

CORRECTED COPY

GENERAL PURPOSE STANDING COMMITTEE No. 4

Thursday 17 September 2009

Examination of proposed expenditure for the portfolio area

SCIENCE AND MEDICAL RESEARCH

The Committee met at 2.00 p.m.

MEMBERS

The Hon. J. A. Gardiner (Chair)

The Hon. D. J. Gay
The Hon. K. F. Griffin
Dr J. Kaye

The Hon. R. A. Smith
The Hon. H. S. Tsang
The Hon. L. J. Voltz

PRESENT

The Hon. J. L. McKay, *Minister for Commerce, Minister for Tourism, Minister for the Hunter, Minister for Science and Medical Research*

Industry and Investment NSW
Mr B. Buffier, *Deputy Director General*

Office of Science and Medical Research
Ms K. Doyle, *Executive Director*

CORRECTIONS TO TRANSCRIPT OF COMMITTEE PROCEEDINGS

Corrections should be marked on a photocopy of the proof and forwarded to:

**Budget Estimates secretariat
Room 812
Parliament House
Macquarie Street
SYDNEY NSW 2000**

CHAIR: I declare the hearing for the inquiry into the Budget Estimates 2009-2010 open to the public. I welcome Minister McKay and accompanying officials to this hearing. Today the Committee will examine the proposed expenditure for the portfolio of Science and Medical Research. Before we commence I will make some comments about procedural matters.

In accordance with the Legislative Council's guidelines for the broadcast of proceedings, only Committee members and witnesses may be filmed or recorded. People in the public gallery should not be the primary focus of any filming or photographs. In reporting the proceedings of this Committee the media must take responsibility for what they publish or what interpretation is placed on anything that is said before the Committee. The guidelines for the broadcast of proceedings are available on the table by the door. Any messages from attendees in the public gallery should be delivered through the Chamber and support staff or the Committee clerks. Minister, I remind you and the officers accompanying you that you are free to pass notes and refer directly to your advisers while at the table. Mobile phones are to be turned off.

The return date for questions on notice will be 21 days after the hearing. Transcripts of the hearing will be available on the website from tomorrow morning. All witnesses from departments, statutory bodies or corporations will be sworn prior to giving evidence. Minister, I remind you that you do not need to be sworn as you have already sworn an oath to your office as a member of Parliament.

BARRY BUFFIER, Deputy Director General, Industry and Investment NSW, sworn and examined:

KERRY DOYLE, Acting Executive Director, Innovation Research and Policy Branch, Industry and Investment NSW, affirmed and examined:

CHAIR: Minister, are you aware that in January 2003, at a function attended by Christopher Reeve, also known as Superman, then Premier Carr announced that he would set up 10 additional fixed speed cameras in Sydney to raise money for a spinal research fund?

Ms JODI McKAY: I am not aware of the specifics of that, no. I was not in Parliament at that point. But I can tell you what we are doing in regard to stem cell research, which is significant.

CHAIR: Can you tell me whether the fund that Mr Carr set up with such fanfare at that time is still in operation?

Ms JODI McKAY: It is. We have a significant amount of work, as I said, in the stem cell area. We are investing directly into cutting-edge stem cell research.

CHAIR: I am talking about spinal research in particular.

Ms JODI McKAY: Yes, I can tell you about spinal research as well because both are obviously, for us, related. I will ask the Acting Executive Director to respond.

Ms DOYLE: I am lucky enough to have been here at that period when Mr Reeve's event was on and I can tell you, as the Minister indicated, that the fund is still in existence and that, to date, over \$22 million has been allocated to it. We have had a slight tightening of the focus of that in terms of where we are putting the balances over into straight capacity building, particularly in emerging researches, and, as the Minister was going to speak about, we also have a focus on stem cell research.

CHAIR: Can you confirm, Ms Doyle, that the money for spinal research was to come from 10 fixed speed cameras?

Ms DOYLE: As I understand it, the money comes from consolidated revenue.

CHAIR: Mr Carr made it very clear that this was different; this was coming from 10 fixed speed cameras, and I will give you the locations where they are.

Ms DOYLE: The first four years of funding was allocated on that basis. We went back through the normal budget process for the second tranche of funding.

Ms JODI McKAY: I think what is important is that in no way have we in any aspect certainly lessened our focus on spinal cord injury or related neurological conditions. It remains a focus for us and, in fact, I have asked the Office of Science and Medical Research to look at how we can expand that program, and that is certainly having a focus more on the neurological area. So it remains a significant focus for us.

CHAIR: Can you tell the Committee why a decision was made not to hypothecate that source of revenue, those funds, to this particular project?

Ms JODI McKAY: I think the important point here is that, as Ms Doyle indicated, all the funds are in consolidated revenue. We have not in any way lessened our focus on this area. I am happy to take that question on notice and come back to you about the decisions that were made in regard to that. But it is important that this Committee knows that we have not in any way lessened our focus on the spinal cord injury and related neurological conditions research program. It remains and continues to be a focus for us. I think your query is over money that was allocated or supposedly directed from 10 speed cameras. I am indicating that that remains the Government's focus. Obviously that money goes into consolidated revenue.

The Hon. DUNCAN GAY: Minister, the original announcement was that 10 extra speed cameras would be put in place specifically for this. Those 10 cameras are still in place. However, you are now telling us that quietly in the dark of night this whole procedure has changed and the people of New South Wales are being duped.

Ms JODI McKAY: I am not telling you that. I am telling you that our focus on this area remains what it was.

The Hon. DUNCAN GAY: It does not. Was there a public announcement?

Ms JODI McKAY: Can I finish my answer? Those dealing with spinal cord and neurological injuries understand the Government's commitment to this area, and that commitment has not changed. I will seek advice on the announcement made in relation to the speed cameras.

CHAIR: Was there an announcement?

Ms JODI McKAY: According to you there was.

CHAIR: No. I am saying that you told us there has been a change. Was an announcement made to the people of New South Wales about a change in the source of revenue?

Ms JODI McKAY: I was going to say that I would seek details. I understand that that program could have been for four years. I need to seek clarification about that. I also need to seek clarification about the message delivered at that time. The important thing is our focus on this area. The source of the money has not changed. We still have the same amount committed to this program; we still have a strong commitment to and engagement with this sector. As I said, I have directed the Office of Science and Medical Research to look at how we can expand our focus on the related neurological condition research. That has obviously engendered a great deal of excitement amongst researchers in the area. The program has been highly successful and our focus on it continues.

CHAIR: Can you tell us the status of any research projects funded by that program when it was first set up?

Ms DOYLE: I can provide an indication, but I have to take the full detail on notice.

Ms JODI McKAY: We can provide on notice a full list of the programs we support out of this fund every year. We are happy to provide information about how the projects that were originally identified are progressing. Since that time a number of projects have been supported annually. We are also happy to provide a list of the successful grant recipients. As members well know, that is a peer review process and these grants are highly regarded and sought after.

CHAIR: Are you aware of the difficulties confronting the world-renowned Pain Management Research Institute, which received funding until 2009 but which is now at risk of collapse as a statewide service because it does not have any funding?

Ms JODI McKAY: I have to take that question on notice. It is certainly not a program we have funded. It may be something that has been supported through New South Wales Health. However, I am happy to take that question on notice and provide information to the Committee.

CHAIR: It has been funded by you.

Ms JODI McKAY: Through the Office of Science and Medical Research?

CHAIR: Yes. There is a body called the Pain Management Research Institute. It is associated with the University of Sydney and Royal North Shore Hospital.

Ms DOYLE: I understand it is a partner in one of the spinal cord grants.

Ms JODI McKAY: The institute did hold a project grant, but my advice is that it did not apply for a grant in the latest funding round. We open the grant round and researchers apply. As I said, the application is then reviewed by research peers. I am happy to seek further advice on this issue as well.

CHAIR: I have a deed of agreement here in relation to that. I also have a list of the critical responses that the institute needed from New South Wales Health and from your Government. It seems to me that you do not know anything about it.

Ms JODI McKAY: I think you are probably talking about something separate from the Office of Science and Medical Research.

CHAIR: No, I am not.

Ms JODI McKAY: There has been no discussion with anyone from the institute during this latest round of funding. I have sought advice from departmental officers and they tell me that there has been no discussion. I am happy to take the information you have and come back to the Committee with further details.

The Hon. DUNCAN GAY: On 29 October 2004 your department wrote to the institute saying that it would be funded for four years.

Ms JODI McKAY: Again, I am very happy to take that question on notice and to provide the Committee with a response.

The Hon. DUNCAN GAY: Do you think this lack of funding is because of the loss of revenue from the cameras?

Ms JODI McKAY: Are you referring to the Medical Research Support Program?

The Hon. DUNCAN GAY: No. The letter states:

Dear Professor Keast

I am writing to you concerning the program grant of \$2 million over four years awarded under the New South Wales Spinal Cord Injury and Other Neurological Conditions Research Grants Program.

That is the one we have been talking about all this time.

Ms JODI McKAY: The institute was funded between 2004 and 2008. That funding was from the spinal cord research program. I am pleased that you have provided that information because we deal with in excess of 20 medical research institutes and 5,000 to 6,000 researchers. If you do have information and if you want a clear answer, you should provide that information up front.

The Hon. DUNCAN GAY: We do not want a denial that you fund it because you are inept enough not to know.

Ms JODI McKAY: I said that if you give me the information I am happy to seek the detail. In regard to that particular program grant, I believe it was for 2004-08. My staff advise me that they have not had any

discussions with anyone from that institute. We would be happy to meet with them if there is a problem and come back to the Committee with any decision made. I again stress that the grant applications are peer reviewed. It is important in this arena that advice sought is from those who actually know the research area in question. I am happy to take that question on notice and to provide the Committee with a detailed answer on that research program.

CHAIR: It sounds like that would ease their pain.

Ms JODI McKAY: That is an unfortunate comment.

CHAIR: It is amazing that you do not know about it. You mentioned the Medical Research Support Program. Can you confirm that investment in that program in the 2009-10 budget is \$2.7 million less than was allocated in the budget last year?

Ms JODI McKAY: With the Committee's indulgence, I would like to explain how the Medical Research Support Program works.

The Hon. DUNCAN GAY: And answer the question?

Ms JODI McKAY: I am happy to answer the question. Funding through the Medical Research Support Program is at record levels. The program is the channel through which funding is provided to New South Wales institutes. It meets their indirect costs that are not covered by grants. That includes support in areas such as salaries and laboratory equipment. We talk to researchers and they know it is infrastructure funding and they tell us about the importance of being able to maintain it. The program has facilitated the employment of 2,800 research personnel in our major medical research institutes and directly created 282 scientific, technical and administrative jobs.

In the 2006-09 triennium the baseline funding for the Medical Research Support Program was \$17.3 million per annum, or about \$51 million for the triennium. That was to 11 medical research institutes. That was then boosted or enhanced by \$13 million, which provided about \$64 million in that triennium or in excess of 25¢ in the dollar. That is a level of support that is equivalent to other States, particularly Victoria and Queensland. For the coming year we have been able to see 17 medical research institutes qualify for that program. It is a good problem for government to have because it means that our research institutes are performing very well. It means, on a peer review basis, that the funding they are receiving is increasing year on year. So we had 11 qualified and we are now up to 17. We have been able to provide in 2009-10 under the Medical Research Support Program funding to 17 institutes, which is a 50 per cent increase on the base level of funding for this program, which was in the forward estimates for this financial year. As I said, that then provides about 25¢ in the dollar, which is equivalent to other States.

CHAIR: Are you confirming that investment through that program was \$2.7 million less than it was in the previous year?

Ms JODI McKAY: No. I am saying to you, in effect, there was a significant increase in funding—about \$8.7 million more—for that program.

Dr JOHN KAYE: I want, first of all, to talk a little about nanotechnology and its development in New South Wales. Can you give us a figure for the total support the office gives in financial terms to the development of nanotechnology materials in New South Wales?

Ms JODI McKAY: I think we will take that question on notice because we do not fund that way. We have allocated some funding to the Collaboration and Infrastructure Access Program, but that is about fostering public and private partnerships. So it is difficult to know which companies are using nanotechnology.

Dr JOHN KAYE: I am addressing those programs specifically oriented towards nanotechnology—that is to say, programs that raise nanotechnology awareness. I understand that one of the objectives of the Office for Science and Medical Research is to continuously identify new areas of science and medical research of relevance to New South Wales. I imagine nanotechnology would fit into that category.

Ms JODI McKAY: It does.

Dr JOHN KAYE: Maybe I will ask my question again. What are you doing to continuously identify the new area of nanotechnology, which presumably is of relevance to New South Wales?

Ms JODI McKAY: What I will say is that obviously the Government requested the Legislative Council's Standing Committee on State Development to undertake an inquiry into nanotechnology. That was very much about allowing us to better understand the risks and also the benefits of nanotechnology in an ongoing way. That committee reported on 29 October 2008. In developing the response to the recommendations of that inquiry, the Government asked Professor Mary O'Kane, who is the Chief Scientist and Scientific Engineer for New South Wales, to chair that response. An advisory committee undertook consultation with industry, with government agencies, with unions and with academia, and that provided a strong basis for our response. I am sure you are aware of the response to the upper House inquiry. It is important to remember with nanotechnology—indicating what a whole-of-government response is, and keeping in mind that the portfolio I have is science and medical research—that nanotechnology-based solutions are emerging in a range of fields, such as in energy, the environment and health. So to enable me to answer that question accurately I probably need to take it on notice.

Dr JOHN KAYE: Okay, thank you for that. We look forward to your answer on notice. You have identified—and clearly you are aware of—the emergence of nanotechnology products and activities across the economy. Is the Office for Science and Medical Research either in or of itself or through activities it funds elsewhere seeking to monitor those activities in both manufacturing and goods sold in New South Wales—monitoring them in the sense of understanding where they are, what they are and where they are leading to?

Ms JODI McKAY: That is not our role. But what we are doing—again, with the assistance of the Chief Scientist and Scientific Engineer, Professor Mary O'Kane—is having high-level consultations with the Commonwealth Department of Innovation, Industry, Science and Research. That is part of the national enabling technology strategy, and that, as you may be aware, is encompassing nanotechnology and also biotechnology. So a national enabling technology strategy is being developed and that is a very important step. But in answer to your question, it is not directly our role to do what you ask.

Dr JOHN KAYE: Are you keeping a watching brief on the current state of understanding of the dangers of nanotechnology, or the potential risks posed by nanotechnology materials, to the workforce involved in manufacturing nanotechnology products, to consumers and also to the environment?

Ms JODI McKAY: The Department of Industry and Investment is working closely with the Commonwealth on this strategy. The upper House inquiry and our response to that, which you would be aware of, certainly put us as one of the leading States in how we approach nanotechnology. So we are working closely with the Commonwealth on this strategy.

Dr JOHN KAYE: I am pleased that you are working closely with the Commonwealth. Can you tell us what you are doing when you are working closely?

Ms JODI McKAY: I can tell you that a strategy is being developed. As you well know, this is a new and emerging area of research—an emerging area that encompasses a number of different areas, as I have indicated. With the Chief Scientist and Scientific Engineer's assistance and her leadership on this issue, as a State we are certainly ahead of other States in our proactive relationship with the Federal Government on this issue. We have a policy coordination—

Dr JOHN KAYE: If I may interrupt for one second, you talked about working closely with and having a proactive relationship with the Commonwealth. My original question was—and what I am trying to get from you now is—what is happening? It is fine to say that you are proactively working with and you have a relationship with the Commonwealth—that is all very nice. But what are you actually doing?

Ms JODI McKAY: As I said to you, we had the upper House inquiry. We have responded to that upper House inquiry.

Dr JOHN KAYE: But that is not working closely with the Federal Government.

Ms JODI McKAY: We are working closely with the Federal Government on this strategy. As you well know, that is an important step forward on this issue. We have also set up a nanotechnology policy coordination committee within government. That includes the Department of Premier and Cabinet and the Better

Regulation Office. It includes the Department of Industry and Investment—our area. It includes Health, WorkCover and, of course, the Department of Environment and Climate Change. We are using that framework to encourage the establishment of a peak body in manufactured nanomaterials and nanotechnology, which is the National Council for Ultrafine Particles. Importantly, as I said, we are working closely with the Commonwealth on the strategy and it does require in every way leadership from the Commonwealth. We believe as a State we have been proactive in certainly encouraging the Commonwealth to give great consideration to this area.

Dr JOHN KAYE: As a State that is working closely with the Commonwealth and encouraging proactively, how many officers within the Office for Science and Medical Research are involved in this close relationship?

Ms JODI McKAY: You have the Chief Scientist and Scientific Engineer. You have the resources of the Office for Science and Medical Research, which backs up the Chief Scientist. The position of Chief Scientist and Scientific Engineer was an initiative of government. That position was created about 12 months ago. Importantly, that position was established to deal with areas like this and to work with the scientific and research community to make sure that New South Wales is doing all it can to ensure that it progresses down our Clever State path. This is one area where the Chief Scientist is actively involved. You do not get much higher within the Office for Science and Medical Research—and this is no disrespect to the director general or the deputy director general. She is certainly leading our approach.

Dr JOHN KAYE: What percentage of her time is spent on nanotechnology issues?

Ms JODI McKAY: I would have to take that on notice and come back to you. As I said, she is obviously leading our Clever State agenda as well, and nanotechnology forms a part of that. I am happy to come back to you on that.

Dr JOHN KAYE: Minister, can I take you somewhere else? Issues are now being raised about nanotechnology materials in the effluent stream—both commercial and industrial effluent streams—in terms of their ecological harm and also their impacts on recycled water. Is your department in any way working on that issue? Is it encouraging research on the issue? Does it have its own watching brief? Is there any activity within the State Government that you would be aware of that looks at that issue?

Ms JODI McKAY: Not specifically that I can think of, sitting here right now. But, again, I am happy to take that on notice and come back to you. What I will say, importantly, is that our role in a lot of ways is to encourage and work with researchers who have a passion or commitment in that area as well. I can take that on notice and I can certainly come back to you about what is happening in that area.

Dr JOHN KAYE: My question was not only what you are doing internally but what are you doing to encourage research in that area. The other area that is directly related is the issue of safety within research institutions. A number of issues have been raised about the exposure of researchers to nanotechnology materials.

Ms JODI McKAY: And that is why we have WorkCover working very closely with us on the advisory committee that the Chief Scientist is heading.

Dr JOHN KAYE: Can you explain what the New South Wales Government is doing to promote safety in research institutions within the State of New South Wales with respect to the handling of nanotechnology materials?

Ms JODI McKAY: More broadly, what I can say to you is that the Government has a view that the most effective and efficient approach in this area, particularly when it comes to regulating nanotechnology—which is what you are implying—is about adapting our existing regulations at both State and Commonwealth levels, but also at the local government level. Those regulations, as you well know and as I have indicated, are across a number of portfolios and they are cross-jurisdictional. It is also about us understanding importation, manufacturing, industrial use, research and commercial.

Dr JOHN KAYE: But my question is only about research. I am concerned specifically about researchers in scientific institutions in New South Wales who are engaged with or working in laboratories where research is being done into nanomaterials. Is the State of New South Wales doing anything to encourage safer practices or to assess and manage risks?

Ms JODI McKAY: I will take you back to where we have already been, which is in regard to the national enabling technology strategy. That is about, importantly, looking at the health, safety and environmental impacts of nanotechnology, the regulations and the standards that are there currently, and what we need to look at. As part of that there is a public awareness and engagement program. It is important—and this was certainly in our response to nanotechnology in the upper House inquiry—that we agreed with the Standing Committee on State Development that we would not impose a moratorium on nanotechnology but we needed to find a balance going forward. As I have mentioned, that strategy is an important part of looking at the area that you have brought forward. Research is one area, but it is not the only area that we need to address.

Dr JOHN KAYE: Before I ask you my next question, I need to declare a personal interest in that I come from a household full of science and engineering educators.

The Hon. LYNDIA VOLTZ: Isn't your wife a teacher?

Dr JOHN KAYE: Yes, I said science and engineering educators.

Ms JODI McKAY: We need more science teachers.

Dr JOHN KAYE: Absolutely, and that is where my question goes. One of the programs of the office is to encourage more students to choose science and technology career pathways. Apart from Science Exposed and Science Exposé, what other activities is the office engaged in, in partnership with, or otherwise encouraging in order to increase the number of students who choose a science and/or technology career pathway?

Ms JODI McKAY: I will let either the director general or the executive director respond to this question as well because I think it is important that we cover this. One of the recent initiatives that the Premier has asked the Minister for Education and Training and I to implement was about working more closely with all the universities. We have had one-on-one meetings with the universities. While it is important that we focus on school education, it is also important that we understand what the pathways are to ensure that we have that support within the university sector. We have been working closely with the university sector to try to understand that. We also have a shortage of engineers, and this is something that the Chief Scientist and Scientific Engineer is working on also. I will hand over to the Acting Executive Director.

Mr BUFFIER: Just briefly before Kerry picks up on all the details, one of the areas we have focused on is recognising science and scientists. We have just recently had the Scientist of the Year awards, which received great publicity—five major awards and a special award for a teacher of renown in that space.

Ms JODI McKAY: From Orange, in fact.

Dr JOHN KAYE: A very fine teacher.

Mr BUFFIER: We are supporters of the Eureka science awards, the Australian Academy of Technological Sciences and Engineering [ATSE] awards. So in terms of raising the profile of science as a career, we actually commit quite a few dollars to that. We have a number of scholarship programs, which again encourage people to take up science in a research sense because there is good money available for them to undertake that research. We also chair within government the science agencies group, which is a group of various government departments that have a significant science component. One of the key programs in that is: How do we raise the profile of science, engineering, et cetera, in the public arena; how do we support that and have a concerted approach? Kerry probably has a little more detail than me and she may want to add to that.

Ms DOYLE: I think it is quite right and pleasing that you mentioned Science Exposed because it is the flagship event and is very successful—I believe around 1,800 students attended the last Science Exposed. It is coming up in late October, if you can be around. We also provide funding and facilitation support to an initiative called Young Tall Poppies. That is a leadership and championship type of role where we pick the best, brightest and most exciting young scientists who are also very strong science communicators. Part of their role is engaging with schools and the community to try to imbue a sense of the possibilities of science and encourage children to take up those careers.

As the Deputy Director General indicated, we have the science agencies group that has allowed us to work in a much more coordinated way with other government agencies and organisations that are also involved in stimulating science education. Our relationships with the Australian Museum and the Powerhouse Museum

are very significant relationships. We provide both funding and facilitation support to some of their activities, such as the Ultimo Science Festival for the Powerhouse Museum. We also participate in Science in the City and Science in the Bush, which are Australian Museum initiatives. We are proud long-term supporters of the Eureka science awards—again, it is about the idea of science being exciting and having champions who can communicate is part of the dialogue of getting people interested in science. The Eureka Awards mix science at all levels. As I am sure you are aware, there is the "sleek geeks" kind of approach and a really strong focus at the Eureka Awards on kids telling the science story very well.

The Hon. LYNDIA VOLTZ: I know it is not in your portfolio, Minister, but there is an excellent program for young girls to encourage Higher School Certificate students to do physics and science subjects as part of their Higher School Certificate studies.

Ms JODI McKAY: I very much appreciate your pointing that out. One of the areas we are struggling with is increasing the number of women in science, and we are trying to look at how we can tackle that.

The Hon. KAYEE GRIFFIN: Minister, could you update the Committee on the New South Wales Government's new Knowledge Fund and plans to invest in the future of science and medical research in New South Wales?

Ms JODI McKAY: I appreciate the opportunity to talk about this initiative. Over the last 12 months we have put into play a range of initiatives. This is very much about ensuring that New South Wales continues to lead the nation in science and medical research innovation. We want to ensure that we remain number one. As many people in this room would be aware, New South Wales researchers are at the forefront of developments in fighting chronic disease, tackling climate change, and enhancing technological solution. We recognise that we need a strong research base to continue to develop these new solutions, but we also need to build a workforce that is scientifically resourced, as Dr John Kaye has identified, and they need to have a range of skills in scientific and engineering disciplines. That is why we are working in partnership with industry and other governments to create opportunities for research and education. I would be happy to enlighten the community on any of those initiatives.

One particular initiative we have established to strengthen research in New South Wales is the New South Wales Knowledge Fund. This is about strengthening research, particularly in our university sector. Universities are the powerhouses of new knowledge and skills, and they are critically important to the future of New South Wales. For those of you who are not aware, New South Wales universities employ more than 26,000 people and contribute close to \$4.4 billion to the State's economy each year. We want to ensure they have the resources they need to pursue greater national, international and philanthropic support for research and development initiatives in New South Wales.

Under the New South Wales Knowledge Fund, universities can buy or sell State-owned land and the Government has agreed that we will invest the proceeds back into the Knowledge Fund. For example, a recent sale of land to the University of Sydney saw \$30 million of the profits from the land sale enable the construction of state-of-the-art research facilities at Westmead Hospital, and \$17 million of the proceeds make up the initial Knowledge Fund investment. The \$17 million initial New South Wales Knowledge Fund investment will help universities leverage greater funding through the Commonwealth's Federal Health and Hospital Fund, which provides money for health and research institutes to carry out capital works, research, clinical training and better cancer care.

All Knowledge Fund allocations are being overseen by the Knowledge Fund Advisory Board, which includes the New South Wales Chief Scientist and Scientific Engineer, Professor Mary O'Kane, and that fund will report to me. The fund is an innovative approach to driving investment in knowledge and infrastructure in this State, and it is a win for the higher education sector. I am sure that if you spoke to any of the Vice-Chancellors, they would tell you how valuable and important the fund is. Universities will benefit from being able to utilise the land value to borrow against, develop or sell. Proceeds of the Knowledge Fund will also be made available for the Government to co-invest in university research developments, supporting their bids for funding under programs including the Education Investment Fund.

This initiative is dedicated to supporting large-scale, collaborative programs such as capital developments that will grow the research workforce capacity and address State priorities. I would also be happy to inform the Committee about another initiative we have undertaken, which is about identifying what our State priorities are in research. The Knowledge Fund is in addition to other programs, including the Science

Leveraging Fund, which provides \$10 million each year to attract cooperative research centres and Australian Research Council centres of excellence funding to New South Wales. We have already spoken about the Medical Research Support Program funding, which has provided a significant amount of critical infrastructure funding to some 17 research institutes in this latest round. We have a commitment overall to research in New South Wales. It demonstrates quite emphatically that we are serious about providing industry and our universities with the support necessary to consolidate New South Wales's position as a leader in science and medical research well into the future.

The Hon. KAYEE GRIFFIN: Minister, you spoke about the Science Leveraging Fund. Could you give the Committee more information on that, as well as on the Collaboration Infrastructure Access Program?

Ms JODI McKAY: These are other initiatives I have touched on, and I appreciate the opportunity to elaborate on them to the Committee. As I said, the Government understands the important role that research and development plays in ensuring that New South Wales consolidates its position as a national leader in innovation. In 2006-07 New South Wales businesses spent more than \$3.8 billion on research and development, which was more than any State or Territory in Australia. The State's public research and development sector is also large, with 11 universities that conduct research in a wide variety of areas of State and national interest. The New South Wales Government is committed to supporting these institutions in their research endeavours.

The \$40 million Science Leveraging Fund is a prime example of the New South Wales Government supporting innovation in science and medical research. The Science Leveraging Fund specifically aims to boost research and development by increasing the competitiveness of applications by New South Wales research institutions for funding from the Federal Government or philanthropic organisations. We have touched on a number of opportunities that the current Federal Government has provided for the university sector and our research institutes which certainly were not provided under the former Federal Government. To date, the New South Wales Government has committed approximately \$32 million in funding to New South Wales research centres, helping them leverage around \$215 million in infrastructure investment from the Federal Government, and harnessing \$390 million in cash and in-kind support from philanthropic and private sector partners.

Our role is very much about supporting New South Wales Government bids for programs such as the National Collaborative Research Infrastructure Strategy, which aims to develop world-class research infrastructure and expertise that can be used by universities, government agencies and business; and the Cooperative Research Centres Program, which supports public research organisations undertaking applied research, development and education that must have real-world applications—in other words, it has to be a focus for researchers. We have been really keen to get across to New South Wales researchers the importance of translation, and the importance of being able to direct their research to real-world applications. There is also the Australian Research Council Centres of Excellence Program, which concentrates on pursuing projects that set the benchmark for international research excellence. We have a number of Australian Research Council centres of excellence here in New South Wales, and that is something that we can be rightly proud of.

The most recent round of Science Leveraging Fund allocations occurred in 2008-09. Funding in the sum of \$989,000 was granted to the New South Wales partners of the Centre of Excellence in Groundwater Research and Training. The centre is undertaking research to help improve our knowledge of groundwater, helping us manage this finite resource in a more sustainable way. And amount of \$600,000 was secured for the Sydney Institute of Marine Science. That particular program is about supporting marine research to improve the environment of Sydney Harbour and the entire coast of New South Wales and beyond. The Sydney Institute of Marine Science [SIMS] is a really good example of an organisation that has used the Science Leveraging Fund to secure great project support. The institute was also successful in obtaining an additional \$600,000 from the philanthropic group, the Ian Potter Foundation. This is our \$600,000 and their \$600,000, and there was funding through the Education Investment Fund of the Commonwealth, which provided \$19.7 million for capital development. Again I stress that that particular project is a very good example of what can be done by both levels of government and private philanthropic sources.

The Science Leveraging Fund has also allocated \$1.3 million to Westmead and Royal Prince Alfred hospitals for the acquisition and maintenance of facilities. These facilities are obviously capable of providing clinical trial grade cell therapy products in Australia that are suitable for human use. The Science Leveraging Fund has been an important tool that has very much allowed the Government to provide research infrastructure, support innovation, support skills development, and support education and training, and that is very much in line with the State's priority policy areas such as health, agriculture, information technology and climate change.

The Hon. HENRY TSANG: I have a question that I am sure Dr John Kaye will be most interested in. Minister, will you please inform the Committee on the New South Wales Energy Challenge Prize?

Ms JODI McKAY: Thank you. I think this is something that will well and truly establish New South Wales in this sector. As I have said, New South Wales has a world-class research sector with 11 universities and leading researchers in solar energy, astronomy and clean coal that is making significant progress in the development of green energy initiatives. We are serious about clean energy solutions for our State and we are committed to finding new opportunities to develop green energy solutions and green energy skills in New South Wales.

In June this year we held our first university business forum—I have spoken previously about the importance of engaging with our university sector and establishing our priorities—and that forum very much involved gearing business around communicating with the university sector and what their priorities are. As part of that forum the Premier announced approval of the first stage of the New South Wales Energy Challenge Prize. That is a \$5 million prize and it is an Australian first. It is about rewarding technological breakthrough, putting New South Wales firmly on the map as a national and international leader in cleaner energy. What it also does—and it is important for the Committee to know this—is that it signals to the rest of the world that New South Wales is serious about research and innovation and the role it plays in clean energy solutions not just for this State but also globally.

The New South Wales Energy Challenge Prize will focus the best minds from our State, the nation and the globe on clean energy alternatives for New South Wales. To be eligible for the prize, research teams must have two essential partners: a New South Wales university and a company with its headquarters in New South Wales. So the university must be in New South Wales and the partner company must also have its headquarters in New South Wales. The scope and criteria of the energy challenge prize is currently being developed in consultation with the engineering and energy sectors and with research experts in Australia and overseas. The challenge period will formally open in early 2010. In the meantime, if there are people—and certainly Dr Kaye may know of some—interested in knowing more about the New South Wales Energy Challenge Prize, they can contact the New South Wales Chief Scientist, Professor Mary O’Kane, because she is overseeing the structure of the energy prize initiative.

I am really pleased to be able to inform the Committee that through initiatives such as the New South Wales Energy Prize, the Government is working to stimulate innovation and, importantly, to help to ensure that our knowledge sector keeps pace with the needs of the New South Wales economy, the environment and the community, which one would naturally expect. Challenge prizes demonstrate their effectiveness in promoting innovative activities and pushing the boundaries of human knowledge to solve a specific problem or challenge in a defined timeframe. The guidelines are being established, and we very much look forward to seeing the high calibre of participants in this challenge prize that we expect to see.

CHAIR: Thank you, Minister McKay, and your advisers for the assistance given to the Committee today.

(The witnesses withdrew)

The Committee proceeded to deliberate.
