

Standing Committee on The Alberta Heritage Savings Trust Fund Act

Thursday, August 21, 1980

Chairman: Mr. Payne

9:07 a.m.

MR CHAIRMAN: Good morning, ladies and gentlemen. I'd like to welcome you to the first of our 1980 series of hearings under the auspices of The Alberta Heritage Savings Trust Fund Act select committee. On your behalf, I'd like to extend a welcome to our newest committee member, Mr. Oman. It's good to have Mr. Oman as a member of this committee. I look forward to his contributions.

I have distributed to the government members earlier today, and will now distribute to Mr. Notley and Mr. Clark, our tentative meeting schedule for the month of September. We'll advise you as soon as we can on confirmation of those tentative dates and times.

I'd like also to confirm that our schedule for today is as it appeared in the August 8 memorandum to you, indicating Mr. Russell at 9, Mr. Miller at 10:30, Mr. Cookson at 1 o'clock, and Mr. Planche at 3 o'clock. It will probably be a fairly full day, but if we find ourselves with time between ministers, I'd like to bring several items to the committee, one of which perhaps is a discussion of our scheduling of future meetings. I'd like to table the interim report of our consulting firm, Western Management Consultants, and have some discussion there. And then if time allows, some discussion as to the request that's come from the southern Alberta solar research group; if possible, I would like today to discuss that request, and in more general terms, I'd like to have a discussion of the principle, or the precedent, I suppose, of having these kinds of groups appear before the committee.

I've had a request for an adjournment around 4:15 or 4:30 from two of the Calgary members who have evening social functions in Calgary. The major variable of course will be the time the committee feels it needs Mr. Planche, but that will be an objective.

I'd like to confirm also -- has each committee member received a copy of the annual report of the heritage fund? I take from the silence that all have received it, and none is without. I regret that I am not able today to provide additional copies of the annual report, but have confirmed that I will be able to do so Monday.

With those preliminary and welcoming comments, then, I'd like to call on Mr. Russell to introduce his departmental officials to the committee, and then perhaps, if he feels it appropriate, to make a preliminary comment or two.

Yes, Mr. Clark?

MR R. CLARK: Just before Mr. Russell starts. I unfortunately have to leave to catch the 3 o'clock plane. Would it be possible perhaps to spread over a little bit of the noon hour as far as arrangements for the future are concerned, as opposed to doing that after 4 o'clock?

MR CHAIRMAN: My expectation is that we might be able to do it immediately following Mr. Miller, about 11:15. Going by last year's schedule anyway, we might be through with him in 45 or 55 minutes. But, yes, we will try to do that. Mr. Notley?

MR NOTLEY: I assume we'll probably be able to keep within this time frame. Looking back not to last year, but several years ago, there was one particular set of investments that took about five or six meetings, and I presume that should we run into that kind of situation -- hopefully not -- that would be the precedent we would follow.

MR CHAIRMAN: Of course. I don't regard this schedule as a cast-in-bronze handcuff -- if I can mix a couple of analogies -- but rather as a guideline. Okay?

MR NOTLEY: Fine.

MR CHAIRMAN: With that undertaking, then, Mr. Russell, please.

MR RUSSELL: Thank you, Mr. Chairman. The people from our department I have with me to help this morning: on my left, Sharon Prediger. She's a program consultant, and will help with the questions relating to the applied research programs. On my right, George Beck, Assistant Deputy Minister, finance and administration; further over, Don Brandell, director of budget control for the department.

By way of introductory remarks, they're mostly just refresher statements, because these projects have all been here two or three times before. They are all ongoing projects and are well under way. The three building projects, as investments of the fund, are the Alberta children's hospital in Calgary, which includes a school for handicapped children. It's a \$29 million fixed contract lump-sum project, is progressing smoothly; now over 75 per cent complete and expected to be finished in the second quarter of 1981. We recently approved a \$1.4 million parking structure for underneath one of the buildings, and that will be in addition to the figure I mentioned.

Also in Calgary, of course, attached to the Foothills provincial hospital, is the Southern Alberta Cancer Centre and Specialty Services Facility. It's probably about 60 per cent complete. They passed the 50 per cent mark last November, and work is progressing well there. We expect it to be finished in the first quarter of '81, although that may be a little optimistic because of the loss of time during the construction strike this summer.

The Walter MacKenzie Health Sciences Centre attached to the University of Alberta Hospital here in Edmonton is now 50 per cent complete. It's a project management arrangement, as well as the southern cancer clinic, and phase two has been approved in principle by the government, and work is just beginning on the preliminary programming stage for that. Its estimated cost is \$87 million in 1980 dollars, compared to \$151 million in 1980 dollars for phase one of that project. So that's becoming quite a substantial investment.

Insofar as the research programs, the cancer and heart components of the program, you'll recall that was to be a five-year investment of a total of \$50 million, roughly \$10 million a year; \$3 million for cancer projects and \$7 million a year for heart research projects. Needless to say, it's impossible to get exactly a \$10 million investment each year, split in that 3:7 thing, because of the nature of the topic we're considering, but the bookkeeping has managed to keep the funds separated. We're allocating the \$3 million a year for cancer, the \$7 million a year for heart research, adding on a 6 per cent factor, which is compounded for inflation each year for those funds, and if there are any roll-over or surplus funds from the previous year, those are blended in and added to the \$7 million or \$3 million allotment for the programs that year. So if you read your reports in detail, you'll probably see that there are figures quite different from \$7 million and \$3 million, but that explains how those global figures are arrived at.

The cancer projects have gone very well, and very straightforwardly, and we're getting good reports on those. The heart projects, because of their nature, were slower to start, and are tending to be more permanent in nature, because they involve the purchase of equipment and the installation of programs in hospitals, as opposed to the laboratory research projects on cancer. I'm only mentioning that difference because there is a significant difference in the progress stage of each of those programs. The cancer I think is substantially ahead of the heart component of that program, insofar as the investment of the funds is concerned.

Those yellow reports I gave you, Mr. Chairman, can be handed to the members at any time. It's simply an information progress report on the cancer projects. I think you'll be interested to see what kind of programs are being funded.

That concludes my opening remarks.

MR CHAIRMAN: Thank you, Mr. Russell. Mr. Clark.

MR R. CLARK: In looking at the report, and listening to the minister's report, I hear talk of the Alberta children's hospital at Calgary. It was my understanding when we approved that initially that it was the southern Alberta children's hospital. Is that the same hospital that's referred to in the back of the -- I forget what page back here -- about the southern Alberta children's hospital? What I really want to find out is, is this becoming an Alberta children's hospital, as opposed to a southern Alberta children's hospital? Quite candidly, I ask the question in light of the interest of a lot of people in the idea of a children's hospital here in Edmonton.

MR RUSSELL: Yes.

MR R. CLARK: Yes, it is?

MR RUSSELL: No, I was just . . . The original idea was that the two packages, that is, the two very specialized projects, the MacKenzie Health Sciences Centre and the children's hospital, as they are being developed under these programs, would provide a very excellent total package for health care for the whole population base. I suppose the reason for that was the traditions that had already been established. The former Red Cross crippled children's hospital, of course, had traditionally been a special children's hospital, particularly for the southern region, but also for the whole province, for children's diseases; as had the University of Alberta really been the major referral centre, I think, for complex or very acute kinds of specialized care that were involved. Neither of them can be regarded as general hospitals. Taking the two together on a bed count or on a population ratio, however you want to look at it, we believe it provides a really good total package, and for that reason we don't think it necessary to consider another children's hospital at this stage, before this first one is even finished. However, both metropolitan area planning councils are looking at their long-term bed need requirements in both metropolitan areas. In the case of Edmonton, I've referred the matter of a northern children's hospital to them, to see if that is something that ought to be included in the Edmonton metropolitan bed requirements, when that analysis is made. So you'll have all the hospitals in Edmonton examining the need for a children's hospital when that metropolitan bed study is done. I think they're going to be good studies. We're providing \$375,000 to each council to do those studies, so we want something meaningful in terms of long-range planning.

MR R. CLARK: Mr. Chairman, a supplementary question to Mr. Russell. Mr. Russell, on page 11 of the report, under "Alberta Children's Provincial General Hospital" and the reference made there; then, Mr. Minister, if we turn to page 34, it talks about the "Southern Alberta Children's Hospital" -- up at the top, under new health care facilities.

MR RUSSELL: Yes?

MR R CLARK: Are they the same?

MR RUSSELL: Yes, they are.

MR R CLARK: What do we call them officially?

MR RUSSELL: I think officially it's the Southern Alberta Children's Hospital.

MR R. CLARK: So there's no attempt to change that designation, then?

MR RUSSELL: No.

MRS FYFE: Mr. Russell, I wonder if you could explain for me how research projects are approved for cancer versus heart. Are they approved in the same fashion?

MR RUSSELL: The cancer projects are organized under the provincial cancer hospitals board, centred at the W. W. Cross building here in Edmonton, and they have a very good assessment panel of experts in the field set up. If an applicant has a project he would like to proceed with, he puts it to the panel, and they adjudicate and make a recommendation, which then works its way up. The final mechanical thing that happens is the signature from my office. The heart projects are done on a hospital by hospital basis, so that for instance the heart specialists of the University of Alberta Hospital would come up with a project that would be approved and recommended by that particular institution, and then on through the department. So in the one case it's more or less a project thing put in by people applicants; in the other, it is generated through the hospital. I'd like Sharon to elaborate on that, because that's something I've been curious about as well.

MS PREDIGER: The heart projects. In 1977 there was a group called the comprehensive cardiac advisory committee, a number of administrators of hospitals in Edmonton and Calgary. They reviewed a number of proposals from the hospitals, and made a decision to approve 11 of the projects at that time, now ongoing at seven different hospitals. So they were approved in '77 and it's their implementation we're dealing with now. They have not been changed since then.

The cancer projects are different. Some of them are enhancements of existing treatments, and then there are individual scientific research projects that are roughly two years each. We have 69 of those going on at the moment, and they are adjudicated through a panel of not just Alberta scientists, but from the United States and across Canada. There are roughly six referees on each project.

MRS FYFE: A supplementary question, Mr. Chairman. I wonder if you could give me some kind of idea as to how we evaluate the projects that are approved, and the difference in the approval processes of cancer and heart. Specifically, I would wonder what kind of evaluation we would have of the heart projects.

MR RUSSELL: I understand that one of the projects that has just been approved this year is an evaluation of projects under way. Cancer -- I don't know. Sharon, can you answer that?

MS PREDIGER: You're quite right about the evaluation project. For the hearts, it is being run by the Faculty of Medicine at the University of Alberta Hospital, in co-ordination with the directors of each of those projects. On the other hand, the cancer projects are being evaluated by the scientific community at the University of Calgary and the University of Alberta here. The first reports will be coming out very shortly, since the first projects are soon to be terminated.

MRS FYFE: Two short questions, Mr. Chairman. How do we ensure that there isn't any duplication in approval of projects between the heritage medical research foundation and what might be approved under these two projects?

MR RUSSELL: I don't know, Myrna. There are two kinds of different projects, of course. One is basic or pure research, and the other is applied. In the case of the applied, in heart particularly, it becomes pretty easy to identify them, because they're almost on-line programs within hospitals -- if I can put it that way -- that deal directly with the patient, as opposed to the lab or the classroom. Because the medical trust research board hasn't dealt with any projects yet, there hasn't been that communication. I don't foresee any problems, but when you ask me how we ensure it, I don't know, because it hasn't happened yet. Sharon, you may want to add to that.

MS PREDIGER: The only other comment is that the projects from the cancer clinic particularly are complete in themselves. They are two-year funded, and at that point an end is put to them. I don't think they would carry on to the other funding.

MRS FYFE: Okay, that's fine. One last question to Sharon, if I may. With \$3 million going to projects related to cancer and \$7 million to heart per year, have you found that there have been sufficient funds for cancer research, or are there a lot of projects that could or should be approved?

MR RUSSELL: I think there's been enough. I think each year there's been a rollover of surplus funds from the previous year. The funds have been sufficient. It's interesting in that report -- when you get it, you'll see that a pattern is forming. In the first year, there was an incredible number of applications and a high number of turndowns. I believe in that first year it was apparent that people were putting everything in, and then once the first year was by and the ground rules were known, the number of applications that were turned down as a percentage of those received became much smaller. So it seems that the medical and scientific community is aware of the game rules, and we haven't been asked for any money. Soon, I suppose, we're going to have to consider whether to extend the five-year program another five years, because we're in the fourth year now.

MR NOTLEY: Mr. Chairman, just to follow up on Mrs. Fyfe's question, with respect to the applied health research and the heritage foundation, is there any connection between the two, in terms of full-time staff? I notice the one is under the purview of the Provincial Treasurer, and the other is under your responsibility. I wonder to what extent there is co-ordination in the actual day to day working of the two.

MR RUSSELL: The only liaison so far -- and it's an important one -- has been the role of Dr. Jack Bradley, who now has been hired by the medical research trust as its permanent executive director. Of course, he had the many years' experience through the commission and through his experience with the applied research programs in the heritage fund, having that good background. I have an exchange of correspondence with Dr. Bradley, asking for his opinion on whether, at the end of their five years, we should terminate these two programs we're discussing, and simply let those kinds of activities blend in with the medical research trust. His advice was not to do that. He sees them as two different kinds of things, and would like this committee and the government to make the decisions based on not blending them. So there has been that kind of communication. I don't know what liaison there will be at the ministerial level. The regulations for the Act will name the minister responsible for reporting and receiving the reports from the medical research trust, and that hasn't been determined yet.

MR NOTLEY: Just to follow that, if I can, Mr. Chairman. Mr. Minister, you indicated that Dr. Bradley had said they should be kept separate because they are somewhat different, but in terms of the public understanding, in terms of changing to avoid the problem of possible overlapping that Myrna Fyfe raised, and in terms of accountability to the Legislature, it seems to me that there is a very clear case to have the two really working together and responsible to one minister. So I would be interested in Dr. Bradley's view as to why there is a good and proper reason for separating the two.

MR RUSSELL: I think he's looking at it scientifically. Number one, these applied research programs, particularly the heart, are almost ongoing hospital functions, whereas they perceive their basic or pure research, I think, to be carried out mainly in the lab and the classroom atmosphere, if I could put it that way. He sees a need for both, and that's a very popular opinion. I see the need for both, too. If I could make up an imaginary example, the medical research trust might, in the realm of heart disease, come up with a concept in the pure research technique that could provide a cure for something, and then want to see it tried in the hospitals. Then that's something that a particular hospital might apply for as an applied research project. At that stage, funds out of this vote would then be used to buy equipment, to hire the extra nurses, to do those kinds of things. That's the kind of investment that's made out of these funds. They're buying equipment, making renovations to hospitals, moving walls, putting in electrical services, and hiring extra nurses in order for these techniques actually to be carried out on patients, whereas the medical research trust would not be doing that.

MR NOTLEY: Then I take it that Dr. Bradley's recommendation is that when we complete the five years of this program, we would then invest for at least another five years.

MR RUSSELL: He didn't comment on that, and I think it's going to have to be up to the Legislature to decide whether to do that. There is an opinion from some of the hospitals that they would like perhaps to see the heart component simply blended into their global budgets, because it's ongoing. Another school of thought says, no, it should be kept separate and identified, and not blended that way. We're still considering that before we bring a recommendation forward.

MR R CLARK: Mr. Chairman, just looking really quickly at some of the projects that have been approved. Under section one, I think it's number 11, Mr. Minister: the objective is "upgrading the equipment in the Calgary Cancer

Clinic, Department of Radiation . . . and support of relevant staff". I guess I have some real difficulty in my own mind in seeing how upgrading equipment and upgrading of relevant staff is research. To be very candid about it, that seems to me the kind of thing that should be coming out of the normal operating budget, as opposed to -- if I can put it this way -- disguising it as research.

MR RUSSELL: You're quite right, because I suppose, in the first place, to take research funds out of the capital investment division of the Heritage Savings Trust Fund was a decision that could have been debated; for example, is research a capital investment? Then the way that applied research was described or defined, on the advice of many people, includes capital changes or improvements to existing hospital facilities; it involves the supply and purchase of equipment necessary to carry on programs; it involves salaries and wages for personnel to use that equipment, and use it on patients. I agree with you, it is argumentative. That's the question in front of us now from some hospital boards. They're saying, why do we have to keep two sets of books? Because if they have four heart patients in an intensive care unit, and two of them are funded by heritage funds and four of them by global budgets through the General Revenue Fund, it becomes an academic question, I suppose.

MR R CLARK: But, Mr. Minister, I think the average person across the province hardly expects this research money that was announced by Mr. Miniely -- when? about '75, '76? -- to be used in upgrading equipment or moving walls. I think if you and I were to do a survey of 10 people on Jasper Avenue, or 8th Avenue in Calgary, perhaps few, if any of them, would expect you to be using this research money for this kind of expenditure. What portion of the money that was spent last year under the guise of research has found its way into equipment, moving walls, electrical outlets, and all these things that, let's say would fit into this hazy area, Mr. Minister? Because I don't think it's too hard to imagine with some precision what the average person would consider, let's say, cancer research.

MR RUSSELL: Yes. That's really a tough question to answer, because we could take the other point of view, and through the global budgets of the hospitals, I suppose, do everything, respond to all the doctors' requests, buy them all the equipment, move all the walls, hire all the staff that was necessary, and do everything. As you know, we don't budget hospitals that way. We try to provide some kind of confines around their operating budgets. The purpose of these funds is to permit deemed worth-while projects that have been reviewed and recommended by assessment panels that I think are fairly prestigious, to proceed. In many cases, that involves buying updated equipment, some new thing that perhaps has been developed at MIT or some other source of sophisticated equipment. So it permits them to get something that they would not be able to do under ordinary circumstances under their global budget. When you ask what portion of the funds have been spent that way, I don't believe I have that figure. But we can certainly figure it out and bring it back to you at a later meeting.

MR R CLARK: Is it possible for you to give us some kind of ballpark . . . Are we looking at perhaps 2 per cent being spent that way? Are we looking at 50 per cent of it?

MR RUSSELL: Well, this report is broken down into four sections. One deals with research equipment, starting on page 34. That gives a compilation of just the purchases that are straight equipment, but there are other projects

where it involves supply of equipment as well. It's just a matter of taking it out and doing the arithmetic, but we can get those figures back to you.

MR R CLARK: Then you have no idea whether it's 2 per cent or 50 per cent?

MR RUSSELL: No. I would think it would be fairly substantial, because some of this equipment is pretty expensive.

MR R CLARK: So it's likely to be closer to 50 per cent than 2 per cent.

MR RUSSELL: I don't know. Sharon, do you know?

MS PREDIGER: Maybe a third, a little less than that, simply because some of this equipment that was bought is also used in research. So it doesn't provide a purely therapeutic function. It also provides some of the sources from which research was done; for instance, the data collected from treatment therapies, treatment ratios, are used in follow-up studies, so in fact it is used in research as well, it isn't just purely treatment.

MR R CLARK: So to make it pretty simple so I can understand it, what you're telling me is, perhaps a third of the money, a third of the \$3 million a year -- I can appreciate that is a ballpark figure -- is going into equipment.

MS PREDIGER: No. Equipment and personnel.

MR R CLARK: Okay, equipment and personnel -- as opposed to what many people would see as the pure research function.

MS PREDIGER: Some of which is used in pure research.

MR R CLARK: Okay, about a million dollars a year.

MR MUSGREAVE: Mr. Minister, I have one question that I've often wrestled with. Do you have, or have you had any requests for research into changing styles of living, rather than research into trying to treat the end causes of our living styles?

MR RUSSELL: I have directly, not through this fund. We receive those on an ongoing basis.

MR MUSGREAVE: Would you see this falling in this area, or rather in Dr. Bradley's research foundation?

MR RUSSELL: No. I think that's a function of the department and government as a whole. As a matter of fact, we've spent a fair amount of time, as have other provinces, looking at what might be an attractive preventative medicine program. That's just a phrase that's used to describe the things you're talking about. I don't particularly like the sound of it; I think there's a better phrase we can find.

MR MUSGREAVE: So we get away from building massive buildings and expensive equipment and get back to basic things, like why are we into these sorts of facilities.

MR RUSSELL: Exactly. I had a doctor come in who made a fascinating comment. He puts it in a capsule. He says, it's a lovely and noble thing to spend all these millions on finding a cure for lung cancer, but you'd be far better to

find a cure for smoking, to keep people from smoking. That stops the main source of lung cancer from happening. So that's an oversimplified thing, but it put it forward pretty dramatically.

MR MUSGREAVE: This is the concern I have. We don't seem to be bringing enough into that area. We seem to be locked into the other.

MR RUSSELL: Well we now in the department and many other provincial governments as well, are looking at that, because I think we have to get into it more.

MR R SPEAKER: Related to that, Mr. Russell, in the rural areas, a lot of people talk about cancer caused by sprays, by certain inducements into animal and poultry feed, that type of thing. I haven't looked through all of the studies. Is there any kind of research being done on those particular areas, relative to cancer?

MS PREDIGER: There are roughly 10 projects looking at some of the causes of cancer from broad points of view. Some are in fact drugs.

MR R SPEAKER: Drugs, pesticides, sprays, that sort of thing?

MS PREDIGER: Sorry. Yes, there is one at the moment.

MR R SPEAKER: But (inaudible) various quantities used in feeding beef animals, poultry, that type of thing?

MS PREDIGER: There isn't one in this report, no.

DR BUCK: Mr. Chairman, to the minister. It's always a problem when you have too much money in funding these projects, that people become entities and they think they're going to start right from ground zero and do all the cancer research in the world right here in Alberta. Just how much communication is there with all the other parts of the world. As the people doing the research are doing their work here, how much co-operation is there, and are we just starting from ground zero? Are we setting up our own little empire, or are we working with the other people that are advanced in these studies?

MR RUSSELL: Well, they work with other people, and as Sharon mentioned earlier, there are some international people on the review panel. There's a certain amount of self-discipline within the professions themselves, too, because they exchange views through their medical journals and research papers. I think the research community around the world has a pretty fair idea of what each of the others is doing.

DR BUCK: There is always that danger of building empires, be it in any field.

MR RUSSELL: Sharon just told me they publish our reports in five major international journals, and others do the same kind of thing, too. There's a pretty good exchange.

MR NOTLEY: Mr. Chairman, I want to get back to this question of co-ordination again. We have different programs in different departments generally dealing with the area of health. We have the Occupational Health and Safety, for example; we have the applied research, the research that is done independently of that by the Department of Hospitals and Medical Care, and the research foundation. The question that comes to my mind is, in determining new applied

research, what kind of overall co-ordination is there? Let me give an example. Mr. Speaker raised the question of the impact of sprays on cancer. Let me put another one, the whole question of environmental health, safety in the workplace, health in the workplace. A great deal has been done in Europe, and I think we can learn much from what they've done. To what extent, as we look at new projects, both for the endowment as well as applied research, are we going beyond heart and cancer to the larger question of health?

MR RUSSELL: Well, that's a future decision. This is strictly related to heart and cancer projects, and has some pretty firm guidelines on it insofar as the assessments that are made. I don't know where the new medical research trust might be going. They're just in their first year and getting organized. They'll certainly be much wider in scope, but much different. These are pretty basic programs. These have zeroed in on the two most common causes of death. I think a reasonable amount of money was designated for applied research over a five-year period. I keep using the terms "applied" and "pure" because of the difference that is important. Mr. Clark referred to it, that the man on the street is probably going to have trouble understanding that. But these two programs we're talking about are pretty limited. We've seen what inflation has done. At the time these were started, I think that seemed like a lot of money, but in today's terms, it really isn't. I mean, \$50 million over five years isn't a lot of money today.

MR NOTLEY: I guess the point of the question is not really to argue what has been done. I think what has been done has been quite useful, and I think we as a committee recognize the distinction between applied research and direct research. But the point of the question is to probe just where we are going in the future, and what kind of co-ordination there is going to be. Eventually, this committee, in a few weeks, is going to have to look at recommendations to be made to the government, and on the question of research, it seems to me we do have different departments of government doing their own little research. And I wonder what kind of co-ordination there is, so that as we have to consider another five-year program, we can say, all right, perhaps an environmental health area is one thing we should consider. But what kind of relationship, for example, is there now between Mr. Diachuk's office and yours on this type of thing?

MR RUSSELL: There is a pretty good relationship between the two offices you just mentioned. And you're quite right in your comments about the broad range of research that we do have. Most of it, of course, is co-ordinated through the Alberta Research Council, and through Mr. Musgreave's office. The other kinds of things you mentioned are usually handled, co-ordinated, and generated through the appropriate standing or select committee of Executive Council. We have our research and science policy committee and our social planning committee. Those are the two major ones. When it gets into the question of funding decisions, those things are brought forward to the priorities and planning committee of Executive Council, and thence they make their way up through the caucus and the Legislature. So I think there is pretty good interdepartmental co-ordination at that basis, insofar as generating programs or making sure there is no unnecessary duplication. The only thing I can't answer is liaison between the new medical research trust and this program, because simply nothing has happened yet with the trust that we can look to. They know they're different from these, but other than that, there hasn't been any communication that I'm aware of.

MR STEWART: I was wondering if there is any liaison between the federal government and the provincial government, and any farming out of research, due

to the fact that chemicals, particularly a lot of agricultural chemicals that have a potential health hazard, are the responsibility of licensing in the federal government; if any of the research relative to this is farmed out from the federal government to the provinces, or whether it's strictly done in their own research departments? And if we run into a duplication of research, if we were to take the responsibility of researching some of the effects of these products on health in this province. I was wondering if there is any co-ordination from that point of view.

MR RUSSELL: Yes, there is good co-ordination. As a matter of fact, at our last annual meeting of health ministers for Canada, that was an agenda topic, particularly the agricultural chemicals and pesticides put forward by the maritime provinces to the federal government, and there's pretty good co-ordination there. Again, that is not something that would happen here unless it's a particularly identified program in the yellow book.

MR SINDLINGER: In response to Mrs. Fyfe's first question, how do we ensure there is no duplication in your department, you said that you didn't know if there was a control mechanism. Now in response to questions coming up in regard to the communication between various departments, you say that there is good communication. I wonder if you might elaborate a little more on the control mechanisms you have within your department to ensure there isn't duplication or lack of communication.

MR RUSSELL: Tom, you've got me, because I don't know what I said I don't know to.

MR SINDLINGER: Well, if I can reiterate for you, the third question was, how do we ensure there is no duplication within the various programs that you have funded by the heritage fund. And the response was, I don't know, I don't know if there is a control mechanism. What confuses me is that now you're saying there is good communication between various government departments. It surprises me that there's better communication between the various departments, but not good communication within your department.

MR RUSSELL: Well, I think you're putting a different interpretation on the words than I would have. I don't know how they can control whether there's duplication on these trust fund research projects. I have to assume that through the adjudication panel and the method of international communication that I mentioned, that that's fairly well controlled. But when I answered Mr. Notley's question about interdepartmental communication, I tried to describe that, and I think that works quite well.

MR SINDLINGER: But you do agree that some sort of control mechanism after the decision has been made to expand funds is necessary within the department to ensure that they're applied in the manner in which they're intended to be?

MR RUSSELL: Maybe (Mr. Beck) could elaborate on that, because, if I understand you, there are the Treasury Board directives as to what guidelines are in place, what percentage of funds can be used, for example, to purchase equipment. This came up when Mr. Clark was speaking. Is that the kind of thing you mean?

MR SINDLINGER: We can start with that, if you like.

MR BECK: Okay. Each of these projects now requires a separate accountant. We receive audited statements each year on all projects. In the case of the

cancer, it's one audited report, because all of the projects and programs are handled through the provincial cancer hospitals board. In the case of the applied heart research, each hospital produces a statement of and for the specific heart project. We have laid down the accounting rules. Generally, incremental costs are associated with the project. The Treasury Board has laid down guidelines as well on the qualification of certain aspects. For instance, in purchasing equipment, which was questioned earlier, over 50 per cent of the equipment must be used for the applied research project. There can be use of the equipment for normal hospital programs, but the 50 per cent rule must hold. We have program people, such as Sharon, dealing continually with these hospitals on these programs. So we feel there are various controls in place within the department on these projects.

MR SINDLINGER: If I may, you've told me that your department adheres to generally accepted accounting practices and principles, and I can understand that. But I still have a great deal of confusion in regard to the response to the third question posed by Myrna Fyfe; that is, how do you ensure there is no duplication between the different projects you undertake. It seems to me that's a pretty important subject area, because other people in the committee have touched peripherally on that subject as well. I would suggest that as a committee we give more consideration to that, and perhaps in our recommendations, give consideration to recommend that there is some mechanism in place to ensure that there is no duplication within your own department, or something like this. Or, if you go back and find out there is some way to ensure that doesn't (inaudible) appropriate in itself.

MR RUSSELL: I see what you're getting at now. I don't know how it's done. I assume it's done, through those two . . . In the case of cancer, that adjudication panel is listed by name and location in the front of the book, so they're the ones who review it. In the case of the heart, Sharon mentioned how those are approved. And also in the case of the heart program, as a project itself, we have this assessment thing under way. And if there has been any inadvertent duplication or any important gaps left out, presumably the evaluation project would identify that. I would certainly hope so. But I personally don't know how they do it.

MR SINDLINGER: I'd just like to suggest, if I may borrow from the medical profession, that preventive medicine is a lot better than remedial medicine in cases like this.

MR RUSSELL: Yes.

MR KNAAK: Mr. Chairman, I just wanted to get back to the question of research. I guess I'll end up with a question at the end. I'm wondering if any research is possible under the programs, as they were initiated some time ago, in emotionally induced illness. And that gets back to preventive medicine. I guess it's well known that a Canadian -- I think his name is Professor Leakey out of Montreal -- is one of the world leaders in stress-related illness. I'm wondering if any programs out of the heritage trust fund are funded into that kind of research. I ask that because if there are some medical doctors of the opinion that 60 to 70 per cent of all illness is emotionally induced -- and that, of course, relates to stress. So I'm wondering if there is a research program in Alberta that relates to that.

MR RUSSELL: I don't know if there is in Alberta, and I don't know if there is under this particular program. Do you know answer to the second, Sharon?

MS PREDIGER: In cardiac rehab program at the Calgary General Hospital, they are attempting to find someone to look at stress in cardiac disease, but in fact they can't. They've been advertising across Canada and in the United States, and haven't been able to find anyone who's interested in that field. So it's been identified as a need, as you suggested, and they've attempted. The only other one, in relation to cancer, is looking at the stress that the cancer person has; those simply having cancer, as opposed to, does it cause cancer. One project is looking at that.

MR KNAAK: But there is no general study on stress and how stress manifests itself in disease? I'm not just talking about cancer and heart. I'm talking in general. And has any study been done on whether -- I'm thinking about Mr. Sindlinger's suggestion about increasing sports activity and funding it -- to what extent athletic individuals have less disease than others. In other words, does the idea of 'participaction' that we've heard so much about; in fact, do people who become more active physically have less stress and disease? Is any research done in an area like that?

MS PREDIGER: Only part of your answer, I presume. In the cardiac -- and again, we're only funding the two areas, so I can only talk to them. But in the cardiac projects that relate to coronary care units, three units have stress testing, exercise fitness components to their programs, and they are in the process of being studied and followed up. But that's longitudinal; that could take some time.

MR KNAAK: I guess the last one is a question. Is it within the scope of this committee, Mr. Chairman, at any time to make specific recommendations such as those, or is that left to the decision of the departments? In other words, can the committee only make general recommendations with respect to research in health, or can we get more specific at some point in time?

MR CHAIRMAN: Well, having due regard for the recommendations that were tabled by this committee last fall, we've had both kinds; some are general and some are very specific. So my answer is yes, but perhaps further discussion might be appropriate when we reach the recommendation and development phase.

MR R CLARK: Mr. Chairman, back to the minister. Mr. Minister, on page 42 of the handout, could you interpret to us just exactly what that means?

MR CHAIRMAN: Could I ask you to repeat the question, Mr. Clark?

MR R CLARK: Yes. I'm asking the minister to look at page 42 of the report, entitled "Provincial Cancer Hospitals Board, Alberta Heritage Savings Trust Fund Schedule of Cash Flow Projections and Expenditures". Very simply, I look at it, and it seems to say to me something like, 71 per cent of the total money to be spent in the year is going to be spent on administrative and service projects and programs; when we get down to equipment, about \$0.5 million, and \$1.2 million in research projects. I'd like the minister to interpret this, looking back to the question I asked earlier about how much is being spent on equipment.

MR RUSSELL: That's right. If you total up all the projects that were approved for the fiscal year '79-80, and break them down into those components, that gives the total of \$4.5 million, through project approvals. Of that, \$3.5 million was in fact spent. But for instance, to go back to your first question, where does the \$2.7 million come from and why is it so high, we have

to go back through each of these projects and take that component out of each project.

MR R CLARK: So what you're really saying, Mr. Minister, is, to use the old math, about 71 per cent of the money approved for expenditure was for administration and service projects.

MR RUSSELL: Yes.

MR R CLARK: And about \$1.2 million of the \$4.5 million was for actual research.

MR RUSSELL: Yes. But be careful of the definitions, because you have to go .

MR R CLARK: I suggest you be careful.

MR RUSSELL: Yes.

MR R CLARK: Because frankly, I get the pretty disturbing feeling that where I thought we were spending a sizable amount of this money in plowing some new ground in Alberta, it seems to me we're plowing an awful lot of money into equipment, 50 per cent of which can be used in the day to day operation of hospitals. And that equipment is taking about 71 per cent of the money that's being allocated.

MR RUSSELL: I mentioned earlier this morning that one of the things in front of us is whether we ought in fact to continue these particular programs for another five-year component, or whether we ought to just roll them into the global budgets of the hospitals. I think they were a good start in applied research. I hate to keep emphasizing those terms, but it is important, because I think there's an impression here that money is being used for exotic laboratory research. It isn't. Most of it is being spent by practising doctors and scientists within existing health care facilities. That's why, particularly in the case of the heart -- this is just a summary for cancer -- but in the case of the heart program, it's becoming increasingly difficult, through the merging of these things, to keep them separate. That's why that pressure is there by some hospitals simply to blend them in. That's one of the decisions we're wrestling with.

MR R CLARK: One of the areas the committee should be ready to grapple with.

MR RUSSELL: Yes. We would appreciate the recommendations of the committee on this, because I think you can see the kind of thing we're getting into, just the example we pointed out.

MR R CLARK: A supplementary, Mr. Chairman. Earlier, Mr. Minister, reference was made to the fact that as long as equipment can be used 50 per cent of the time, let's say in a cancer research project that had been approved, then that equipment is purchased. And it obviously wouldn't be sensible having it sit there and not being used. So if I can use the term, this becomes a supplementary funding situation for hospitals. Then I suppose we get to the chicken or the egg question, don't we?

MR RUSSELL: Yes.

MR R CLARK: As to whether a hospital decides what project it can't get under its operating budget, so it decides, well, we like this piece of equipment; now if we can get someone to do some research that would use this equipment, we could perhaps get the money out of this area here. Knowing the way all people operate -- not only hospital boards or anyone else dealing with governments -- that must be a very practical problem you have to face.

MR RUSSELL: I suspect some of that goes on. In fact, I've talked to individual doctors who I know have gone to their department heads, their boards, with a project they really feel is very worth while and would be beneficial, and the board would turn it down for budgetary reasons, and so the doctor says, well, maybe I can work this up into a heritage fund research project. And if it meets the parameters and gets through the assessment panels and can meet Treasury Board directives, it would probably be approved. Then you come into this Catch 22 situation; once it's approved, then the board says, why do we have to keep accounting them as separate projects; let's just roll it into the global budget of our institution. So it's a difficult problem to deal with. I agree.

MR PAHL: Mr. Chairman, to the minister. I wonder if you could indicate, given sort of your projections for the next few years, whether the sort of ratios we're now faced with in this overhead and support category, versus what might be more clearly identified as the research hardware and research people; whether those ratios will continue, and if the department has any insight into what the experience has been in other jurisdictions with similar sorts of research efforts. Maybe it's the same question.

MR RUSSELL: I don't know. I'd only be guessing.

MR PAHL: Well, for example, you only really have to build the building once. There are some one-time expenditures in here I notice.

MR RUSSELL: Well, no, it's difficult to answer because of the ongoing and seemingly explosive situation with respect to developments in this field. Well I can pick out specific examples where in one year you think your expenditures on that kind of thing are at an end and they're really just beginning. Our Research Council is dealing now with a project assessment that's probably going to run \$75 million or \$80 million for one very limited program, and I don't know whether Alberta ought to be getting into that kind of thing now or not. Cat scanners are something that at one time if Alberta had had two, we'd have considered ourselves very well off as an area of Canada for our population. I've now got in front of me a request for a fourth one for the city of Edmonton. So there's a non-ending appetite I suppose for these kinds of things. That's why I find it difficult to answer your question.

MR PAHL: In other words, this is a frontier activity . . .

MR RUSSELL: Yes.

MR PAHL: . . . on a world scale in effect, and the scope of it is probably limited by the resources society is willing to dedicate to it rather than the light at the end of the tunnel. Is that a fair precis?

MR RUSSELL: Yes, I think so. And I'm just giving an answer based on opinion now rather than facts.

MR MUSGREAVE: Mr. Minister, I just want to go back. Maybe I could amplify what you were just saying. On page 11 there's a \$928,000 item there. I just wanted to ask you: is that included in the summary page on page 42?

MR RUSSELL: I'll let Mr. Beck answer that.

MR BECK: I haven't checked the arithmetic of this report, but I believe that is correct. I think that word "administrative" as it was used a little earlier is a bit misunderstood. If one looks at the summary on page 10, I guess it would be, when we talk about administrative and service projects and programs, we see that they're defined as to improve services, improve clinical research, assess the research programs, and administer the program. And when you look at page 11, yes, there's \$928,000 which is the purchase basically of linear accelerators -- very high technology equipment -- and it's under an administrative section.

MR MUSGREAVE: This is what I wanted to bring out. I just wanted to make sure that \$928,000 was in there, because that's what the minister was talking about. If and when you decide to purchase a linear accelerator, then you're looking at the \$75 million. The \$900,000 is more or less to determine whether or not we should be getting into that. It's the same program.

MR BECK: There is equipment in that \$928,000, but I would suggest the bulk of that money is the purchase.

MR MUSGREAVE: But my understanding of a linear accelerator is a very massive piece of equipment.

MR RUSSELL: I don't think this is the same one.

MR MUSGREAVE: It's not the same one. Because it's the same doctor and director and everything else and I just wondered.

MR RUSSELL: This was approved in 1977.

MR MUSGREAVE: I notice that. This was why I wondered.

MR BECK: These are sophisticated x-ray machines.

MR MUSGREAVE: Maybe the use of the words "linear accelerator" in there is not right then.

MS PREDIGER: That \$900,000 included the purchase of a linear accelerator, yes, which last year would be around \$600,000 or \$700,000. That figure -- I'm sorry, that's one of my colleagues departments.

MR NOTLEY: I just have one question for Mr. Beck. On page 42 I wonder, from the amount expended, which one of those figures is incorrect, because it doesn't add up to the \$3,500,000. One of the five figures is incorrect. Perhaps we could get that information.

MR BECK: The arithmetic doesn't work.

MR NOTLEY: The arithmetic is using old math and new math; the arithmetic still doesn't add up. I'll leave that with you.

MR BECK: This was a report of the cancer hospitals board and those departments.

MR NOTLEY: I think this information -- if you could get back to the committee. But we should at least have accurate information.

MR R CLARK: Mr. Chairman, just on the same line, could I ask Mr. Beck or the Minister would it be possible to get a breakdown like we have on page 42 for the cancer research in its broadest terms for health research also, so we get some kind of an idea as to the breakdown of the heart research.

MR RUSSELL: You mean the heart?

MR R CLARK: Yes, something comparable to this, Mr. Minister, so we'd be able to do some comparisons. Could you make it available, Mr. Chairman, to all the members and then we can come back to it.

MR RUSSELL: Yes, we have that information, Bob, put together in a different way, but we can assemble it and get it to you.

MR CHAIRMAN: Mr. Russell, could I ask that you make that available to me, then I will arrange to have copies distributed to members of the committee.

MR RUSSELL: And we'll get the clarification of these cancer figures for you too.

MR CHAIRMAN: Mr. Russell, if the Chair could be permitted a question. For the past two or three years in High River there has been functioning a theoretical cancer research institute. I regret I can't recall its name or indeed its principals. But I have seen photocopies of some of their research papers in international journals. And I have also seen photocopies of quite laudatory correspondence from international figures such as Dr. Linus Pauling. To this point I believe it's been entirely funded from the private sector, primarily through personal charitable contributions of Albertans who have been interested in cancer research. My question is: is there a difference between theoretical cancer research and pure cancer research. And if there is an important difference, is the Alberta government funding any research in the so-called theoretical cancer research area?

MR RUSSELL: Well I'd have to back through the list of these projects and see if any of them meet a theoretical definition. I would guess that they wouldn't.

MR CHAIRMAN: Would not or would?

MR RUSSELL: Would not. That's the kind of pure basic research that would be carried out by the medical research trust. These are applied research projects, sort of the -- well, we've gone over that before. I wouldn't think so, but we ought to check the description of all these projects and see if there are any that meet that description. Sharon, you wanted to add to this.

MS PREDIGER: I'm not sure what you mean by "theoretical".

MR CHAIRMAN: I regret that I cannot explain the difference either, but the name of that institute -- I forget its first name, but it's something like Highwood -- is theoretical cancer research. The journals that I have read or the photocopies of selective pages consistently use the words "theoretical"

cancer research. I'm advised -- but I do not understand the distinction -- that there is an important distinction between the kinds of cancer research now being undertaken in the province and "theoretical" research. I'm simply seeking assurance that in fact there was not such a distinction and that it is not being overlooked in Alberta.

(15 seconds not recorded)

MR RUSSELL: . . . could have been cancer incidence, an historical perspective study of Alberta Indians. Now I suppose that could be called a theory, because their change in lifestyle will induce or promote incidence of cancer. That could be a theoretical study I suppose, but I don't know.

MR CHAIRMAN: If I may purport a supplementary. At such time as the medical research foundation is functioning, do I have it correct that that foundation will have a primary concern for pure research as opposed to applied research which is the subject by and large of the kinds of projects we've discussed today?

MR RUSSELL: Yes. I think that was made quite clear when the program was introduced and the legislation went through and by the very nature of the international review panels and the triennial reports that are coming back to the Legislature and the referral then of the financial statements to this committee that that will be quite different from these programs that we're talking about.

MR R CLARK: Mr. Chairman, earlier reference was made in the committee to the Heritage Foundation for Medical Research Endowment Fund and recognizing, Mr. Minister, it hasn't got off the ground to any significant degree yet, but I notice on page 9 of the report reference is made to encourage Albertans to pursue careers in medical research. What I would like to know is: is there as yet any program of financial assistance to desiring Alberta students or official Alberta students from the endowment fund, because reference was made here this morning to the fact that starting in the area people simply aren't available. I hear that quite often from people both at the University Hospital here and the Foothills in Calgary that people simply aren't available. Have we made any strides in that direction?

MR RUSSELL: I'm going by memory, but I don't think any has been dispersed yet. It's my memory that the trustees of the foundation can fund scholarships and fellowships.

MR R CLARK: But they have not yet.

MR RUSSELL: No.

MR R CLARK: Mr. Chairman, to the minister. When is it logical to expect that the trustees will have the fund off and operating? Are we looking at another six months? They've been in place -- what? -- about four months now.

MR RUSSELL: Yes, I would think the times you mentioned are probably about right.

MR R CLARK: Just one other question. It isn't related. You likely won't be able to have the figures available today, but I'd appreciate your making them available to the Chairman so we could have copies. I'd like to know how much

heart research funds have been made available to Dr. Tal Talibi or any of his associates.

MR RUSSELL: \$20,760.

MR R CLARK: Is that the amount for this year, Mr. Minister, the total amount allocated?

MR RUSSELL: No, that was the total amount during the '76 to '80 time period, and that was through the northern Alberta cardiac rehabilitation program.

MR R CLARK: And do we have any ongoing projects with Dr. Talibi now?

MR RUSSELL: No, I don't think so.

MR CHAIRMAN: Do I take it there are no further questions from the committee?

MRS FYFE: I'd just like to make one comment. I think we've asked a lot of questions related to duplication, to perhaps an emphasis on administration of projects and programs, but I think I would just like to emphasize that maybe we should be looking at what is the spinoff benefit of research projects and if there is additional equipment and new knowledge that comes out of these. You know that really is what research is about. Research in itself does not help Albertans or anyone else. It's the application of what we learn through research. I think that it is maybe very difficult to analyse the direct benefits, but it has to be emphasized.

MR CHAIRMAN: Any further comments or questions?

MR R CLARK: Might I just make one comment, Mr. Chairman. I am extremely pleased to hear from the minister that the southern Alberta children's hospital is not in the process of having its name changed to take over the function of the Alberta hospital. Mr. Minister, I would hope next year that in this beautiful glossy report we could have one name for that institution rather than two, and we wouldn't try to slide a new one under the table.

MR RUSSELL: Well, I'll tell you something that will interest you. Our last board appointee to that board was from Edmonton.

MR R CLARK: Might I respond then, Mr. Minister, by saying that frankly, though I'm a little skeptical of the committee you set up to look at the idea of a children's hospital for Edmonton because often most hospitals like to preserve a portion of what they're doing now. That's sometimes referred to as retaining one's empire. I know some hospitals in Edmonton aren't the least bit enthused at all with the prospect of their losing the area dealing with children -- any area. And I frankly am not very optimistic that that group will recommend a children's hospital in Edmonton. That may have to come from the minister.

MR RUSSELL: Well, you've put your finger right on the problem, and we might as well talk about it for a minute because that's it. We've got an excess of excellent pediatric facilities here in Edmonton at the moment, and the last thing Edmonton needs at the present time is a children's hospital.

MR R CLARK: It seems to me the minister has made up his mind then.

MR RUSSELL: No, I don't. I'm stating facts. If we build another children's hospital in Edmonton, it's going to mean the closing down of most existing pediatric wards in the community hospitals throughout Edmonton, and that's a pretty major decision to make. You know, there are more children's beds in the Royal Alex wing alone than in the entire southern Alberta children's hospital. A lot of parents want those beds retained in their communities or neighborhoods. There's a very strong difference of opinion within the profession and among the hospital boards. So I agree it's going to be a tough decision to make, but we don't need another children's hospital physically, as a physical plant, at the present time.

MR CHAIRMAN: Your chairman feels an otherwise pleasant adjournment slipping through his fingers.

MR KNAAK: Mr. Chairman and Mr. Minister, if I understand the argument in favor of a northern Alberta children's hospital, it's not related to the number of beds, but it's related in terms of the kind of care that a child care centre can provide -- and I use the words "child care centre" rather than children's hospital. The way I understand the concept is that a child care centre would first of all have staff trained dealing specifically with children's care and not exclusively but for sure with respect to emergency care for which there is a shortage of trained staff now. In terms of tertiary care, although that is a subspecialty care -- although that subspecialty care is good now, it can be better if in fact a child care centre is established by attracting world-renown specialists to Alberta who will not now come to Alberta.

There was some argument made, although not by the minister today, but it has been made that the southern Alberta children's hospital could accommodate tertiary care for all children in Alberta. I think that argument is difficult for northern Albertans to accept simply because I think there are 126 beds available in Calgary, and they don't seem to be sufficient for the needs of southern Alberta. Although the argument that there are more children's beds available in Edmonton than seem to be required is true, but the argument I think of the committee that's pushing for the northern Alberta children's hospital is with respect to care not to the availability of beds. So, although one point of view has been expressed, I hope the debate can be ongoing and that this isn't the finality of it all.

MR RUSSELL: No, that's why I referred it to the council, because they're all represented there: the medical profession and the hospitals. It's like other communities; they're going to have to work out their own differences before we jump into it.

MR R CLARK: I wouldn't hold my breath.

MR KNAAK: In that regard I do have one more point of view, which is a personal point of view. I think that the citizens of Alberta should have some input in addition to the experts, because I sense that the experts have a vested interest sometimes that's not consistent with the needs of the citizens, and sometimes it's hard as decision-makers here to really find out what the needs are. I think, in addition to the input from this group that the minister has referred it to, we should continue to be open to the good arguments that the citizens or the MLAs might have in this regard.

MR CHAIRMAN: With that parting shot then from Mr. Knaak, Mr. Russell, I'd like on behalf of my committee colleagues to thank you and your department officials for participating with us today. We'll look forward to receiving those materials that you have indicated you would provide in the future.

MR RUSSELL: This has been good for us, Mr. Chairman, and I'm sorry I didn't have the breakdown the way you wanted it on those research projects. We'll get it for you very quickly.

MR R CLARK: Mr. Chairman, I want to reopen the question. Mr. Russell, in the introduction you gave us, you failed to give us the price of a project, the southern Alberta cancer and specialty care facility. If it isn't available today, just . . .

MR RUSSELL: It's \$90 million.

MR R CLARK: Now is that in -- what kind of dollars?

MR RUSSELL: Pardon me?

MR R CLARK: What kind of dollars is that -- '77 or '78 dollars?

MR RUSSELL: That's 1980 dollars. And these figures keep rolling, because they're adjusted for inflation on the two centres: the MacKenzie Health Sciences Centre and the southern Alberta cancer and related services centre.

MR R CLARK: That's going to take in the whole project, Mr. Minister? That's the auxiliary hospital beds, all those other things that are involved there?

MR RUSSELL: Yes, that's the whole thing.

MR R CLARK: \$90 million.

MR RUSSELL: Yes, that's in round figures. It's actually \$86.439 million, but because they're going forward by project management, they have to be adjusted each year for inflation. There's about a 12 to 14 per cent factor each year that the management committee applies. But those are current dollars.

MR CHAIRMAN: I'd like to thank you again, Mr. Russell, and I'd like to ask Karen to indicate that we'll be ready for Mr. Miller in 10 minutes. Perhaps we could have a 10-minute adjournment.

*The meeting adjourned at 10:30 a.m.*