



COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

## SENATE

STANDING COMMITTEE ON ECONOMICS

ESTIMATES

**(Additional Budget Estimates)**

TUESDAY, 11 MARCH 2008

CANBERRA

BY AUTHORITY OF THE SENATE



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**SENATE STANDING COMMITTEE ON****ECONOMICS****Tuesday, 11 March 2008**

**Members:** Senator Hurley (*Chair*), Senator Eggleston (*Deputy Chair*), Senators Bishop, Bushby, Campbell, Joyce, Murray and Webber

**Participating members:** Senators Abetz, Adams, Allison, Barnett, Bartlett, Bernardi, Birmingham, Boswell, Boyce, Brandis, Bob Brown, Chapman, Colbeck, Coonan, Cormann, Ellison, Fielding, Fierravanti-Wells, Fifield, Fisher, Heffernan, Humphries, Johnston, Kemp, Lightfoot, Ian Macdonald, Sandy Macdonald, McGauran, Mason, Milne, Minchin, Nash, Nettle, Parry, Patterson, Payne, Ronaldson, Scullion, Siewert, Troeth, Trood and Watson

**Senators in attendance:** Senators Abetz, Bob Brown, Hurley and Joyce

**Committee met at 7.32 pm**

**INNOVATION, INDUSTRY, SCIENCE AND RESEARCH PORTFOLIO**

Consideration resumed from 21 February 2008

**In Attendance**

Senator the Hon. Kim Carr, Minister for Innovation, Industry, Science and Research

**Department of Innovation, Industry, Science and Research**

Mr Mark Paterson, Secretary

**Office of the Chief Scientist**

Dr Jim Peacock, Chief Scientist

**CHAIR (Senator Hurley)**—I declare open this meeting of the Senate Standing Committee on Economics. In accordance with the resolution of the committee on 3 March 2008, today's hearing is convened to resume the committee's consideration of the 2007-08 additional estimates for the Innovation, Industry, Science and Research portfolio. This evening the committee will consider the Office of the Chief Scientist. The committee is due to report to the Senate on 19 March 2008 and has fixed Friday, 11 April 2008 as the date for the return of answers to questions taken on notice. Under standing order 26 the committee must take all evidence in public session. This includes answers to questions on notice. I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee, and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to a committee.

The Senate by resolution in 1999 endorsed the following test of relevance of questions at estimates hearings: any questions going to the operations or financial positions of the departments and agencies which are seeking funds in the estimates are relevant questions for the purposes of estimates hearings. I remind officers that the Senate has resolved that there are no areas in connection with the expenditure of public funds where any person has a discretion to withhold details or explanations from the parliament or its committees unless the parliament has expressly provided otherwise.

The Senate has also resolved that an officer of a department of the Commonwealth or of a state should not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked of the officer to a minister. This resolution prohibits only questions asking for opinions on matters of policy and does not preclude questions asking for explanation of policies or factual questions about when and how policies were adopted. If a witness objects to answering a question, the witness should state the ground upon which the objection is taken and the committee will determine whether it will insist on an answer having regard to the ground which is claimed. Any claim that it would be contrary to the public interest to answer a question must be made by the minister and should be accompanied by a statement setting out the basis for a claim.

[7.34 pm]

#### **Office of the Chief Scientist**

**CHAIR**—I welcome Senator Carr, the Minister for Innovation, Industry, Science and Research, Dr Jim Peacock, Chief Scientist, Mr Mark Paterson, Secretary of the Department of Innovation, Industry, Science and Research and officers of the department. Dr Peacock, do you wish to make an opening statement?

**Dr Peacock**—No, thank you.

**CHAIR**—We will go straight to questions then. Senator Abetz?

**Senator ABETZ**—Thank you very much, Chair, and thank you very much, Dr Peacock, for appearing at what may well be an inconvenient time for you. I understand that historically the Chief Scientist has not been requested at Senate estimates.

**Senator Carr**—That is not true. He was refused by the previous government on numerous occasions.

**Senator ABETZ**—I am not sure when the last time was that the Chief Scientist appeared.

**Senator Carr**—I requested it on regular occasions.

**Senator ABETZ**—In relation to your funding and the overall allocation and staffing for the Office of the Chief Scientist, how much is it and how many staff do you have at your disposal?

**Dr Peacock**—The details of that I think should be given by the department officials. I am aware that I have, as had the previous Chief Scientist, 10 supporting staff.

**Senator ABETZ**—Whereabouts are they placed—in the department itself?

**Dr Peacock**—Yes.

**Senator ABETZ**—They work under your personal direction?

**Dr Peacock**—Yes.

**Senator ABETZ**—Have you been hit with the so-called efficiency dividend request?

**Dr Peacock**—Not to my knowledge, but again I would look to the department.

**Senator ABETZ**—Mr Paterson, will it apply to the Chief Scientist's office?

**Mr Paterson**—The efficiency dividend applies on the basis of the total appropriation to the department, so it will apply to the Office of Chief Scientist in the same way as it applies to the rest of the department. But we have not segregated out the impact of the efficiency dividend against every branch, section or division of the department. It is my responsibility as the secretary of the department to deliver the efficiency dividend across the board in relation to the department.

**Senator ABETZ**—Without shocking Dr Peacock, Mr Paterson, it is possible that the totality of the dividend, if you were so minded, could be visited upon the Office of the Chief Scientist or, indeed, not a single cent be taken from the Chief Scientist's office because you will make the savings elsewhere. Is that correct?

**Mr Paterson**—Both of those are highly speculative propositions and we went through some detail at the last hearing on the decisions that I have taken in relation to the effect of the additional two per cent efficiency dividend in the current financial year and I indicated in evidence on the last occasion that I had taken no decisions at this stage in relation to how we would meet the efficiency dividend in the new financial year and the out years.

**Senator ABETZ**—Expect some questions at the May estimates in relation to that.

**Mr Paterson**—I have no doubt—

**Senator ABETZ**—And I understand that.

**Mr Paterson**—Yes.

**Senator ABETZ**—The government has made a promise to make the Office of the Chief Scientist a full-time position. Is the position full time as yet?

**Dr Peacock**—My position is as it was, so it is three days a week.

**Senator ABETZ**—When is it likely that the government's promise to make it a full-time position will be honoured?

**Senator Carr**—We have, by agreement with the Chief Scientist, extended Dr Peacock's existing contract for an additional three months, and advertisements will be placed with a view to securing the services of a full-time Chief Scientist.

**Senator ABETZ**—You say his services have been extended for three months; I was not aware that his term was up. When does that three months start from?

**Senator Carr**—February 28.

**Senator ABETZ**—Have advertisements already been placed?

**Senator Carr**—No.

**Senator ABETZ**—When is it anticipated they might be placed?

**Senator Carr**—Relatively shortly.

**Senator ABETZ**—Very helpful. Dr Peacock, do you have a role in the innovation inquiry?

**Dr Peacock**—An ex officio role on the panel.

**Senator ABETZ**—Regarding your 10 support staff, I would imagine that those 10 would be secretarial assistants and receptionists. But are you supported in those 10 by people that are scientifically qualified?

**Dr Peacock**—Those staff support me with background research on specific areas that I request. They support me with drafts of speeches that I am required to give and in briefing me for meetings that I undertake with either research or education institutions, or with industry—

**Senator ABETZ**—Senate estimates, if I might suggest as well.

**Senator Carr**—Since the new government, that is the case. Under the previous government the Chief Scientist was not allowed to appear.

**Senator ABETZ**—Do your staff support you as well for appearances at Senate estimates?

**Dr Peacock**—This is my first appearance and I have sought information about it. I have largely dealt with the secretary, and the minister has also spoken to me.

**Senator ABETZ**—What does your ex officio role in the innovation inquiry actually entail?

**Dr Peacock**—I am a member of the panel.

**Senator ABETZ**—You are a member of the panel, but you will not be part of the report?

**Dr Peacock**—As a panel member.

**Senator Carr**—The Chief Scientist will take a role in the panel as a member of the—

**Senator ABETZ**—As a full member.

**Senator Carr**—As a full member of the panel. There are no restrictions on his capacity or his contribution; I trust it will be full.

**Dr Peacock**—It has been quite a—

**Senator ABETZ**—There are different ways of interpreting what ex officio means, but if he has a full role on it, that is good to hear and I am pleased to hear it. Dr Peacock, have you had any input into the regulatory framework for nanotechnology?

**Dr Peacock**—I have not.

**Senator ABETZ**—Have you had any input in relation to the government's announcement on the plastic bag ban?

**Dr Peacock**—Not at all.

**Senator ABETZ**—Have you had any input on the government's green car program?

**Dr Peacock**—No.

**Senator ABETZ**—With that one you still have plenty of time because it does not roll out until 2011. There might be an opportunity for you or your successor to have a role in that. Are you tasked from time to time by the government—and I do not want necessarily to know the details—to provide some advice in relation to, let us say, the two examples I have used—the regulatory framework for nanotechnology or plastic bags—as to how the science might stack up and the way forward?



**Dr Peacock**—I have been asked by the government to provide advice on a number of issues.

**Senator ABETZ**—That is, if you like, a proactive step by the government to ask you. Do you, in your charter of responsibilities, have the opportunity for you to be proactive in advising the government in a particular area of policy where you think the government may be on the wrong track or that the science does not necessarily support a direction that the government might be going in?

**Dr Peacock**—I do not have any direct role in determining government policy, but I do my utmost to provide evidence based advice on particular topics.

**Senator ABETZ**—I appreciate that. At the end of the day, no matter which government it is, the government has to make the final decision and I accept that. How does it work? Do you provide advice only if asked? Or do you also sometimes provide advice on a gratuitous basis saying, for example, 'I have read in the paper that such and such is happening within government. If that is true, my views, for what they are worth, are as follows.' Do you ever proactively seek to provide advice to the government?

**Dr Peacock**—I bring scientific matters to the government's attention where there may be some new discoveries or other circumstances.

**Senator ABETZ**—Is there a format or formal mechanism that you do that through, or do you do that on an ad hoc basis?

**Dr Peacock**—With both governments that I have been associated with, I have a regular monthly reporting.

**Senator ABETZ**—To whom, if I may interrupt?

**Dr Peacock**—To the minister.

**Senator ABETZ**—To the minister direct?

**Dr Peacock**—Yes, and I have never been discouraged from bringing forth information at other times.

**Senator ABETZ**—I am not suggesting that you have. I just want to know the mechanisms and how the position of Chief Scientist actually interacts with government. Thank you for that. I appreciate that. The previous government tasked you with the pulp mill in Tasmania. I just want to confirm with you that you and a panel of—was it six experts?

**Dr Peacock**—I think it was six.

**Senator ABETZ**—Yes, six experts, had a look at that proposal and your report was a unanimous report of the six on the panel plus yourself?

**Dr Peacock**—On behalf of the panel I filed a report with Minister Turnbull.

**Senator ABETZ**—But that was an unanimous view of the committee?

**Dr Peacock**—Yes, it was.

**Senator ABETZ**—Correct my language if I do not have the correct terminology, but I understand that certain recommendations were made that certain conditions be placed on the

pulp mill and all those conditions—if that is the correct terminology—had the support of you and the six expert panellists. Is that correct?

**Dr Peacock**—Yes.

**Senator ABETZ**—If I may, I just want to confirm that in your report you said that if the environmental impact management plan conditions were met in their entirety then you felt there was a very strong prospect that the mill would operate with an environmentally neutral footprint.

**Dr Peacock**—That was with regard to those topics that we were specifically asked to consider.

**Senator ABETZ**—That is right, which was in the remit of the Australian government.

**Dr Peacock**—Yes.

**Senator ABETZ**—I do not want to verbal you in any way so if I have misinterpreted anything please correct me. Did the report also indicate that the greenhouse gas emissions from the mill were likely to be negligible compared to Australia's total emissions?

**Dr Peacock**—I do not recall making that statement.

**Senator ABETZ**—I dare say you do not have a copy of the report with you; otherwise, you would have brought a whole lot of paper with you.

**Dr Peacock**—I have it.

**Senator ABETZ**—Excellent. I draw your attention to page 59 of the report, paragraph 70 and the last sentence in that.

**Dr Peacock**—Yes.

**Senator ABETZ**—In asking these questions, if I may backtrack, you still stand by that as your scientific assessment?

**Dr Peacock**—Yes.

**Senator ABETZ**—And you also stand by your comment on an environmentally neutral footprint, on the basis of those matters that you were asked to look into? Your scientific opinion on that has not changed either. Is that correct?

**Dr Peacock**—No, it has not.

**Senator ABETZ**—If I may move on, there has been a lot of talk about the mill being total chlorine free or elemental chlorine free. Is it your scientific opinion that there is no toxicological difference between waste waters generated from ECF based or TCF based bleaching?

**Dr Peacock**—The actual engineering processes of the mill was outside our terms of reference. We had a toxicologist with us on the panel.

**Senator ABETZ**—Yes. I do not want this to be a memory test, so possibly you could have a look at page 44 of your report. It is the second dot point: 'Research has shown that there is no toxicological difference between waste waters generated from ECF based or TCF based bleaching.'

**Dr Peacock**—That was referring to a report from the United Nations environment program.

**Senator ABETZ**—Yes, and it is footnoted that the United Nations environment program considers the ECF and TCF bleaching methods to be equivalent with respect to their potential formation of PCDD and PCDF. Can you also confirm that more trees are required to make paper with a TCF process?

**Dr Peacock**—No, I cannot.

**Senator ABETZ**—Can I refer you to the third dot point on page 44: ‘With TCF, three to four per cent less paper is produced from the same amount of wood compared—

**Dr Peacock**—I cannot recall the basis of that statement at this stage.

**Senator ABETZ**—But you would not seek to retract that now?

**Dr Peacock**—As far as I know, every statement in the report was based on scientific evidence.

**Senator ABETZ**—Yes. Nothing has emerged since 4 October, when you presented your report?

**Dr Peacock**—I have not been associated with it since.

**Senator ABETZ**—But nothing has been drawn to your attention since 4 October to make you doubt the veracity of that statement?

**Dr Peacock**—No.

**Senator ABETZ**—You might need to assist me here. Can you confirm that the maximum level of dioxins will be 3.4 picograms TEQ per litre? For those of us who do not have a science degree are you able to indicate what that actually means—how small it is or how big it is?

**Dr Peacock**—In general terms, I can say that the amount of dioxins and related toxins are extremely small compared to the technologies that existed, for example, when the Wesley Vale mill was considered earlier. I would need to refresh my memory on those particular levels.

**Senator ABETZ**—Are you in a position to describe the amount of dioxin per year? Two picograms is the trigger level, with a maximum of 3.4 picograms, but how much would that represent per annum with the discharge from the mill? Are you able to assist us with that?

**Dr Peacock**—We have certainly calculated that.

**Senator ABETZ**—Would that be a shovel full per annum going into Bass Strait?

**Dr Peacock**—I cannot answer it in those terms.

**Senator ABETZ**—You would need further advice on that?

**Dr Peacock**—The levels that are concerned are very low and difficult to measure but it can be done. As we indicated, it is possible to accurately measure. The sampling procedures are significantly greater than have been used in the past.

**Senator ABETZ**—Indeed. Referring to the past, are you aware of the approval of the Maryvale pulp mill in Gippsland? Did you do a comparison with that pulp mill at all? In particular, the maximum daily dioxin limit was set at 20 picograms, which of course will be about one-tenth of that which would be allowed of the proposed Bell Bay pulp mill.

**Dr Peacock**—I do not recall that.

**Senator ABETZ**—But, without the detail, would you accept that this would be, without doubt, world's best practice, to the best of your sort of scientific research and knowledge?

**Dr Peacock**—The expert toxicologist that I had on my committee would be able to answer in much greater detail than I can right now, although I did analyse all those arguments at the time. In comparison—or considered along with what we were presented with in regard to the nature of the mill—we regarded it as equal to world's best practice at that time. It is likely of course that subsequent mills will achieve even lower toxicologies.

**Senator ABETZ**—And that is how one would hope the science would develop with these things—that we continually get better in improving the environmental impact of anything we do. Have you undertaken any assessment or had any information brought to your attention as to what dioxin levels, picogram levels, are allowed for in, say, US drinking water?

**Dr Peacock**—The toxicologist that was on my panel would have those figures at his fingertips. We used data from Canada, the US and Europe in our assessments.

**Senator ABETZ**—Would you be able to take on notice for me that question, because that would be very helpful.

**Senator Carr**—Is that information in the report?

**Dr Peacock**—We would have made reference to it.

**Senator Carr**—I suggest you read the report, Senator Abetz, if it is canvassed in the report.

**Senator ABETZ**—I can assure you I have a very extensively marked copy of the report, and I suggest that, unlike you, Minister, I have actually read every single word of it.

**Senator Carr**—This is your government's report. If you want to grill the Chief Scientist over your government's actions, so be it. But this is a—

**Senator ABETZ**—Senate estimates does not have to be about grilling people; it can also be about obtaining information pure and simple. I would have thought any rational person listening to my questioning of the Chief Scientist would say that it is being done with utter respect and that there has been no grilling whatsoever. It has been the pursuit of information in, if I might say, one of the more polite sessions of this particular estimates.

**Senator Carr**—Then get on with it.

**Senator ABETZ**—I was getting on with it, until your interpretation, Minister.

**CHAIR**—Senator Abetz and Minister Carr, let us continue with the questioning, please.

**Dr Peacock**—If the staff give me your exact question, I will undertake to get you the answer.

**Senator ABETZ**—Excellent. Thank you very much for that. That ends my bracket of questions for the moment.

**Senator BOB BROWN**—Your report uses those terms that Senator Abetz has referred to as ‘environmentally neutral’. Does that mean having no environmental impact?

**Dr Peacock**—As I understand it, we expected there to be no significant change in the Commonwealth environmental areas that we looked at.

**Senator BOB BROWN**—What does that word ‘significant’ mean?

**Dr Peacock**—I cannot answer that now. I can give you a range of—

**Senator BOB BROWN**—You are a scientist and a word like ‘significant’ brings in a whole range of doubt to the matter, doesn’t it? And you have said that the mill, in the matters you had looked at, will be environmentally neutral. That means neither good nor bad, doesn’t it?

**Dr Peacock**—I think in relation to that the word ‘significant’ would imply there would be no detrimental effects to those parts of the environment we looked at.

**Senator BOB BROWN**—That means no effects?

**Dr Peacock**—Sorry?

**Senator BOB BROWN**—Environmentally neutral means no effect, doesn’t it?

**Dr Peacock**—No, it does not.

**Senator BOB BROWN**—It does not? Then what effects would be acceptable as being not significant?

**Dr Peacock**—We were referring to: would we expect there to be any effects on the endangered species that we were asked to look at, or in any of the other marine ecosystems that we were asked to consider.

**Senator BOB BROWN**—Your remit was to look at the three matters that the Commonwealth put forward. Did you feel constrained that you were asked to look at parts of the environmental impact of this mill but to not look at significant other parts?

**Dr Peacock**—That was the task.

**Senator BOB BROWN**—Did you feel constrained by that task?

**Dr Peacock**—I understood the arrangement had been made between the Commonwealth and the state governments as to who was responsible for which part of the mill’s operations, so I did not feel unduly upset at that.

**Senator BOB BROWN**—You did not, as a scientist, feel constrained by looking at a part of an environmental impact of a mill which had very much wider impacts than that and then reporting that the impact was environmentally neutral?

**Dr Peacock**—My duty was to look at those things that were specifically in the Commonwealth’s responsibility, and that is how I treated them.

**Senator BOB BROWN**—If I was to put to you that your duty as a chief scientist ought to have been to look at the whole impact, the whole environmental impact statement, you do not agree with that?

**Dr Peacock**—No, I was not asked to do that at all.

**Senator BOB BROWN**—I know you were not asked to, but ought you not have insisted that you do look at the whole environmental impact and why did you not?

**Dr Peacock**—I do not think I should answer that. That is a personal question requiring a personal opinion.

**Senator BOB BROWN**—No, it is an integral part of your role as Chief Scientist.

**CHAIR**—Senator Brown, in a large sense you are asking Dr Peacock for an opinion about his task.

**Senator BOB BROWN**—As Chief Scientist—yes, I am.

**CHAIR**—Specifically in my opening statement I said that witnesses asked for opinions—

**Senator BOB BROWN**—Chair, I am not asking for an opinion. I am asking—

**CHAIR**—I think you are, Senator Brown. If we could—

**Senator BOB BROWN**—You must not shepherd the witness, Chair.

**CHAIR**—I think Dr Peacock in his previous answer indicated that he regarded it that way, that the question was an opinion, so perhaps if you direct your questions to a slightly different area.

**Senator BOB BROWN**—I will not ask an opinion. I will ask directly. Dr Peacock, why did you not ask the government to be able to expand your remit to look at the whole of the environmental impact of the pulp mill?

**Dr Peacock**—That was a policy matter and it was no concern of mine.

**Senator BOB BROWN**—It was no concern? If the government asked you—

**Senator Carr**—Senator Brown, this is a somewhat invidious position to put me in, but I do think officers are entitled to the protection of the standing orders in regard to the nature of the questions they answer. Dr Peacock, as I understand it, was given a particular task to complete. There were terms of reference that he was obliged to fulfil. What he thought of the terms of reference or whether or not he should be doing another job is quite immaterial to the fact that he was given that particular job. I think you are entitled to ask questions about the job itself, but I do not think it is fair or reasonable for an officer to be asked an opinion about the nature of the policy decisions of government, even if it was the former government.

**Senator BOB BROWN**—I was not asking about the government. I was asking about the Office of the Chief Scientist and the decision made there. Let me ask about the fine particulate matter that will come from the mill. Did you look at that?

**Dr Peacock**—No. The atmospheric emissions were not part of our remit.

**Senator BOB BROWN**—The established and accepted fact that 200,000 hectares of native forests and wildlife habitat will be removed as feedstock to the mill—you did not look at that?

**Dr Peacock**—Again, that was outside the remit.

**Senator BOB BROWN**—But you nevertheless came up with the words ‘environmentally neutral’.

**Dr Peacock**—That was in regard to those aspects of the environment that were Commonwealth responsibility.

**Senator BOB BROWN**—The government statement following your report says, ‘If built as described and operated in accordance with the conditions he has recommended’—that is you—‘the proposed mill is unlikely to have an unacceptable impact on the environment.’ What does that word ‘unacceptable’ mean?

**Senator Carr**—Senator Brown, I think you just indicated that was the position of the minister in the previous government. It was not Dr Peacock’s opinion. He is not required to comment on the previous government’s statements in regard to their response to his report. In terms of the procedures and in terms of the standing orders, I do not think it is an appropriate question to put to the officers.

**Senator BOB BROWN**—May I put that question to you?

**Senator Carr**—You can put any question you like to me on a political basis. I will now seek to answer it, and that is that it was a decision of the previous government.

**Senator BOB BROWN**—Is it your opinion that the proposed mill is unlikely to have an unacceptable impact on the environment?

**Senator Carr**—It was a decision of the previous government and it is a matter that I suggest you take up with another estimates committee in regard to the actions of this government and the approval processes that were undertaken.

**Senator ABETZ**—I am happy to answer that, but of course I am not—

**Senator BOB BROWN**—I am asking this minister.

**Senator Carr**—That is my answer.

**Senator BOB BROWN**—I am not getting an answer.

**Senator Carr**—Senator Brown, I am not qualified to comment on the previous government’s statements in regard to this matter. If you are asking me about the actions of this government, I suggest you go to the appropriate estimates committee and the appropriate minister that made those decisions.

**Senator BOB BROWN**—Dr Peacock, there are essentially six elements to strengthening the conditions that you proposed, and the first of those is an integrated environmental impact management plan that would strictly prescribe all actions relating to EPBC Act matters. Is that plan published?

**Dr Peacock**—That was an agreement that was pre-existing, yes.

**Senator BOB BROWN**—And that plan is publicly available?

**Dr Peacock**—I am sorry, Senator, I do not understand what you mean.

**Senator BOB BROWN**—It says that an integrated environmental impact management plan will prescribe all matters.

**Dr Peacock**—In our recommendations to the minister we proposed that such a plan be developed. My understanding is that the minister then, in consultation with his department and other bodies, agreed that that was a necessary prerequisite.

**Senator BOB BROWN**—So that is a prerequisite to any work on the mill being undertaken?

**Dr Peacock**—That is what we recommended should occur.

**Senator BOB BROWN**—Then it says that an independent inspector appointed by the government should monitor Gunns compliance. Do you know if that inspector has been appointed?

**Dr Peacock**—I know of no subsequent action other than that there was an expert scientific committee formed to monitor all of the recommendations which I understood were accepted by the government.

**Senator BOB BROWN**—A further recommendation from you was that there should be a guarantee that if maximum limits or effluent discharge are reached and cannot be reduced within stipulated time frames, the pulp mill will cease to operate until tertiary treatment of effluent is installed. Wouldn't the precautionary principle have that the other way around, that the tertiary effluent treatment ought to be installed to forestall that possibility?

**Dr Peacock**—No, I do not think that is a logical conclusion.

**Senator BOB BROWN**—Do you accept that precautionary principle as a scientist?

**Dr Peacock**—Yes, I do, and we made recommendations accordingly.

**Senator BOB BROWN**—But here you say, 'if in the event effluent discharge cannot be reduced within stipulated time frames'. So you foresee that as a possibility.

**Dr Peacock**—No. We set up an alert—a warning system—that is well within the allowable limits that had been set. I think we set up pretty tough response. If these could not be corrected, then the mill had to cease.

**Senator BOB BROWN**—But you did foresee in this—

**Dr Peacock**—We foresaw that if that happened, that was the way it should be handled. That is what we recommended.

**Senator BOB BROWN**—Which inherently means the potential for that to happen is part of the mill operational future.

**Dr Peacock**—No.

**Mr Paterson**—Chair, this is an additional estimates hearing, not an inquiry into the pulp mill in Tasmania. We are supposed to be here in relation to matters of appropriation for this department. The Office of the Chief Scientist is here to respond to the questions, but still dealing with the additional estimates. We are dealing with matters that are not the responsibility of this department. The recommendations made by the Chief Scientist were to



another government, to another minister in a different portfolio. This hearing is supposed to be about matters associated with this portfolio.

**CHAIR**—Yes, Mr Paterson—

**Senator BOB BROWN**—Chair, may I respond?

**CHAIR**—No, I am responding as chair. I was asked, I believe, to rule as to the relevance of these questions and I am ruling. I take your point, Mr Paterson, that the nature of this inquiry is going into the specific inquiry that Dr Peacock did. Nevertheless, I think as part of his role of Chief Scientist there is some relevance to that kind of questioning in determining his role as Chief Scientist. But I would ask members of the committee to be aware that Dr Peacock had a specific task and is not responsible for the consequences beyond that or any other actions of other departments outside of his own and to try to keep the questions a bit more tightly based around that aspect of his role.

**Senator BOB BROWN**—Chair, you will be very aware that estimates provides an opportunity to get answers from ministers, government instrumentalities and officers about the matters that they deal with. That is what is happening here tonight.

**CHAIR**—Yes, I am just asking you to stick a bit more closely to Dr Peacock's role rather than venturing into other areas.

**Senator BOB BROWN**—I will do so. I am not having much luck so far, but I will continue to do so. The outcome of your report is further that the EIMP will be set up in three categories dealing with the development of the pulp mill: pre-construction, construction and pre-commissioning. Was it the intention that those three elements be extant before the mill got under way?

**Dr Peacock**—Not necessarily.

**Senator BOB BROWN**—None of the three?

**Dr Peacock**—The preconstruction ones are exactly that. No construction was recommended to take place until those particular points were satisfied. Then it was recognised that some of the requirements that we suggested to the previous government would take some months, possibly 18 months or so, of detailed data gathering, and that some of that, if the proponents of the mill so chose, could occur whilst they initiated some construction. But they had to take the risk because if they could not satisfy those requirements, everything had to cease.

**Senator BOB BROWN**—One of those elements of course is the tidal configuration and the movement of the effluent once it comes out of that pipe into Bass Strait. You were satisfied that in 18 months that matter could be, from at least a baseline through to—

**Dr Peacock**—That was the best advice we had, yes. We had found very inadequate preparation in that matter.

**Senator BOB BROWN**—Will that matter about tidal movements and indeed layered movements on Bass Strait, and therefore the distribution of the effluent out of that pipe—64,000 tonnes a day—be established by the time of the preconstruction report; in other words, before construction gets under way?

**Dr Peacock**—No. I could not see that it could possibly be.

**Senator BOB BROWN**—Again, with the precautionary principle, why did you not think that it was necessary to have that—pretty critical?

**Dr Peacock**—I just answered you before.

**Senator BOB BROWN**—Then repeat the answer for me. I am sorry; I did not really follow it.

**Dr Peacock**—If those answers were not satisfactory, no matter how much construction had been carried out, it would cease and the mill would not operate. That was our recommendation.

**Senator BOB BROWN**—Do you know of any major construction anywhere in Australia which has ever been brought to a halt by a process which—

**Dr Peacock**—I cannot answer that.

**Senator BOB BROWN**—No, I did not think you could. The next matter goes to the actual operation of the pulp mill.

**Mr Paterson**—Can I raise a question about gratuitous observations being made in relation to the evidence that is being given, Chair.

**Senator BOB BROWN**—It is my observation and I shall make it, Mr Paterson. I am not questioning you; I am asking Dr Peacock.

**Mr Paterson**—You may well be, Senator, but I have a responsibility here as well, and taking gratuitous observations that reflect on the integrity of the witnesses before the committee is something that I certainly take exception to.

**Senator BOB BROWN**—You are welcome to your opinion on that matter, Mr Paterson. There are some pretty important matters at hand here, and I hope you are listening carefully to the questions being put and the answers being given.

**CHAIR**—Senator Brown, I am sure Mr Paterson and Dr Peacock are listening very carefully.

**Senator BOB BROWN**—I hope so.

**CHAIR**—I think we are getting well away from the point.

**Senator BOB BROWN**—Mr Paterson might leave the answers to come from the questions.

**Senator Carr**—Senator Brown, I share the concern. This is an additional estimates hearing that the opposition has sought on a report that was given to the previous government. The matters that are being canvassed go to the actions of another minister in another government, and I presume at some point you will go to other matters which are not the matters of this committee.

**Senator BOB BROWN**—The matters I am asking about, Minister, go directly to the report of the Chief Scientist and I am asking the Chief Scientist about those. That is an absolutely valid function of a Senate committee.

**Senator Carr**—I appreciate that, but Dr Peacock was asked to undertake a function for the previous government and I do not think it is fair to reflect on him questions that go to the construction patterns of other projects in Australia. I think you are entitled to ask questions about his report and his role in the construction of that report.

**Senator BOB BROWN**—That is what I am doing and I will continue to do it.

**CHAIR**—Can we continue with the questioning please, Senator Brown. I would again remind you to try to restrict your questions to answers that Dr Peacock is responsible for.

**Senator BOB BROWN**—As I have done throughout and I will continue to do, Chair.

**CHAIR**—Thank you, Senator Brown.

**Senator BOB BROWN**—The actual operation of the pulp mill will be dealt with in two categories in the EIMP—ongoing monitoring and remedial and response strategies. Was it your recommendation, Chief Scientist, that those two categories be extant before the decision to allow the mill to proceed was given?

**Dr Peacock**—My panel, through me, made this report to Minister Turnbull. I think we had some 48 recommendations, as I recall, and you have indicated that we made them in certain categories. We filed the report, which I understand Minister Turnbull accepted in full, and really that is where my responsibility finished.

**Senator BOB BROWN**—Yes, but I am asking about these two categories in the EIMP—the first being ongoing monitoring and the second being remedial and response strategies—and whether it was in your report that these should be—

**Dr Peacock**—Set out?

**Senator BOB BROWN**—Set out and how they were going to be implemented be made clear before the mill got underway.

**Dr Peacock**—That is correct.

**Senator BOB BROWN**—In the next point it says that, in the EIMP, Gunns must describe the specific changes to mill processes and operations they would undertake in the event that specified trigger points are reached, such that an unacceptable impact is likely. Did your report lay out those specified trigger points?

**Dr Peacock**—No, we defined, as you indicated before, what a trigger point was and that, if it could not be remedied, the mill would have to cease operations. We further suggested that Gunns, in that case, disclose as they saw at that time what all the various remedies could be. That was the recommendation we made.

**Senator BOB BROWN**—But with regard to the specified trigger points, have you specified what those trigger points are?

**Dr Peacock**—We did.

**Senator BOB BROWN**—Then, if necessary, the pulp mill will cease operation with the retrofitting of effluent tertiary treatment, as we have spoken about before. I have asked you about a precedent for that and you have answered that. The next point is that some conditions

of the recommended EIMP will need to be fulfilled prior to any construction of the mill and the associated water supply and effluent disposal pulp lines. Which were those conditions?

**Dr Peacock**—We defined them in the report as ‘pre-construction’.

**Senator BOB BROWN**—That included pre-construction—

**Dr Peacock**—I cannot remember how many there were, but they were categorised into those various types.

**Senator BOB BROWN**—Are you aware that the state government has now flagged that it will make the pipeline a matter of state significance so that it is—

**CHAIR**—That question does not appear to be within Dr Peacock’s job specification.

**Senator BOB BROWN**—It is. It is a perfectly reasonable question. It is on the public record.

**CHAIR**—Senator Brown, I ask you to stick to questions within the area that Dr Peacock is responsible for. He is clearly not responsible for any state government decisions.

**Senator BOB BROWN**—I did not ask him whether he was responsible for it. I know he is not. I asked him was he aware of that.

**CHAIR**—I have ruled that question out of order. I ask you to move on.

**Senator BOB BROWN**—I ask you to refer that ruling to the President if you would please.

**CHAIR**—Yes.

**Senator BOB BROWN**—It then says that a monitoring regime must be established that includes baseline and ongoing measurement of pollutants in the water columns in sediments and in biota. That monitoring regime however, I presume, was meant to be the precursor for the 18-month study. Did you have advice to the government or did you establish how long it would take to establish the impact on biota of effluent going into Bass Strait?

**Dr Peacock**—We expected it to be continuing.

**Senator BOB BROWN**—What stage would it be established whether or not the biota was being impacted upon by the effluent?

**Dr Peacock**—That would depend upon the collected data.

**Senator BOB BROWN**—You do not know how long that would take to establish?

**Dr Peacock**—That is not a question I can answer.

**Senator BOB BROWN**—All the trigger levels and maximum limits for effluent discharge together with agreed response strategies and time frames must be proved in the EIMP before the pulp mill enters its commissioning phase. That was the recommendation as well. I thank you for those answers. I have a couple more questions. In response to Senator Abetz, you mentioned the greenhouse gas emissions from the pulp mill.

**Dr Peacock**—It was a reference to the United Nations support.

**Senator BOB BROWN**—To what degree did you study that matter?

**Dr Peacock**—Personally?

**Senator BOB BROWN**—You and your panel.

**Dr Peacock**—The atmospheric emissions were outside our remit. We were excluded from that analysis. We were aware of work done by the state government and scientists associated with their questioning of those likely effects, but it was quite outside our report area.

**Senator BOB BROWN**—Did you look at the furnace attached to the pulp mill to produce energy and the greenhouse gas impact of that or any other impact of that?

**Dr Peacock**—No. We were not required to look at that at all.

**Senator BOB BROWN**—Not required to look at the cogeneration or energy production facility?

**Dr Peacock**—No. We were aware of some of the plans, but we did not look into that area at all.

**Senator ABETZ**—Chair, possibly the Chief Scientist's attention should be drawn to page 59, paragraph 70. It is a bit unfair after all this time for him to have a memory test on all the details of this matter.

**Senator BOB BROWN**—It is not—living near the mill, Senator Abetz.

**Senator ABETZ**—But with regard to electricity generation, using biomass or renewable fuel would have fewer greenhouse impacts than if the proposed operations were to use electricity generated from the use of coal or oil. There are other comments there.

**Senator BOB BROWN**—Yes. Was that statement based on a analysis of the impact on forests as well as the mill itself?

**Dr Peacock**—No, we did not look into that area.

**Senator BOB BROWN**—Was a comparison done there with renewable energy or energy efficiency and—

**Dr Peacock**—We were aware of the proposition to use some of the—

**Senator ABETZ**—This is renewable.

**Senator BOB BROWN**—It is not.

**Dr Peacock**—I beg your pardon?

**CHAIR**—Please ignore the byplay between the two committee members, Dr Peacock, and just finish your answer.

**Senator ABETZ**—Clearly it is renewable energy. Every European country will tell you that biomass is renewable.

**Dr Peacock**—We were aware that that was the plan.

**CHAIR**—Senator, Dr Peacock was finishing his answer to Senator Brown. Had you finished your answer?

**Senator BOB BROWN**—I will put the question again. Did you look at the comparison, seeing the coal comparison was cited, with renewable energy and/or energy efficiency?

**Dr Peacock**—No. That was outside our remit. That was quite outside.

**Senator BOB BROWN**—But a comparison with coal was inside your remit?

**Dr Peacock**—No. We were not required to examine the mode of operation of the mill machinery for the generation of energy. We made some comment in reference to the electricity generation, but it was outside our detailed report.

**Senator BOB BROWN**—So why did you make that comment if it was outside your remit and the requirement of your report?

**Dr Peacock**—We made the observation that there was going to be use of some of the by-product for energy.

**Senator BOB BROWN**—Yes, and then that comparison with coal?

**Dr Peacock**—We did not make a comparison with coal.

**Senator BOB BROWN**—So it is not there. We have a little bit of a dispute in evidence here, but I will move on. On the matter of dioxins and furans, what level of these is safe in the environment?

**Dr Peacock**—The safety of those has been documented by various biological testings. We required further biological testing to be done. That was one of the suggestions we made—requirements we made.

**Senator BOB BROWN**—Is the impact of them linear—that is, proportionate—to their presence in the environment? They are cancer causing agents and they have teratogenic properties.

**Dr Peacock**—I cannot answer that for you.

**Senator BOB BROWN**—You do not know?

**Dr Peacock**—I do not know that.

**Senator BOB BROWN**—Can you tell me about the specific site itself and your assessment of the impact on the Tasmanian devil? How was that assessment made?

**Dr Peacock**—I had in my panel an expert on the terrestrial animals as related to the mill site and to the effluent pipeline going to the coast. We made some specific recommendations about a number of studies that needed to be taken, both in relation to animals and plants.

**Senator BOB BROWN**—But you did not get those studies done before you made your recommendations?

**Dr Peacock**—No, we made the recommendations as to what needed to be done. We were aware that some studies had been undertaken and we required further studies to be undertaken.

**Senator BOB BROWN**—What is the impact on the mill site on the Tasmanian wedge-tailed eagles which are in that vicinity?

**Dr Peacock**—We were given data about wedge-tail nest sites and the procedures that were to follow in regard to mill operations when wedge-tails were spotted and particularly in the breeding season. Again, we required further work to be done.

**Senator BOB BROWN**—In the breeding season, logging operations, for example, ceased within the region in which the eagles are nesting. Is that a requirement under—

**Dr Peacock**—We were not referred to the logging operation.

**Senator BOB BROWN**—No, I am referring to the building and functioning of the pulp mill itself within the vicinity of nesting eagles.

**Dr Peacock**—There were specific statements about that. I am sorry; it is some months since I studied that report in detail. I cannot specifically remember those conditions now, but that was one thing we discussed.

**Senator BOB BROWN**—The impact of the pipeline to the mill—

**Dr Peacock**—It was not considered by us.

**Senator BOB BROWN**—But you recommended that it be considered before the pulp mill go ahead?

**Dr Peacock**—We recommended there were certain environmental issues that needed to be analysed and data collected on a series of properties before any construction took place.

**Senator BOB BROWN**—The mouth of the Tamar River has some of the richest marine ecosystem colonies in Australian waters. What assessment of those did you make before coming to your conclusion and reporting back to government?

**Dr Peacock**—The location of the effluent pipe is not at the mouth of the Tamar. Nevertheless, we recommended that detailed hydrodynamic modelling and studying should occur not only further out to sea but also near the shorelines.

**Senator BOB BROWN**—The pipeline will not be in the vicinity of those marine ecosystems?

**Dr Peacock**—It will obviously be in the vicinity of marine ecosystems.

**Senator BOB BROWN**—It obviously has to be laid down, does it not?

**Dr Peacock**—The pipeline?

**Senator BOB BROWN**—Yes.

**Dr Peacock**—Yes.

**Senator BOB BROWN**—So the question I am asking you is: do you know what the impact on those littoral and marine ecosystems will be when the pipeline is laid down through those ecosystems?

**Dr Peacock**—That is what we recommended needed to be studied. There was no baseline data, to our satisfaction, either of the sediments or of the water phase.

**Senator BOB BROWN**—You have had no feedback on how those studies or recommendations are going?

**Dr Peacock**—No, I have not. A specific expert committee was set up. I am not aware of their operation.

**Senator ABETZ**—Can I thank Dr Peacock for his appearance. I will be absenting myself, but it has been most helpful from my point of view. Thank you very much. Thank you, Minister, for making him available.

**Senator JOYCE**—This is a completely ignorant question, but I will ask it anyway: with the decomposition of anything in this room, would there be dioxins in this room?

**Dr Peacock**—There are probably dioxins in this air column, yes.

**Senator JOYCE**—It is fair to say that with the decomposition, especially the plastics or the electrical equipment, there will be a presence of a dioxin. It is endemic in all sections.

**Dr Peacock**—I cannot offer you a comment as to the source of any dioxins.

**Senator JOYCE**—I want to go to a general question. I suppose, Mr Paterson, I will address this to you. Can you direct me to where in the additional estimates are the appropriations for Dr Peacock's role?

**Mr Paterson**—You will not find anything in the additional estimates because the additional estimates were only about variations in appropriations.

**Senator JOYCE**—So it is the same as option 5 in the previous ones. Is that correct?

**Mr Paterson**—I do not have that document with me because the Office of the Chief Scientist at the last budget did not exist within this department as this department did not exist at that time. Under the previous government, I was not responsible for the Office of the Chief Scientist.

**Senator Carr**—It was in DEST, the old—

**Mr Paterson**—The Department of Education, Science and Training, which is before a different committee.

**Senator JOYCE**—Is there any variation between the previous estimates of his department and—

**Mr Paterson**—There is no variation between any prior published information in relation to the Office of the Chief Scientist as a result of the additional estimates.

**Senator JOYCE**—You have stated that, at this point in time, if I am correct, there have not been any clear decisions made about whether the efficiency dividend will come from either Dr Peacock or any other part of the department.

**Mr Paterson**—I indicated in evidence on the last occasion that I had taken decisions in relation to the current financial year and the impact of the efficiency dividend and about how we would meet the overall impact of the new efficiency dividend on the portfolio in the current financial year. I outlined in some detail—you and I had an interchange in relation to those issues—that I have taken no decisions going forward. I have taken no decisions that explicitly impact on the Office of the Chief Scientist per se. You will recall from the evidence I gave on the last occasion that I indicated that one of the things that we did, following the election when we knew we were going to be confronted by the additional efficiency dividend, was to put in place a recruitment pause. That is one of the measures that has an impact—disproportionately, but it depends on when the vacancies arise in particular areas. We put that in place and it continues.



**Senator JOYCE**—Just to circumvent any questions from this point on about it, at the next budget estimates there will be some tabulation of where an efficiency dividend has started and savings that have occurred—

**Mr Paterson**—No, not necessarily, because the obligation on me is to manage departmental funds within the appropriation provided by the parliament. One of the measures that impacts on that appropriation is the efficiency dividend. In fact, we went through on the last occasion that there are three components to the efficiency dividend. There is a one per cent efficiency dividend that had applied over time; it was applied by the previous government. There was an additional 2.5 per cent that was introduced, as I recall it, in 2004. Then there was an additional two per cent that was introduced by the new government, which has partial impact in the current financial year.

Expenditure patterns will vary between divisions. The effect of the recruitment pause will have a different impact depending on what the level of turnover is at a point in time. I indicated on the last occasion that we had reduced the size of the executive and we had restructured divisions. All of those things are designed to have a global impact. But do we try to allocate every cent to that particular number? The answer is no, we do not. I would expect to be in a position to outline—I will not commit to it now—how we propose to deal with the full impact of the efficiency dividend in the year ahead because that is when the full impact of the efficiency dividend comes in. You will also be aware that any wage increases that are provided for within the portfolio are paid for from efficiencies achieved in the operation of the department.

The efficiency dividends come in many forms. If we are asked to absorb an activity, that is an additional expected efficient dividend. If we are asked to undertake a new program without departmental funding to undertake that program, that is another efficiency dividend by another name that we are expected to meet. All of those things will have a complex set of interactions. Will I have a piece of paper that I can hand over to you that says that all of these absolutely add up to \$741,000 in the current financial year, no, I do not—and I do not expect to be.

**Senator JOYCE**—There has been included in the appropriations of the nation an efficiency dividend. Will we get to a point where we can actually match up our estimation with the reality in some way, shape or form?

**Mr Paterson**—Yes, you will, because I am obligated under the Financial Management and Accountability Act to manage the department within the appropriation. I am not allowed, without the approval of the Minister for Finance and Deregulation, to run a loss. So you will know in the annual report that is published what the financial performance of the portfolio is and whether, on balance, given all of the programs that we administer and the departmental appropriation that is provided to us, whether we operate within those guidelines.

**Senator JOYCE**—You are saying that the annual report across all departments will be added to the—

**Mr Paterson**—The annual report for my department will indicate to you our performance in relation to the various programs. It will outline to you the performance against the various outcomes under which we operate and it will give you a bottom line. The efficiency dividend

that is applied to me, I am not told how to deliver on that efficiency dividend; I am merely told to do it.

**Senator JOYCE**—We will be able determine that in the annual report.

**Mr Paterson**—You will know whether or not I have done it. If I have not done it, I will be running at a loss and that will be obvious to you.

**Senator JOYCE**—Has your department had any luck with those questions that I put on notice before with regard to the Aboriginal—

**Mr Paterson**—I think we have only got the questions on notice within the last few days.

**Senator JOYCE**—That is all right.

**Mr Paterson**—We have not filed responses to them yet.

**Senator JOYCE**—Going back to Dr Peacock, have you been involved in any way, shape or form with the modelling of the carbon emission targets and outputs?

**Dr Peacock**—I have not been involved in modelling, no.

**Senator JOYCE**—So in no way, shape or form have you been asked about Professor Ross Garnaut's input?

**Dr Peacock**—I have not been asked to comment.

**CHAIR**—Thank you, Minister, Mr Paterson and Dr Peacock. I will draw the meeting to a close tonight.

**Committee adjourned at 8.43 pm**