it resulted in a very considerable improvement to the living environment for people in a particular region. Certainly, the list of the agencies which had to give approvals for various stages filled one A4 page. Certainly, they extended to all three layers of government. And, certainly, the need to involve those agencies probably resulted in a considerable delay in implementation

and it may even have diverted attention from what I think would be the more urgent need to actually consult the local communities on the ground because you are dealing with so many bureaucracies. We just have so many interlacing and interlocking bureaucratic systems and legislative provisions that it is very difficult to deal with them all effectively.

Senator HOGG—I have one last question. It refers to page 4 of your submission where you refer to the fact that the government has recently announced that funding to the Energy Research and Development Corporation has been cut. You go on to say that there is already evidence that worthwhile and effective programs are being discontinued. Can you give us some idea of what worthwhile and effective programs are being discontinued?

Dr Webster—If we could take that on notice, we can give you the information that was based on—I do not have it at my fingertips. But I would have to say that, quite frankly, I think that was a mistaken decision and probably one which the government already regrets.

Senator LUNDY—I just want to ask a couple of questions about the Snowy Hydro Corporatisation Bill which is before the parliament. Does your organisation have any views regarding the management of the Snowy scheme, either from an environmental or an administrative point of view, particularly with regard to the Snowy River flows?

Dr Webster—I do not think that I could give a specific answer in respect of that bill. But we were sufficiently concerned about the issue about 18 months ago—or a little more, I suppose—to undertake our own public inquiry into the issues that were arising in the privatisation of major utilities. Again, I hasten to say that in broad terms we feel that that is often for the good, that there have been very large and fairly clumsy systems put in place to manage these and to provide services and that injecting a degree of competition is capable of improving the efficiency with which we do things. But there are clearly some safeguards that are necessary in that process.

We took evidence over a period of some months and produced a document which finished up being called *Engineering the transition to competitive utilities*. It focused on a number of issues that we thought were critical to getting the best out of this transition. In other words, to doing it, getting the benefits and avoiding the potential disbenefits. Issues of preserving a capacity for innovation, the design capability for major integrated projects and securing human resource requirements were high on that list, as was the issue of taking the long-term view, the total system view, to potential environmental outcomes of the sorts of developments that might go on.

We explored all these at some length in this document, which I am also happy to table, which was the report we produced at the time. Without wanting to refer to every detail of it, I think that we would certainly feel that it is exceedingly important when engaging in privatisation of this sort—or corporatisation in the case you are talking about—to reflect on what it is that government, on behalf of the people, wants out of the

process of corporatisation and privatisation.

I think the evidence of some of the earlier privatisations in Victoria was that although the government was very keen about achieving some particular outcomes in terms of a competitive electricity market it had not necessarily thought through, and perhaps in its defence had not had the time to think through, all the sorts of things that had been taken for granted and were usually lumped under the forbidding title of ‘community service obligations’.

Certainly, on the second tranche of privatisations in Victoria, I believe the Victorian government has learned from its experience and is spelling out some of the requirements that it proposes to place on utilities with a greater degree of precision. When you get to the stage where one privatised organisation can suggest that the people of Victoria need to experience energy outages in order to value continuity at its proper level, I think that there may be some element there of allowing the commercial drive to intrude a little too far into the provision of a basic service. I know that the Victorian government would wish to avoid that in its future privatisations.

It is therefore important in any corporatisation to spell out clearly what the government on behalf of the community expects of the corporate body. It should not be simply to deliver the maximum profit in terms of the operations of that body but also to respect the environmental and other guidelines that people have come to anticipate and to be responsive to concerns that arise. I am not, as I say, familiar with that specific bill but I would certainly support efforts to ensure that the bill does include appropriate guidelines so that the new corporate entity knows exactly what it is buying into and how it should go about serving the functions that government wants it to serve on behalf of the people.

Senator LUNDY—One major issue of the bill is the jurisdictional management of the scheme, particularly environmental flows in the Snowy River. As we have heard in previous evidence, one of the implications arising from that bill is the transfer of responsibility for management of issues relating to environmental flows and the scheme itself being transferred from the Commonwealth to the states on a joint basis—for example, New South Wales and Victoria. I just want to relate that back to your earlier comments about jurisdictional coverage and the role of the Commonwealth where you have two states impacting upon certain environmental decisions. Do you have any comment with respect to that particular outcome and the comments you have made with jurisdictional coverage between the states and the relationship with the Commonwealth?

Dr Webster—There is a saying that if we do not learn from history we are condemned to repeat it, and I seem to recall that issues surrounding the Murray River were potent issues in the decision to federate nearly 100 years ago and to establish a Commonwealth government because it was very difficult to resolve those issues simply by debate between two states with different priorities and different directions. So, to that extent, clearly there is an issue here.

I would comment—and I am sure I am talking to a group of people who understand this as well as I do—that the issues in respect of environmental flows in this or any other hydro power case are actually very, very complex ones. In this particular case there appear to be quite wide differences in what experts believe is the proper level of flow necessary to secure the environmental conditions. So somebody at some stage is going to have to adjudicate on those competing claims and put that in the overall picture, where the hydro power that is available from the Snowy is almost the only significant hydro power available on the mainland of Australia and has a very significant role in mitigating the impact associated with the requirement to meet peak loads through high cost generating means, which obviously would result in increased greenhouse gases.

So there is the issue of the trade-off between clean non-polluting power and environmental flow and there is the issue of the trade-off between environmental flow east of the divide and environmental and utilitarian flow west of the divide, and those are not issues that will be easily resolved by debate between the states.

Senator LUNDY—My question went not so much to the merits of the flows—they have been widely canvassed in other forums—but to the comment on the actual jurisdictional coverage, given the transfer of power, if you like, that is implied under the bills. I guess what I am seeking is your opinion about the degree of control the Commonwealth should maintain over such issues, given the lessons of history, as you have quoted.

Dr Webster—I think that that is probably a case where it is easy to demonstrate that the national interest is involved and that the Commonwealth has a continuing role.

CHAIR—You have just mentioned the issue of greenhouse, and I was wondering whether your institute has done any work to look at how you can contribute to reduction of emissions. I know architects have a major role in this, but engineers as well.

Dr Webster—Actually I suspect that, as in so many cases in the end, it is a central role for engineers to address the issue. We have, I think, to address the issue in a number of directions, and we have in fact different groups looking at different aspects of this question. The first thing that we need to recognise I believe is that, whatever you may consider about the evidence for the causality of the relationship between the increase in emissions of greenhouse gases and changes in the world thermal environment, there is a clear synchronicity. We are going through a stage where the evidence appears to suggest that it is a warming stage in the global climate and that is going to have some results as not yet not fully determined.

The amount of research that has actually been carried out, for example, on the issue of the potential rise in sea water levels as a result of warming is actually very slender and much of the wisdom that tends to get handed down can be traced back to one or two fairly modest pieces of work 10 years ago when back-of-the-envelope calculations

were done with the objective that further detailed work would be done.

But, all that being said, I think engineers have a duty to factor that into the future because, no matter what change is made now, no matter how drastic the world decided to be with itself in Kyoto—and one suspects that the words may be stronger than the deeds for many of the participants—we are going through a warming phase and we are going to see results of that, which are going to impact on the community and on engineering works.

We have one group of people who are looking at that. Without saying, ‘Where is this coming from? What can we do about it?’ they are saying, ‘How are we going to cope with this and ensure that long-term designs reflect the need for possibly greater protection against floods, possibly greater provision of water supply, greater re-use of water and so forth?’ Then we have another group of people who are looking at the issues that are more directly impacting on greenhouse—issues of energy production, energy efficiency in industry, clean production and so on. I think Lynne might like to comment on some of those.

CHAIR—Perhaps if I could just add to that. You mentioned in your submission that the Energy Research and Development Corporation cuts were a worry. Where does that concern fit in?

Ms Reeder—One of the roles we see for government is in leading by example, leading through its priorities. The messages that are going out when you cut things like the Energy Research and Development Corporation and the energy auditing programs are not messages that need to be put out at this time.

The institution has only just completed a survey of our enterprise leaders which looked at the steps that companies were taking to improve their energy efficiency and greenhouse outputs. That is only just out now. We are in the process of writing that up and will certainly make that available to you.

Overwhelmingly, the incentives they say are necessary for them to undertake energy efficiency processes are a commitment from management and potential cost savings—two significant factors which meant a change in behaviour in companies. As I say, we will write that up and make a copy available to you. Again, going back to government as the leader in terms of messages coming out, I think those indications have important policy outputs.

CHAIR—There being no further questions, thank you very much for your time here before us. It was most interesting.

Committee adjourned at 7.53 p.m.