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**Subcom.D: Science, Res. & Infor. Tech.**

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8:01 p.m.

[Mrs. Gordon in the chair]

**Subcommittee D – Science, Research, and Information Technology**

Gordon, Judy, Chairman  
Haley, Carol, Deputy Chairman  
Amery, Moe  
Black, Pat  
Boutilier, Guy  
Broda, Dave  
Carlson, Debby

Coutts, David  
Herard, Denis  
Langevin, Paul  
Lund, Ty  
Magnus, Richard  
Pannu, Raj  
Paul, Pamela

Pham, Hung  
Sapers, Howard  
Shariff, Shiraz  
Taylor, Lorne  
West, Stephen  
White, Lance

THE CHAIRMAN: I'd like to call the committee to order. We're here tonight to hear the estimates of science, research, and information technology. This is an opportunity for members on both sides to ask detailed questions about departmental responsibilities and expenditures.

With that, I'd like to ask the hon. minister to please start out.

DR. TAYLOR: Thank you, Madam Chairman. Just a word. In room 512 I notice we're allowed to sit while we do our presentations. Are we allowed to sit in here as well? I noticed you were chairman in 512.

THE CHAIRMAN: The chair here will rule that this is in fact the actual Assembly. This is the Chamber. I do think that our protocol usually asks us to stand in this particular place, and I would ask the hon. minister to do so. Being as young as you are, hon. minister, it shouldn't be a problem.

DR. WEST: Stand and take it like a man.

DR. TAYLOR: The Minister of Energy has suggested I stand and take it like a man, so I'll take his suggestion.

THE CHAIRMAN: Thank you, hon. minister.

AN HON. MEMBER: What's your pin?

DR. TAYLOR: Oh, my pin. Actually, somebody's commented on the pin I'm wearing. It says: Think Ahead: Invest in Research.

Thanks, Madam Chairman. I am pleased to be here to address the House this evening and to present our budget estimates for the next year. I would point out that in the past, the minister has only addressed the ministry estimates, and the chairman of the Alberta Research Council has always addressed the Alberta Research Council budget and estimates. Each individual has been allowed 20 minutes. That is, the minister has been allowed 20 minutes and the chair of ARC has been allowed 20 minutes. However, tonight the Member for Red Deer-South, who's the chair of ARC, is unable to be here. So I think it would be appropriate then, Madam Chairman, if I'm allowed 40 minutes to do both the ministry and the ARC.

THE CHAIRMAN: Do you think, hon. minister, we should let the membership of the committee vote on that?

DR. TAYLOR: Well, I think so.

THE CHAIRMAN: I think, hon. minister, if you take your 20 minutes, we'll allow someone else, and then you could probably come back and talk about ARC.

DR. TAYLOR: Okay. Then I'll do the ARC after the first question in the next 20 minutes. Okay. Thank you.

I thought I'd start my discussion tonight with a quick overview of the ministry components so that everybody's aware of the mandate of the ministry and the components so that members of the Assembly have a better understanding of the ministry and what we're attempting to do.

The ministry has three basic components. We have the Alberta Research Council, which I'm sure all of you are familiar with, and that now includes, of course, the Vegreville centre. It used to be called the Environmental Centre at Vegreville but is now the Alberta Research Council, Vegreville centre. The second component of the ministry is the Alberta Science and Research Authority, and this is abbreviated generally as ASRA. This is advised by a board of management. On the board of management there are private-sector, academic people from the province. ASRA is supported by a small but dedicated workforce – I think the president of ASRA must have written this – a small but dedicated workforce of eight people. In fact, while I mention it, we have some of those people here tonight. We have in the gallery and I'll just mention them by name – I'll have to change my glasses actually so I can see them, see that they're there. Oh, yes, they're there. We have John McDougall, the CEO and managing director of ARC; Keith Salmon, the communications officer at ARC. We have Marilyn Johnston from Executive Council; she helps ASRA with the financials. Then we have my executive assistant, Ken Faulkner. So they're in the gallery tonight. I thought it was important that they be here, members, so they can hear the concerns of all members, particularly the opposition members, if they have any concerns.

AN HON. MEMBER: Everything's fine.

DR. TAYLOR: Everything's fine. Thank you.

AN HON. MEMBER: You missed one.

DR. TAYLOR: Oh, who did I miss? Oh, sorry. I missed Dr. Robert Fessenden. Man, he's written his name biggest here too. He's the president of the Alberta Science and Research Authority. Sorry about that, Bob. It was not intentional, I assure you.

Anyway, that's the second component, which is the Alberta Science and Research Authority.

The third component, of course, is the minister's office, and all these components are working together to make sure the province gets the best bang for their buck in terms of the expenditure of research dollars. I really believe, Madam Chairman, that the work of this ministry is critical to the economic prosperity of

Alberta today and in the future, and I intend to talk about that a little bit today in the context of our estimates.

What we're trying to do as a ministry is create a vision of our emerging economy. What is our economy going to look like? I believe this vision of our emerging economy is one that is based on knowledge. When we're talking about a vision of an emerging economy, we're not talking about what it might look like next year or the next year. We're talking: what is our economy going to look like five, 10, 15 years from now? We believe that the theme of that emerging economy is going to be knowledge. In fact, the theme of my ministry is: knowledge is our most important and valuable renewable resource. If you walk into my office, you can see a sign about that big that says exactly that. I actually wanted to get a banner to string across my office that said: knowledge is our most valuable renewable resource. My staff wouldn't let me. They said it would get dusty and look tacky. That's what we're trying to create, Madam Chairman. We're trying to create this atmosphere.

We are all aware that our province has been blessed with abundant natural resources, and when we look at what I call the three basic pillars of our economy, they're based on a natural resource economy. We can look at agriculture as one pillar of our economy. It's based, obviously, on the resources we have in the ground. We can look at forestry as another pillar of our economy, based on the forests across the province. Then we can look at the oil patch, and it's once again based in the ground. These are resources that cannot be moved; these are stable resources in Alberta. They were very important in the past, and they will continue to be important in the future.

They've been important in the past because we as Albertans have successfully exploited these resources, and we've overcome significant barriers to develop these resources and to exploit them to their potential. For example, in Alberta, as you all are aware, we have a very short growing season. Of course, this affects the forestry; this affects our agriculture. Through knowledge we've been able to get around some of these problems. For instance, in agriculture we've invested in research and development and developed crops that mature in a shorter season. If you look at canola, which is a huge cash crop in Alberta right now and hopefully will remain so, unless the Wheat Board gets its hands on it, we have developed new forms of canola that withstand certain diseases. This is one of the things that the Alberta Environmental Centre, ARC Vegreville, is doing. If we look at what we've done in hydrocarbons, it's all knowledge based, Madam Chairman. All knowledge based. We would not be having the oil sands development that we have today if we hadn't invested in research and development. That has allowed the price of oil from those oil sands to drop to a level where it's competitive with traditional light crude.

We have in Alberta overcome significant obstacles that they haven't overcome in places that have similar resources. For instance, China has very similar resources. They've got good agricultural areas. They've got good oil patch areas. They've got good forestry areas. But because of the fact that they have not invested in research and development to the same extent that the private sector and the government have in Alberta, they have not been able to develop their resources. In fact, the Chinese come to Alberta to learn about us and learn about our resources and how to develop their resources. So we've attracted and trained the right types of people in our universities, and we must never forget that we have to continue adequate funding and increase funding for universities to continue to train these people.

## 8:11

Science and research from my perspective are the key for

today, but they are vital for meeting the economic and social challenges of tomorrow. We will only develop and build an innovative economy in the 21st century if we invest in science and research. Science and research, science and technology means jobs, Madam Chairman. It means high-quality, high-paying, and clean jobs for Albertans, and it means high levels of growth for Alberta, not just for Alberta but for Canada and around the world. Wherever people, the private sector, and government are prepared to invest in R and D, you will see these types of jobs. You will see this type of growth.

I might give you a couple of examples of that. More than half of our province's growth in the last few years resulted directly or indirectly from technological innovation. I gave the example of the oil sands a little earlier. Nearly 70 percent of new jobs since the mid-1980s in Alberta were in the high knowledge intensive industries. Three years ago there were about 55,000 people working in this high knowledge intensive business. Today there are over 70,000. That's an increase of 27 percent in just three years, and it is going to continue to grow as long as we can continue to provide the people. We have to provide the technically educated people, the university-educated people that allow companies in the high knowledge areas to continue to grow.

Three years ago the innovation-based economy made up about 6.4 percent of Alberta's economy. Today it makes up about 7.7 percent. That's a 20 percent increase in just three years. There are other indicators that I could give you, but I know my time is going to run out since I was not allowed the extension, so I'll continue. With this kind of growth and with all the economic indicators pointing to a continuation of this trend, I don't think there's any doubt that it'll happen. It is imperative that we focus more attention on this sector of our economy.

When I look at the three pillars, because they're commodity-based, we see very cyclical kinds of economic cycles. I'm very familiar, as you might know, Madam Chairman, with the cattle business. There have been many occasions when we've bought cattle – not too many, fortunately, but some occasions – and we've grown them, fed them, and sold them for less than we have in them because of the cyclical nature. Quite frankly, right now I can indicate to you that people are selling yearlings – in fact, we had about 3,500 yearlings today at the market I partially own with my brother in Medicine Hat, and the market was too high, from my perspective, for people like ourselves to buy, because you can run these cattle on grass but you might not get that much for them in the fall. So it's very cyclical.

One of the things about the knowledge-based economy is that it's stable. You do not have the same kind of cycles in the knowledge-based economy that you have in a commodity-based economy. The oil patch is another good example. Look at what oil is doing to us right now, and the Minister of Energy could correct me.

DR. WEST: What's wrong with the oil patch?

DR. TAYLOR: No. The oil patch is very good. What I'm saying, Minister of Energy, is that it's cyclical. Oil is probably under \$16 a barrel.

DR. WEST: It was \$15.18 today.

DR. TAYLOR: Well, even worse than I thought: \$15.18.

So it's cyclical in nature. We know that the pulp industry is cyclical in nature.

What we have is a vision of an important part, the fourth pillar of our economy, Madam Chairman, the fourth pillar that we

would call knowledge-intensive businesses, that are not cyclical, that are stable, that are clean, that hire young people and pay them well. I had dinner not long ago with John Roth, the president of NorTel. He indicated to me that these electrical engineers and radio frequency engineers that are graduating from the universities, that NorTel would hire – in fact, NorTel would go in and give you a signing bonus in your fourth year if you would agree to come and work with NorTel. It's getting as bad as hockey players. Now, the bonuses perhaps aren't quite as large, but they would give you a signing bonus to sign on and come work with NorTel. He indicated to me that a starting salary for an engineer coming out of university would be in the area of \$45,000 to \$50,000, and he said that within three to four years, if they're any good, they're going to be making in the six figures.

DR. WEST: Is that some of the money we put into it?

DR. TAYLOR: No. That's none of the money you've put into NorTel, unless you, Mr. Minister of Energy, hold shares in NorTel, a publicly traded company. Perhaps you do. I don't know what your portfolio consists of.

It is very important that we develop and recognize the importance of what will be the fourth pillar of our economy. So one of the focuses of the science, research, and information technology ministry is to recognize the importance and communicate this importance to our community at large, not just the community at large but all the members in this House so that all of you members recognize the importance, and that's one of the reasons ARC offers yearly tours. I think there's a tour of the facilities of ARC coming up shortly, and I would encourage all members to avail themselves of that tour and go out there and see the exciting things that are being done at ARC.

One of the prime focuses of the ministry is to ensure that our science and research effort is effective and co-ordinated. We have a number of plans and strategies to do that, and I'd like to take just a minute to outline some of them. As I've indicated, an important strategy is to act as an advocate for the science and research community among the public, the business community, as well as the global community. We have to get the message out in the global community that Alberta has the right types of people, has the strong educational institutions and that we can provide the right types of people and the right environment to attract global investment. We must get that message out, that our province is an ideal place for R and D investment.

We will also as a ministry continue to take the message of the importance of science and research to our younger citizens. We will be playing an integral role in the planning and implementation of a national Science and Technology Week. In fact, this year the member for Howard Sapers and myself were at the Edmonton Space and Science Centre. We were down on the floor . . .

MR. SAPERS: The Member for Edmonton-Glenora. They haven't named it after me yet.

DR. TAYLOR: Oh, okay. I always forget it. The Member for Edmonton-Glenora. I forget the riding sometimes. But we were down on the floor and spent a really interesting morning with young children, elementary kids, at the Edmonton Space and Science Centre. One of the things they developed were some vehicles that were basically powered by hot air. Now, I thought that if the member from Edmonton Glenora and I had got involved, we would have had the winning vehicles, and I'm not sure whose would have gone farther.

THE CHAIRMAN: That's the hon. Member for Edmonton-Glenora; right?

DR. TAYLOR: That's right.

So it was interesting to see the different ways these kids had used basically a plastic bottle and a balloon and some kinds of paper clips and wheels to make these vehicles go. As I say, I had – and I know the member opposite did as well – a very interesting and fun morning.

The value of science promotion cannot be overestimated, especially with the young people, and we need really to stress that because that's where the jobs are: right now, for instance, NorTel in Calgary, CDC in Calgary, probably QC Data in Calgary. There are vacant jobs today because we don't have the people in Alberta to fill those jobs and, as I indicated earlier, good jobs and well-paying jobs.

A second key area of the ministry's responsibilities is to monitor and evaluate all government-supported science and research and to ensure it addresses the province's economic and social needs. What we do is have a committee that is made up of board members from ASRA that looks at the science and research business plans of each department. Each department must produce a science and research business plan. This is a considerable task and requires a great commitment from our board members when one considers that we spend over a hundred million dollars a year as a government on R and D. That's not what is funded at the university level. That's separate from the university.

Now, this is somewhat less than it was a few years ago. Once again, because it is a little less, this reinforces the necessity of making sure that it's done right, that we're getting a good bang for our buck, that the dollars are going to good use, that there's not overlap. That's what this committee does. It evaluates the various research business plans of the departments. I believe that report will be released for this year about the end of March.

8:21

Now, we are greatly aided in our job, as I've indicated, by a board of management, if we can call it that. This board of management is composed of, as I said earlier, the best and brightest, as far as I'm concerned, in science and business and academia in Alberta.

I'll just provide you with a couple of examples of people who are on that board. Some of you may know Dr. Robert Church, our chairman, an ex-professor of medical biochemistry at the U of C. He was associate dean of medical research at the same university. The best thing about Bob, from my perspective, is that he's a rancher. He's well respected, and he sits on innumerable boards and assists in developing high-technology companies. So Bob's a real down-to-earth guy who understands high technology.

Another person who sits on our board is Mr. David Kitchen. He's a retired senior president of the Royal Bank and was responsible for the bank's operations in Alberta and the Northwest Territories. Prior to that, he was with the bank's global energy and minerals group located in Calgary with the mandate for financing energy development worldwide.

I'm not going to go through them all. I'm just going to provide you with a couple more.

A third individual is Dr. Bill Cochrane, a health products investment consultant. He's the former president of Connaught Laboratories. He was also the first dean of medicine at the University of Calgary.

The final name I'll mention will be John Brick. He's the vice-

president for NorTel. His experience with the information technology sector is extensive and dates back over a decade. [Dr. Taylor's speaking time expired] That can't be 20 minutes?

THE CHAIRMAN: I'm sorry, hon. member, but, yes, it is.

DR. TAYLOR: Well, I'll sit now, but I've quite a few more things I want to say, so I'll take the time after the first question to say some of those.

THE CHAIRMAN: Right, and I would remind members that they are allowed up to 20 minutes, back and forth.

The hon. Member for Edmonton-Glenora.

MR. SAPERS: Thank you, Madam Chairman. I appreciate the reminder that I have to limit my first remarks to 20 minutes, as the minister does. Also, I made note of the starting time, and I'm assuming we won't be moving to adjourn until at least 10:04 this evening. Of course, if there's any procedural wrangling, we'll have to deduct that procedural time out of the debate time, and I know that's consistent with your understanding, Madam Chairman.

THE CHAIRMAN: Of course, it's at the call of the chair.

MR. SAPERS: My comments to the minister. I want to thank the minister. I was very much looking forward to the opportunity to discuss the debates of this particular department until I realized that it conflicted with my opportunity to meet with Colonel Mike Mullane, the colonel who's been up on three space shuttle missions who's over at the science centre tonight talking. You and I were both invited to be there. Couldn't you have scheduled this for some other time . . .

DR. TAYLOR: I'd rather be there.

MR. SAPERS: Yeah.

. . . so that we could go and listen to him talk about his experiences in the space shuttle?

Anyway, I wanted to start off by first thanking the minister for working as closely as he has with me as the critic. It's been a steep learning curve for both of us in this department, perhaps more steep for me than for him. Nonetheless, I've appreciated the co-operation.

I'm a little disappointed that in the minister's opening comments he didn't mention the ASRA discussion document in more detail. It's a document worth reading, and I want the minister to know that as far as the five major thrusts – the tax and regulatory policy initiatives, the increase in support for education and training, expanding and targeting government investment in science and research, industry funding for sustainable resource development and resource value-added R and D, and actively recruiting key companies to come to Alberta, particularly those who can help create the critical mass that we require to have sustainable R and D clusters in this province – all five of those strategies are worth while and we support them. There are some things, of course, that we take issue with, but overall the thrust is one that we can accept.

DR. WEST: Okay. Question.

MR. SAPERS: I hope the Minister of Energy is nice and relaxed tonight and is on all of his meds and all of that so we can co-operate this evening.

Madam Chairman, through you to the minister, I'm going to focus my comments mostly on the business plan, and my colleagues are going to do some more detailed line-by-line analyses . . . [interjection] Yeah; that's because there are only four lines. One of the things that I was looking for in the business plan – and I was hoping to see it more clearly articulated – is the distinction between support for basic science and research and applied science, or commercialized science. As I've come to understand science, we can generally speak of four components: exploration, confirmation, explanation, and application. I find that this department is heavily focused on the application side.

Now, application's not bad, and I'm not finding fault with a certain degree of emphasis on application or commercialization of knowledge, but it seems to me there is a fundamental contradiction with some of the other policy directions of the government. I'm just hoping the minister can help me get past this contradiction. If the government wants to be clearly out of the business of being in business and doesn't want to be picking winners and losers and all of that other jargon, how can you explain the focus on application and commercialization?

Application funding by definition picks winners and losers. I mean, you're taking ideas that have demonstrated some commercial viability and growing them to commercial success. Again, I'm not saying that's a bad thing, but I'm just wondering how you can make it consistent. If in fact that's your challenge within cabinet, to get them to pick up the ball and understand it – that's not necessarily a bad thing – then I hope the minister will say that as well, and perhaps we can join together. There won't be any more editorial comments about that.

Now, one of the examples, one of the real success stories, I think, in this province when it comes to science and technology is the Alberta Heritage Foundation for Medical Research. The AHFMR funding has done tremendous benefit for this province and in fact the rest of the world because of some of the breakthrough research that's been done in medical science. This has been supporting academic research, exploratory research. It has in fact embodied some government policy. It was set up because of a vision that the government of the day had in terms of how we could grow these industries, not just how we could grow the industries but how we could grow knowledge in the medical science area.

Another success that unfortunately Alberta doesn't share in is something called the Canadian medical discoveries fund, and that's because of our tax structure and our tax policy in this province. It seems to me that one of the roles your ministry should be playing is helping to build a bridge between something that we've done well, like the Alberta Heritage Foundation for Medical Research – something that we have ignored taking advantage of are these pooled funds like the Canadian medical discoveries fund. Again I was looking for something that would flow out of the ASRA discussion document into your business plan about these tax strategies. If I missed it, point it out to me, please.

If we take a look at those four basic areas that I first started talking about – exploration, confirmation, explanation, and application – it seems to me that the broadest public good can be found in direct tax funding of the exploration and confirmation side, and of course we do a tremendous amount of that through our postsecondary institutions. You mentioned the \$100 million figure, and I appreciate that as well. But other than the tax incentives, which we may be able to discuss in more detail later on, it seems to me that industry really has to come to the table to support the explanation and application part of the equation. Maybe that's where you go away from direct funding and you go

towards tax-based incentives. As I understand the plan that's in the ASRA discussion document, that is at least part of it.

Basic science must be the focus of public policy. It has the greatest payoff for the greatest good. I don't think we disagree about that. If anybody questions whether or not government support for basic science is worth while – I mean, there are tonnes of examples. I was talking to some PhD students recently at the University of Alberta open house, when they had their preview days. I was talking to some PhD physicists, which is an eye-opening experience for anybody. They made the point to me, they said: you know, Newton is responsible for putting a man on the moon; once Newton figured out the basis of gravity . . . Their table, by the way, Mr. Minister, happened to be beside the structural engineers' table so I think there was a little bit of competition going on, because then they rather flippantly said: after Newton figured out the basis of gravity, all that was left was an engineering problem. I can't really tell you about the rest of the conversation because it was too colourful.

**8:31**

MR. WHITE: Aside from the fact there's a structural engineer sitting to your right.

MR. SAPERS: Yes, and in deference to my hon. colleague from Edmonton-Calder.

So, Mr. Minister, I'll pick up where I left off last time I got to discuss this department's business plan. We don't see a lot of agreement in this business plan with some of the other business plans the government has provided. I don't mean that in the substance. I mean that in the format. It would certainly be of benefit to me, as somebody who's struggling to keep on top of this department, to see the business plan set out in such a way that it was very clear what the goals, the strategies, the outcomes, and the performance measures were to be, and if we could do that over some kind of projected time line. As you flip through the business plans of the government, you see that for so many of the other departments. I remember mentioning that last year. I didn't really see the correction this year, and it's too bad. It just would have made it easier to understand and to grasp.

One of the primary areas of your ministry is, of course, science and research policy. One of the things I was looking for under that responsibility area is the vision of how we're going to have Alberta set up for the next millennium, the kind of wired province that we could and should be. Alberta is a real hotbed of communications technology and communications technology research, but other provinces, including some with much smaller economies and resource bases such as New Brunswick, are far ahead of us in articulating government policies that lead towards Internet access, wired and wireless communication, application of digital resources and communication technologies in schools and in other public institutions.

If it is, in fact, SRIT that is responsible for steering the government's policy ship to when it comes to this kind of technology policy, I would encourage you to be even more aggressive than you've been in terms of setting that vision out for discussion and generating some more public interest and debate in the area.

One of the other things I note out of your business plan is that there has been a tremendous consolidation within your department since you became minister. I don't know you as an extremely territorial or predatory kind of politician, so I think I want to thank you for doing this in a quiet and competent way, because I think it's a good idea that such things as responsibility for TRILabs, which used to be vested with Alberta Economic Devel-

opment, have come to your department. The responsibility for the Heritage Foundation for Medical Research, which I mentioned before, has come to your department. I think it's a good thing. I understand that this department is a small department, but I'm trying to fully understand what the relation is. I'll be asking you the same question I'll be asking the minister of advanced education; that is, to draw a much clearer picture of the relationship between your department and the department of advanced education when it comes to the oversight of R and D in science and technology in our postsecondary institutions.

One of the other things that I was looking for in the plan – and I didn't see it – is a complete understanding of how Bill 14 will impact on the operations of your ministry. Bill 14 is of course on the Order Paper and before the House I believe at second reading as the Alberta Science, Research and Technology Authority Act, but throughout your business plan you continue to talk about ASRA and ARC and not the new authority. In particular, when I look at things like the expert review panel that the minister will be appointing pursuant to the existing act which must review the operations of ASRA in the fiscal year 2000-01, I'm wondering whether or not that transfers over under the new act and if in fact there's going to be some other kind of sunset review or mandatory, ongoing review. I guess my general question is: why aren't we seeing the new legislation reflected more clearly in the business plan? Is it just a timing issue? Will you be supplying, then, a supplementary business plan when and if Bill 14 becomes law? I guess part of that question too – and I may not be saying it as clearly as I might – is that I'm asking you to table a supplementary business plan when and if Bill 14 becomes law.

Under the section in your business plan that talks about performance measurements, there's some language that I'd like you to be clearer on. Perhaps, Mr. Minister, instead of taking your next block of time to tell us all about the ARC, which I think members on this side have a pretty good understanding of, you could give us some more detail in answering these questions; not that I would presume to tell the minister how to do his job, just letting him know what it is we'd be more interested in hearing.

Under the section on performance measurement you talk about maintaining and improving the "performance measurement framework for science and research in Alberta." Well, maintaining and improving: I'm always curious when I see that phrase because I never know what's to be maintained and what's to be improved. So could you give us some details? What's working and what isn't? What exactly is the performance measurement framework for science and research in Alberta? I mean, science and research in Alberta takes place all over the map. As you said yourself, there's what you do, there's what the minister of advanced education does, and you see science and research certainly in Energy. We had a very brief, truncated, and limited opportunity to quiz the Minister of Energy about research in that department. There's also the minister of agriculture responsible for a fair bit of science and research, and even in transportation. So what is this framework? I haven't seen a master plan; I haven't seen a master framework. So if one exists that's not just governmentwide, that's provinciewide, that helps integrate or bring into focus what it is that's going on in partnership with industry and what it is that's going on in partnership with other jurisdictions, I'd sure like to know about it, and I'd like to know if that's how broad this performance measure goes.

The second one is: "Work with Advanced Education and Career Development to develop appropriate measures for Human Capital Capacity." I understand that you would have a role in that, Mr. Minister, but it seems to me the Minister of Advanced Education and Career Development would have to be the lead hand. That

minister has talked about the skills shortage and the skills deficit. I guess who's leading the parade on this one is a question of interest to me. "Human Capital Capacity": is this going to be driven entirely by industry needs, or is government policy going to help inform those industry needs? Which is going to come first? If you're going to say, "Well, you know, it's a joint thing that goes hand in hand," then I wonder what exactly the work will be with Advanced Education and Career Development.

The other performance measurement that I thought was a little bit interesting was: "Publish the Annual Report on the Performance of Alberta's Innovation System." I'm not sure that simply publishing an annual report is the performance measurement. [interjection] Does that time get deducted?

THE CHAIRMAN: Go ahead, hon. member.

MR. SAPERS: I'm not sure that publishing the annual report in and of itself constitutes a performance measurement. It would seem to me that it's the content of the report that's important. This phrase as well, "Alberta's Innovation System." I'm beginning to get a grasp, an understanding of what that phrase means and just how broad that is. So, again, I'm wondering: what particular key performance are you going to be looking for within that innovation system, and is what you publish and what you report on going to be consistent with what happens in those other primary industries, Advanced Education and Career Development, Energy, Agriculture, et cetera?

8:41

The other one that I was particularly interested in at this point is the "Public Awareness and Support for Science and Research." What you say in the business plan is to

facilitate the science promotion efforts of public and private organizations that enhance the science and innovation culture in Alberta.

Did that translate into some direct dollars in your department? If you would just tell me where it is exactly and how many dollars. Is this money that's going to be used to leverage dollars out of other places, or is it a campaign that you've got in mind for your own department? Is it something the Public Affairs Bureau is working on through the department?

You and I, Mr. Minister, tend to show up at some of these very public science and tech events, and I don't know whether you're going to be at the one on Saturday over at the Shaw Conference Centre, the science fair. That would be a good one. If you give me some more thinking caps and buttons, I'll make sure I hand them out on your behalf because I'm going to be there.

DR. TAYLOR: I'd have to spend some time in the constituency just in case.

MR. SAPERS: Just in case, that's right.

Mr. Minister, all the questions I've had now about performance measurement and public awareness flow directly out of the ASRA business plan. I haven't really focused yet on the ARC business plan. I see that I've only got a couple of minutes left, so what I'll do is very quickly talk about the chart that's on the bottom of page 328 of the business plans where you try to lay out in a table ARC's business goals, performance measures, and targets.

I thought I had at least two minutes left.

THE CHAIRMAN: I'm very sorry, hon. member, but your time has expired.

MR. SAPERS: Well, I'll come back to that point, Mr. Minister.

THE CHAIRMAN: Hon. minister.

DR. TAYLOR: Thank you. I should say if I don't address all your questions, we will certainly respond. We're going to go through *Hansard*, and we will respond in written form to your questions. I'm just going to kind of pick and choose a bit here.

You mentioned the peer review: will it continue in the new legislation? Yes, the peer review will continue in the new legislation. So that's one easy, simple one.

One of the first things you talked about was the ASRA discussion document. That was actually the next conversation piece in my little speech that I've got prepared here, and I was going to talk about the strategies. You've already mentioned them, so there's no need for me to mention them again. The importance of that document. We sent out over 3,000 copies of that document and have responses from many of those people. I don't have the figures right here in front of me, but we got about an 8 percent response rate, I believe, which is apparently considered by the – oh, a 10 percent response rate, which is considered very good on documents that you send out. We sent this to I think about 3,600 different individuals and organizations, and the response that came back was extremely positive. We have about a 95 percent agreement rate with the strategies. Certainly not everybody agrees, but when you can get 95 percent, I think it's certainly worth while. So, yeah, that is a very important document, and we are continuing to work on the strategies in that document.

One of the strategies in that document is creating a competitive tax environment. Certainly we are in the process of doing that as we speak and developing a proposal that we will be taking forward to the committee that our hon. Treasurer has developed. As you know, in his budget he announced a committee of four or five people, and it was to review the two things that we're particularly interested in, one of which is R and D tax credits and the other is the lack of venture capital funding in Alberta. Those are the two prime things that committee will look at. The important thing about that is that it has to report by April 30. So it's a relatively short time frame for that committee to report. We will have a proposal that we will be presenting to that committee, and I believe we will have a good hearing at that committee.

Just let me look at my notes. You also mentioned that you didn't see the tax policy issues clearly mentioned in the business plan. Well, in fact if you look at page 324 on the bottom, we do mention the specific tax and regulatory environment. Now, it's brief, granted, but we say we will "Pursue the implementation of the recommendations of the 'Barriers to Technology Commercialization in Alberta' Report." If you haven't got that report, it's by Healy. You should take a look at it, because that essentially outlines the position we are going to be taking in terms of our tax positions and our tax policy that we will be presenting to the committee.

I think it's interesting to note that we just have some recent data in that indicates that in fact R and D tax credits do work and work very well. We have the Canadian Association of Advanced Technology report. They had Deloitte & Touche do a study and report just before Christmas. They looked at the federal tax credit, which has well over 6,000 companies enrolled in that program. What they discovered was that the personal income taxes paid by the companies and the employees of 169 companies paid for the total program of the over 6,000 companies employed. One hundred and sixty-nine companies paid for the total program through their employee tax payroll deductions and the corporate taxes. So these do work.

It's not an issue of money. Tax incentives, tax policy, R and

D tax credits are not an issue of money, because they pay back very quickly. We just got this week a publication called *Technology Week*. Coopers & Lybrand did a study of the American program, and it's exactly the same thing. Coopers & Lybrand is recommending that the American government include this as a permanent fixture in their tax program. They've got their figures in there. I can't remember; I think it generates \$4 billion or \$5 billion worth of activity in the American economy, a relatively small tax credit. So we know they work. We know they are not an issue of money. It's a matter of taking this case and presenting it to the tax committee, and hopefully we will get a good and fair hearing there. So we intend to do that and advocate with the tax committee on that issue.

I've actually requested the full Coopers & Lybrand report from the organization in the U.S. If any of you or your members are particularly interested in the CATA survey, the Canadian Advanced Technology Association survey – I can provide you a two-page summary of the Coopers & Lybrand thing, because that's what I have in my office. We can get you that. Once the whole report comes in – I should have it in a week to two weeks – we can provide you with copies of that as well. It is a very important issue.

Another thing you talked about was science and the process of science, which is an interesting discussion from my perspective. You talked about the exploration as the initial stage, and you talked about the model of the AHFMR. The AHFMR is no doubt very, very effective. For every dollar invested by the AHFMR, the return is 4 to 5 to 1. What the AHFMR has allowed is to create a critical mass – okay? – a critical mass of scientists in Alberta, working in various projects. That critical mass attracts the best quality people in the world.

For instance, when I visited there just before Christmas, I met with a lady scientist who's apparently one of the leaders in the world in some kind of cancer research – it was too esoteric for me to understand, but she was one of the leaders in the world. I said: why did you come to Edmonton? She had come from the southern states someplace and brought her husband and her kids and her horses and so on. She said: I came because of AHFMR and their support for my research program. That was her primary reason for coming. The second reason she came: she wanted to raise her children in an environment like Edmonton, that was healthy to raise kids in. I said: well, you're from the southern states. She came last winter just before one of the coldest winters we've had in history. I said: well, you know, how did you stand this winter? She said it didn't matter: I didn't have to worry about my kids; Edmonton is a healthy place to raise children. So we have a lot of natural advantages in Alberta that we can build on. It's not just the fact that we have research funds or don't have research funds. There are other natural advantages.

### 8:51

That brings me to my topic of the research fund and the support for exploration research. We have a research fund that was 6 and a half million dollars last year and has been increased to 16 and a half million. Unfortunately, the press hasn't picked up on this, you know. It indicates the government's commitment to increasing the research dollars. In fact, if you look at the science and research document, the strategy, if you look at a table there, it shows that we've got a measured increase in funding for R and D in Alberta. In that document it recommends that the fund go from \$5 million to \$15 million this next budget year, an increase of \$10 million. Well, that's exactly what we did as a government. We have increased the fund by \$10 million. The purpose of that fund is to kick start important strategic science and research initiatives.

We want, through that fund, to build on the province's R and D infrastructure.

Now, as you are aware, in Alberta we also have under Advanced Education, which we co-operate with quite closely, the IIPP or the I2P2. It stands for – I know all the acronyms – the intellectual infrastructure partnership program, I think. Before anything is signed off on that program, it's signed by both the minister of advanced education and myself. The committee is made up of Advanced Ed people and my people from science and research, who will evaluate the proposals. The money is housed in Advanced Ed. That's good; we have no problem with that. It's positive. We can work with Advanced Ed and have a co-ordinated approach to this. But that's also \$15 million a year. So this year there's been an increase of \$25 million from the provincial government to build our province's R and D infrastructure.

Now, as well, we have a federal government. I must say that I don't often say positive things about the federal Liberal government, but they have recognized this. They have increased their support to R and D in the country by I think it was \$400 million. And they've created more than that. They've created a fund that's called the CFI, the Canada foundation for intellectual innovation or something. It's \$800 million to be spent over six years, and it's to be matching dollars. So we can use our funds in Alberta to attract matching dollars. That's what this is all about: attracting, getting good projects that build the infrastructure but that will match dollars and lever dollars.

[Ms Haley in the chair]

Now, this fund of ours. I'll just give you a couple of brief criteria. We look at initiatives that demonstrate a high probability of generating significant identifiable social or economic benefits for Alberta. We look at initiatives that will not create orphans. In other words, we don't want a project that is not going to be able to support itself when the funding period is over. We look at projects or initiatives that enhance the human capital of the province through learning and training. As I mentioned earlier, right now in Alberta we have a deficit of the type of people we need to have in Alberta, and we're working at present with SAIT and NorTel to come up with some programs in that area. Fourthly, initiatives should be founded on relevant expert professional assessment of opportunity, need, and receptor capacity.

So what we have is a committee that is set up of the ASRA board. Some of them I talked about. If you remember, I just barely concluded talking about the vice-president of NorTel, John Brick. I should say that we appreciate all the board members. These board members commit; it's a huge time commitment. These board members commit a large amount of time to this process. Not only that, but NorTel allows John Brick to come and spend his time at our board meetings, his time. John Brick is chairing our IT committee. This province right at present does not have an IT strategy. He is chairing our IT committee, and he's interviewed – John himself has interviewed – over 60 of the IT leaders in the province. Now, that's a huge time commitment for a vice-president of NorTel to take, but he's committed to this process. He's committed to the fact that it is important for us to have an IT strategy.

One of the next things that we're going to be working on: before summer I hope we will be releasing an IT strategy for the province that would match something like sustaining the Alberta advantage, the science and research strategy, which will then map out steps that we need to take as a ministry in the IT area, just as

the document you mentioned earlier has mapped out some steps that we need to take and that we are working on.

So we have this group of business and technology leaders as an evaluation committee. They've set up criteria for evaluating proposals, and they meet and do just that. One of the chief people on that committee is Glenn Rainbird, I believe, the president of TRILabs. Is Glenn the chairman of that committee? I can't see that far.

AN HON. MEMBER: Yes.

DR. TAYLOR: Okay. He is. It took some time to get it set up, but this year this committee has approved \$2.2 million in expenditures.

Just let me tell you a little bit about the projects that we've approved. At the University of Alberta there's a scientist named Brian Sykes. He's one of the leaders in NMR technology in the world. He and his whole department were recruited by other universities. They were going to pick up this whole department and take it – one place was Columbia University. He and all his staff were going to go because we did not have an NMR 800 machine in the province. That was brought to the attention of the Science and Research Authority and the board and their committee. We took a look at: is this a worthwhile project? Well, it's about an \$8 million project to get an NMR 800. So we said, where's the money coming from? Well, we learned that, for instance, the Medical Research Council was willing to contribute some money. The U of A was willing to contribute some money. The U of C was willing to contribute some money. UBC was willing to contribute a little money. The University of Saskatchewan was willing to contribute a little money. There were some other agencies as well, but basically we were about a million and a half short.

As a result, they made a proposal to the Science and Research Fund Committee, and the Science and Research Authority agreed to fund that NMR 800 to the tune of about \$1.5 million. In fact, it may not end up being that high, because the western economic diversification has now come in and they may be funding some of it as well. So our contribution from our fund might be down as low as \$700,000 on an \$8 million project. If you look at \$700,000 invested for \$8 million, folks, that's better than 1 to 10. There are not many places you could invest \$1 and get \$10 back. In fact, if there were any investment in this province right now that I knew of where I could invest \$1 and get \$10 back within a year, we'd be falling all over ourselves to go out and invest in that. That's the kind of leverage you can get in this area with collaborative work, working with other agencies.

Another example of exactly what I'm talking about is the NMR 600. I don't understand the difference in technology. One's liquid technology and one's solid state technology, whatever that means. I'm not sure which is which. I think the 600 is liquid technology. But at the U of C we are helping to fund to the tune of, I think, about \$600,000 the NMR 600 at U of C. What was so nice about all of this is that we didn't see the universities fighting for the resources. What we saw is the University of Calgary saying: you know, Brian Sykes and his staff are an important resource to this province. Let's keep them here. We'll help with the NMR 800. But on the 600 we can work collaboratively again with the 800. So we are helping the U of C in that area.

Another area we're doing some funding in is something called a level 3 containment facility. There is not a level 3 containment facility in the province right now, so we are going to contribute, with the University of Calgary, to a level 3 biomedical contain-

ment facility. We are putting, I believe, about \$200,000 in that project, which is not a lot. But the funds are coming from the private sector, from other universities. As a matter of fact, that containment facility even before it is built has a \$1.5 million contract with the United States Department of Defense. Once again, collaborative, leveraging.

That's what we're trying to do with our funds: to collaborate with other agencies, to collaborate with the private sector, and to leverage our funds to get maximum potential. You know, we're not going to get, quite frankly, to be honest with you, 10 to 1 on every investment, but we would like to see 4 to 1. There may be no matching dollars. If the basic level of incentive or the basic level of exploration is important enough, if it's important for Alberta to have something, if there's no matching dollars because it's at such a basic level of research, then it is also worth while to fund that. Somebody, as the hon. Member for Edmonton-Glenora pointed out, has to fund that exploration level of research, and in most cases that has to be the taxpayer.

So we're working with this fund. As I say, it took a little while to get established this year with the committee and so on, to establish criteria, to establish the types of programs that we were going to accept, and then establish a protocol that these applicants would have to go through.

Thank you, Madam Chairman.

9:01

THE DEPUTY CHAIRMAN: Thank you.

Edmonton-Ellerslie.

MS CARLSON: Thank you, Madam Chairman. I have a few questions for the minister and his department. Certainly there's no doubt that I know something about the Alberta Research Council. I've supported their endeavours over the years. I don't know much about the Alberta Science and Research Authority, but I have it on good authority that they've also done an excellent job.

All of my comments tonight are from the perspective that we respect what they are doing there. We think they have excellent goals. But I have some significant questions in terms of how they're getting there. I just want more specific detail on how this process has been developed and how they come up with their numbers.

First of all, I'd like to deal with some of the comments that the minister made in his opening comments when he talked about there being three pillars of the economy that this department, I took from his comments, would be focusing on: agriculture, forestry, and the oil patch. Madam Chairman, it would be my opinion that there is a fourth pillar of the economy, that he has forgotten to mention in any of his 40 minutes of comments so far, and that would be managing the outputs from these three pillars in terms of an environmentally sensitive manner.

Now, I know that the ARC in the past has done some good work in this area. They've done I think some leading-edge stuff on waste management, on using by-products and having them refined, that kind of technology. I'm wondering if by the absence of the minister's comments, we're seeing them being forced to move away from that strategy, given that there's no fourth pillar here. So I'm wondering if you could address that for me and if you could tell me specifically in the list which projects are being undertaken currently, are in operation, or are being considered in the future that have an environmentally significant component or are completely driven as a reaction to environmental concerns, particularly those that fall out of the three pillars that he talked about.

Then you talked about the business plans, and you seemed to be



quite proud of the business plans that are coming out of this department. I'm sure I would be too if I could understand them. Having spent many, many, many years, 20 or more, evaluating business plans in the marketplace, without any additional backup document I find these to be virtually unreadable from a truly technical perspective and being able to determine the criteria that's been used to come up with these figures. If you could go over for me again, to begin with, who evaluates the business plans, I'd appreciate that. What criteria is used in terms of the evaluation process? It's a subjective process a lot of times. Sometimes formulas are used; sometimes there are specific industry benchmarks or targets. If those are there, could we have that information? In fact, if you have a standardized kind of form by which the business plans themselves are evaluated, could you table that information or send it over to us, certainly not with any sensitive information but a blank kind of form or some kind of a subset that you might have?

When you're talking about projects that are a success, how are you defining success, Mr. Minister? There are many, many different ways to measure success in this regard. I see that you've got some key performance measures here, which I'll address in more detail later on, but if this is all there is, then it seems a little weak on the benchmarking side. It also doesn't tell us the different levels of evaluation that projects have to go through in order to be deemed a success. Certainly there's got to be some sort of initial investment, initial research and development that's done. They go through that phase. They hit another phase where the project is ongoing. They successfully meet a set of criteria which kicks in the funding for the next stage. There has to be some sort of criteria involved in the process to deal with rejections, projects that are being rejected for whatever reason. Could we know what that is? Ultimately, a successful project, I guess, is where we come out to your mission effectiveness measures.

I'll go to those key performance measures now for a moment. When we talk about economic impact in measure A on page 347 of the estimates book, you talk about "incremental domestic and export sales." So define precisely for me, if you would, Mr. Minister, incremental in this particular context.

Going on to direct job creation, you're talking here about measures that lead to "improved performance of companies and their ability to hire more employees or to protect the jobs of existing employees." Now, that's a very subjective measure, Mr. Minister. Protecting the jobs of existing employees is an interesting criteria. Tell us, please, if you will, precisely what kinds of jobs you're wanting to protect and why you would be protecting them in the first place. You guys are the promoters of the free enterprise system, which means that the most successful, the guy who makes money, stays in business and everybody else falls by the wayside. So clearly that's not the criteria you're using here, or you wouldn't be protecting jobs, because that would be interfering in the marketplace. Surely two or three times this week the Minister of Energy has given us lectures on why your government wouldn't do that. So if you could define that for me, I would appreciate it.

Now, the ability to hire more employees. Do you take out of that component the natural kind of growth in the industry that would have occurred without input from R and D dollars of the government or any kinds of other matching funds that people find? Are you taking natural growth, economic growth, any other kinds of factors into account? I would think that to have a clear picture of the kinds of job creation that are directly attributable to R and D dollars, you would be taking out all of those factors, but I have a feeling that that isn't occurring.

When we get to mission effectiveness, economic impact/government investment, measure C, I quite frankly can't figure out where the numbers come from. Now, maybe I'm just particularly thick this evening, but they don't seem to particularly relate to the other measures that are there. I'm wondering if you could give me what the formula is for figuring that out. Certainly there is one.

When you're talking about the jobs that have been created or, I suspect, protected, are you talking about new jobs, or are these figures incremental over the years? So if you could give some definition there.

When you talk about measure A here, the economic impact, we see \$90 million in '95-96, \$117 million in '96-97, \$130 million in '97-98, accurate figures for the past two fiscal years, and a projection this year that seems reasonable given the kinds of increased dollars that you're putting into R and D. But the projections thereafter are quite subjective, and I'm wondering what criteria you used to evaluate them. Does this mean that in '98-99, '99-2000, and 2000-01 we're seeing corresponding increases in government support in these areas? If you factored that into this projection, what other kinds of support are you expecting from industry or the feds in this instance? These look quite a bit to me like shots in the dark, and I would hope that there's some sort of backup criteria to evaluate those. So if you could answer those questions for me, I would certainly appreciate that. Then I can better evaluate what's going on here. As it stands, there's really not enough information, and it would be very helpful for us.

## *9:11*

Now, I see how much money you're spending in this department in R and D. We had the Minister of Energy in estimates the other night, and he's got a significant increase in R and D in his budget, as do a number of other ministers. I'm wondering how you're integrating all of those different projects. I'm sure you've got a very nice long 20-minute answer for that, but certainly we need to know that in fact there is someone overseeing all of this so that you can actually hit number 4 in your mandate and core businesses, on page 323 of Agenda for Opportunity, which talk about developing and monitoring

a financial management plan for the science and research investments of the Government that maximizes returns to economic and social development, minimizes duplication and promotes cooperation.

So I'm hoping that it's right there, that you're taking a look at integrating all of the R and D that's going on throughout the government agencies. Certainly we'd like to know the answer to that, because of course growth is as hard to manage being in a stagnant market or in doing cutbacks. For sure we want to see that the dollars are spent as directly as possible in R and D projects that don't cause overlap or duplication or in fact become obsolete because of perhaps what some other department is doing.

Now I'd like to move on to the budget itself and go to line 1.0.2. Can you provide me some details, please, on the steps the Science and Research Authority is taking to increase the commercialization, specifically, of technology-based products and services, as you've stated in the authority's business plan? For sure that's been a concern for a long time, both at the university level of R and D and in these more commercially orientated organizations. You can do all the R and D you want in the world, but if you haven't got someone who can actually market it – find the market, get it out there, get it sold, and get the money back in – it really doesn't do you much good. I know this has been a focus of yours. I think that's an excellent focus, but I'd like some

specific criteria and identification of the steps that you're taking in this regard.

Back to Agenda for Opportunity. I see that you have a focus here on increasing government investment in science and research, and we see that this is one of the only budgets that has big increases. Do you have actual supporting evidence that leads you to believe that this a cost-effective investment? We see the numbers here that come out in terms of job creation and the ratios you've determined here, projected input, but dollar for dollar let's make sure this money is really well spent. I know you have that as a high priority, but I think we would like to see on this side of the House that it's also a high priority for us.

What independent assessments have been done to assess the calibre and limitations of your research infrastructure right now? I'm sure with the kinds of big dollars that are going in here, you've said that your intent is to build on the infrastructure that's in the province. Clearly there are some limitations; clearly there are some opportunities. Can you let us know in some degree of detail what they are? Even if you've done an inventory in terms of the limitations, what are you doing to improve them? We're certainly happy to give you all the credit in the world for progress made in those regards, and I think sometimes that it helps to know if we've got some holes out there. If not, that's good to know too.

On page 323 you list one of the core businesses as being to conduct an annual review of all Government science and research policies, priorities . . . and recommend to Executive Council the amount of public money that [each] should receive.

So can you elaborate on what lessons have been learned from past annual reviews and what changes can be expected there? I think it's good you're doing an annual review. I hope that you'll continue that in the future.

I think, too, that the focus of the annual review is very important in this context. Is it just to see that things are done leaner and meaner than they were in the year before, that your productivity figures are up from the year before, or are you identifying that what's happening in the organization is the smartest thing to happen? That doesn't always mean short-term cost-cutting or ignoring perhaps some infrastructure needs or ignoring emerging markets like Environment is in this province and globally. So if you could identify those and give us that information I would appreciate it.

Since the authority has established a task force here on technology, can you just explain to me why we need to maintain a separate task force and a separate Science and Research Authority? You may have done this before for our Member for Edmonton-Glenora, but I haven't heard it, and I'd like to know. It looks on the face of things that this is overlap and duplication, Mr. Minister, and I'm sure that you can let us know that that isn't true and that there's some really good justification for that being in place.

Can you tell me, please, what specific time lines you've got for developing the implementation of the strategy that you've got contained in Sustaining the Alberta Advantage? Really what changes and improvements will we see in the upcoming fiscal year? I think you've touched on a few of them tonight in sort of an overall sense. Do you have a list? Could we see it? That would be helpful.

Also, Mr. Minister, what process will the department be using to develop the strategic plan for information technology? Will industry stakeholders be involved in this process? Also, I want to know: is the strategic plan going to be a static kind of plan, or is it a plan that you'll be reviewing with your board on a monthly, quarterly, semiannual basis, upgrading, adding to depending on what happens out in the marketplace, the developments you've had in your own organization? Are we taking a look at something

that you're developing now and it's going to be a one-, three-, five-, or 20-year plan that has little room for adjustments in it?

I guess what I'm really asking is: do you have a generic strategy overall that is quite target focused? I see that you have a generic strategy in terms of building a framework and infrastructure for R and D in the province, but I don't see that falling out in more specifics. Strategic planning is just the implementing of the actual tactics. A generic strategy that is a flow-through strategy that can be updated on an annual basis or a semiannual basis I think is important to be addressing. So if you could just clarify that for me I would appreciate it.

I'm interested in this context, too, if you could comment on the status of implementing your 31 recommendations made by the Science and Research Authority in the report The Commercialization of Biotechnology in Alberta. I'm wondering if there are any improvements in the functioning of this industry as a direct result of this study. I'm hoping that that has happened. If you can give us that information, it would be very beneficial.

Do you have any other initiatives planned in this area, Mr. Minister, that are not contained in the report? Are there going to be any updates to this report? Are there any other reports in process now that we can look forward to seeing and reviewing? I think that would be good information for us to know.

From your perspective also, Mr. Minister, could you comment for us on the results of the study that was initiated by the Health Research Task Force. Once again I'm quite interested. I don't fully understand how these are integrated. Is this what the Alberta Science and Research Authority is doing? Is this part of their mandate, to take a look at all of these? You're saying yes; that's excellent. Then can you comment on the results, and can you talk about the specific changes that you're going to be implementing as a result of the Health Research: A Strategic Opportunity for Albertans report? We're quite interested in what's going on there, and I'm sure you've got some interesting comments in terms of where you plan to take that. So that would be important.

*9:21*

That brings to mind a thought for me. I have been concerned that the Alberta Research Council will no longer have the focus to be able to work directly in research projects. If the Alberta Science and Research Authority is taking an overall view, trying to integrate all the R and D that's going on, it seems to some extent that those are two competing interests. So could you just explain for us exactly how it is that one is not going to be ignored or given precedence over the other one so that we don't forget in this expansion mode that you're in that the old R and D that was done there is good, that it's important to mesh all of the R and D that's happening in the different ministries together but not to lose focus of them? I think there may be some management problems in that area in the future. Probably you have a plan that will make that not occur, and if so, then could you just reinforce that with us so that we fully understand that there aren't going to be any problems coming up in that area?

Can you comment on the status of the recommendations that were developed by the technology research and advisory council in the science and technological activities overviews? Specifically I'm interested in the recommendation that the government should increase and maintain its research investment at \$300 million per year. I'm assuming that's before any kinds of matching funds that we may get from the feds. I would appreciate some comments on that.

Thank you.

THE DEPUTY CHAIRMAN: The hon. minister.

DR. TAYLOR: Thank you. I appreciate the comments. You've raised a lot of points, and I won't be able to respond to them all right now, but we will get back to you.

I'm going to respond to a number of them. One of the first comments I picked up on was the R and D integration and evaluation. As I indicated to the Member for Edmonton-Glenora, we have a committee of ASRA that evaluates R and D business plans and publishes these in an annual review. You asked about the differences: how have they changed? Well, I would encourage you to look at the first R and D business plan document review that was published and then look at this year's when it is published. You'll see substantially different changes in R and D business plans from departments after the review they got. The document is very honest. It recommends other changes as well. So I would encourage the member to take a look at that and see the differences, see the gains, see where R and D is going just in the period of one year because of the R and D business plans.

You had some questions about the calibre of the infrastructure and the funding that we're doing. I assume those questions are about due diligence and how we evaluate the funds and the proposals. Well, we did not want to create a large bureaucracy in my department, so one of the things we've done is that we're using others to do some of our due diligence for us. For instance, we know that when Brian Sykes gets a grant from MRC, MRC has already done a lot of the due diligence. So we can count on MRC or NRC or some of the agencies out there that are doing due diligence, look at their due diligence reports and evaluate them accordingly.

The third point that you mentioned was: what is the process for developing the IT strategy? Well, as I mentioned earlier, we have a committee chaired by John Brick. You questioned: is industry being consulted? Yes, member, industry is being consulted. As I indicated, over 60 interviews have been conducted of industry stakeholders. So the report will be written, and then we will be giving the report wide circulation. [interjections]

THE DEPUTY CHAIRMAN: Order please.

Mr. Minister?

DR. TAYLOR: I just wondered. Perhaps the minister of environment and the member would like to debate back and forth. [interjection]

THE DEPUTY CHAIRMAN: I'd prefer that you just continue, please.

DR. TAYLOR: Well, there's been some suggestion by a member on her side that they might like to be alone outside, but I would have great sympathy for Ty if that ever happened.

THE DEPUTY CHAIRMAN: Mr. Minister.

DR. TAYLOR: Sorry, Madam Chairman. That comment is withdrawn.

The process for developing the IT strategy. As I said, once we have the report done, member, we will be sending it back out to the IT community and asking for feedback. So both the academic and private communities are going to be intimately involved, if I can use that phraseology, in this process.

The steps in regards to commercialization and where we were moving. Well, from my perspective the most significant issues and items in regard to commercialization are the tax issues. Unless we get our tax policy straight, we will not have the opportunity to commercialize.

Let me give you an example of AHFMR, which spent about \$2 million in the development of a product in Alberta. As soon as that was ready to be commercialized, because of the fact that we were short of venture capital in Alberta, the product could not be commercialized in Alberta. The person and the staff have moved I believe to the University of Western Ontario, and the commercialization is being done in Ontario. So we need very clearly to have the proper tax policy if we're going to get commercialization in Alberta.

In fact, we have a report I mentioned earlier, the Healy report, which once again I would recommend you take a look at. It has 18 recommendations dealing with management and marketing issues as well as some of the financial issues. That whole report is about commercialization of technology, and it is an excellent report.

You asked briefly about the biotechnology commercialization report. Where is it? Yes, we have taken steps on that. In fact, before Christmas sometime we had a biotechnology dinner that we sponsored here in Edmonton. We brought in the biotechnology firms from across the province. One of the main recommendations of that report was to establish a biotechnology organization of private-sector companies and other individuals associated with biotechnology to have their own advocate organization. Because of that dinner we had and because of the promotion that we've done, the group outside government of biotechnology people is going to take that over and hopefully get a vital organization going.

A further thing you asked about was the Health Research Task Force. That is chaired by Jack MacLeod from Calgary. It is actually made up of three ministers: it's involving the minister of advanced education, it's involving the Minister of Health, and it's involving myself as minister of science and technology. As a result, it is a joint effort of the three ministries. My ministry happens to be leading them. We've had several meetings. There are good things happening. The committee is working, but there are no definite concrete results to report at the present time.

A lot of the other issues raised had to do with ARC. You raised questions about job creation, employment, and so on. Most of these new jobs that are created are as a result of new business opportunities. These new business opportunities come about not necessarily in new companies but in existing companies as well as new companies.

I can remember seeing a demonstration over at ARC not long ago by a young fellow that had created a new kind of stack for flaring that really cuts down on pollutants. That will be a new company, and that will create new jobs. Another example might be of Gienow Windows, which ARC worked with several years ago and helped them modernize their plant. There were new jobs created. Gienow is now one of the biggest window producers in the country, as I understand, and exports much of their product out of the country.

We get these figures, member, from the survey of customers. ARC actually goes out and asks customers. From there the customers respond. So we have very good measures of direct leverage.

There's a number of comments you did raise about ARC, which gives me the opportunity to talk about ARC for a few minutes. I would point out that ARC is in partnership with global leaders to advance the Alberta economy. The corporation's primary role is to provide science and technology that creates wealth and diversifies our economy. That's what I was talking about a little earlier, diversifying the economy to a fourth pillar, which I would call knowledge-based industries.

The other thing ARC is very good at is acting as an adviser to

small- and medium-sized industries and helping these companies bridge the gap between basic research and the marketplace. In short, the Alberta Research Council is a strategic investment for the government of Alberta in sustaining the Alberta advantage.

[Mrs. Gordon in the chair]

I would point out, if you look at the figures here, the budget for – unfortunately for some reason my pages aren't numbered, so I can't refer you to the page. But it talks about assistance to the Alberta Research Council, and that's \$25.363 million. Their budget is going to be well over \$50 million this year and may in fact hit \$60 million. Where does the other money come from? Well, it comes from the private sector, folks. What this should say to all of us is the value that ARC has to the economy of Alberta. If ARC can attract from the private sector more than double what it's getting from the government, that's something the private sector values.

*9:31*

I know myself as a businessman we're very careful where we invest our money and how we invest it in technology. You might think there's not much technology involved in the cattle industry, but I can assure you there is. We have a satellite marketing system. It's downlinked from Grande Prairie to Kansas, from the B.C. border to the Quebec border. So when we market cattle in our market as we did today, we have downlinks all across that wide area where people can actually bid live into our market on cattle. We looked at: what do we invest in technology as a businessperson? We invested in some technology that is, quite frankly, paying off very nicely for us. We made a good choice. But you don't as a small businessman have a lot of money to invest in technology, so you are very careful where you invest that. So that's the importance of ARC. When they can convince small business to over double their budget with small business money coming into ARC, it tells you how valuable that organization is to small business.

Quite frankly, it's very valuable to the Edmonton area. I'm not sure of the exact figures, but I believe there's altogether, if we include the Vegreville centre, someplace in the neighbourhood of 600 people working out there. The member did mention the importance of environmental research and seeming to indicate that we had perhaps backed off on that. I would say that is not correct. The Alberta Research Council, through the Vegreville centre, is actually increasing its budget and doing more environmental research out there than it has in the past.

One of the issues we will be working on with the Minister of Energy is global warming. I think that's a very important issue for our economy, and we have the opportunity at ARC to do some very, very exciting work.

MRS. SOETAERT: Lorne, let us have a question. Take a breather.

DR. TAYLOR: I believe I have some time left. I have a lot of important things to say, so I'll probably continue to use my time. Thank you for your suggestion though.

I would say that ARC is a key instrument of this ministry in implementing the province's science and technology strategies, and that's one of the reasons we're bringing it together in one board. We have at present two boards – and I can't remember if it was Edmonton-Glenora that mentioned this; I think it was. We will not be joining those boards officially till a year from this March. So that would be April 1, 1999. That's why in our

business plans it refers to ARC and ASRA as two separate entities. It has to for this year. The next business plan you will see will refer to them as one entity. So ARC is going to be a very key instrument in implementing the province's science and technology strategies. So when we bring ARC in as part of the policy organization, there will be a very clear connection between policy and operations. What are government policies in regards to science and research? ARC was part of the board and part of the organization and will very clearly understand the connection between government policies and actual operational research.

ARC also invests long term in scientific infrastructure required to support ongoing and future innovation and competitiveness. It establishes strategic alliances and partnerships with global leaders with potential breakthrough impacts and return on investment for the province. Let me give you an example of that. ARC has an agreement with Mitsui. ARC developed some coal-scrubbing technology. As you know, in other places where they have high-sulphur coal, there's a lot of pollution that comes out of the stack, so ARC has developed some technology that reduces that pollution substantially. So they've signed an agreement with Mitsui, and Mitsui is going to market that technology around the world. I can't remember what the figure was, but the initial payment on the contract it seems to me was someplace in the area of a quarter million dollars. Yes, a quarter million dollars. [interjections] I can't see that far. I just had to check the fact. [interjection] Yeah, that's what they have to do. [interjection] I don't know what that means.

MRS. SOETAERT: Time.

DR. TAYLOR: Oh, okay. That's only in athletic events, I'm sure.

They have developed this and Mitsui will, as they sell this, particularly in China – and all of you know that China produces about 18 percent of global warming. We might look at Canada, for instance, and everybody says: "Canada's got to do something. Canada's got to do something." Well, Canada as a total only produces 2 percent of the greenhouse gases. China produces 18 percent, and that is largely through their sulphur-burning coal.

MS CARLSON: So it's somebody else's problem; right?

DR. TAYLOR: Yeah, that's exactly true. Somebody else is a much larger problem than Canada is, much larger than Canada. Until those somebody elses become part of the solution, then we will not have a solution, quite frankly. [interjection] But that's exactly what I'm talking about: how we can help through developing the technology in terms of cleaning the smoke that comes out of these smokestacks. So Mitsui is going to try and market that technology into China, and if we can do that, we will help China reduce their impact on global warming. Hopefully, they'll get down to lower than the 18 percent.

As I pointed out, ARC works with a number of companies. ARC works with over 850 companies each year, and with the annual audit of these companies, there was an initial \$117 million contributed to Alberta's economy just this past year. The Member for Edmonton-Ellerslie asked about that: was it over a number of years, or what was the money referring to? No, it was \$117 million in one year. Last year it was on a \$23 million investment. So we're looking at roughly 5 to 1, a little better than a 5 to 1 return on an investment. If ARC can continue to work in that area and get that kind of return on a government investment, I mean, it's absolutely fantastic, and it recognizes the value of the organization to this province when we can, say, invest \$23 million

and get out \$117 million in return. That would be the same for any of us. As I said earlier, if we can invest \$23 and get \$117 in one year, all of us would be rushing out to buy that investment. I know I certainly would, and I'm sure many of you would as well. So we have to indicate to the public, we have to indicate to the members opposite, to the members on this side the value of ARC in terms of its contribution to our economy.

During that same year 730 jobs were created in Alberta as a direct result of this activity. So not only does it create, you know, \$117 million worth of economy, it also creates a lot of jobs. During '96-97 ARC exceeded its targets for economic impact. This trend is expected to continue, and as minister, I will expect that trend to continue. I will hold ARC's feet to the fire to make sure in fact that it does continue. In fact, if you look at ARC's targets for the coming year, they're looking at an economic contribution – actually, this is through its partners – of \$140 million and 800 jobs. The member opposite wondered: well, how do you measure that? Are these accurate measurements? Yes, when we measure it, they are accurate measurements, because we do audits of the companies we are involved with.

So ARC will achieve its goals and targets through several key strategies. We'll enhance its market focus on technology development and commercialization. Something else the member asked about was technology commercialization. In fact Karen Beliveau has just recently been appointed as head of the technology commercialization office at ARC. Karen is a long-time employee of ARC and needs to be congratulated and encouraged in her job. I am positive that she will help and ARC will help Alberta's economy by developing new science and technology opportunities within Alberta's industries.

9:41

We've got a number of examples of where ARC is working with the economic drivers of our province, what I call the three main pillars of our economy: agriculture, energy, and forestry.

AN HON. MEMBER: And manufacturing.

DR. TAYLOR: And manufacturing, yes. Thank you.

The example of this is working in the area of sustainable fibre initiative. What we're doing here is aimed at improving the utilization and sustainability of Alberta's fibre resource and establishing a capacity to use agricultural fibre such as straw. As people on our side who are more familiar with agriculture than members opposite will remember – other than at least one member who is a proud member and has been a proud member of 4-H and apparently knows how to ride.

Unfortunately my time appears to be up. I'm wondering if I could request unanimous consent to continue, Madam Chairman.

THE CHAIRMAN: The hon. minister has asked for unanimous consent to continue. Agreed?

SOME HON. MEMBERS: Agreed.

THE CHAIRMAN: Opposed.

SOME HON. MEMBERS: No.

THE CHAIRMAN: I'm sorry, but it's defeated, hon. minister. The hon. Member for Edmonton-Calder.

MR. WHITE: Thank you, Madam Chairman. The minister

should recognize that the reason for these meetings is to question the minister and not listen to a lecture. Perhaps he could in future write some of his notes to us so that we have them beforehand so that we can ask some questions of the minister and can get a bit of a dialogue and therefore have some enlightenment on some of the things that he talks about for the public.

DR. TAYLOR: I'd enlightened you as much as I can. If you're not enlightened already, there's no hope for you, Lance.

MR. WHITE: Well, maybe the minister can answer this question: why? Why is there a ministry at all? I mean it doesn't seem to me that . . . [interjection].

THE CHAIRMAN: Edmonton-Calder has the floor.

MR. WHITE: He lost his 20 minutes here, and he keeps interrupting in mine. I didn't interrupt at all.

THE CHAIRMAN: Hon. member, go ahead and ask your question, please.

MR. WHITE: Thank you kindly, Madam Chairman. That is an obvious question to ask. I mean there isn't any other ministry of this in Canada, that I'm aware of, other than the federal government. To spend \$250,000 on no research at all but simply keeping a minister in office: I think it deserves an explanation. This is by far the smallest ministry and the least defined, of course. If the minister really thought there was some reason to have a ministry, he probably would have said so in his earlier remarks. But he seems to skip over that obvious one, which points out the reason for having the opposition question.

I gather there are between three and four boards that report to him, because we don't know TRILabs, whether it has a board or not, and I would think there would be some kind of explanation forthcoming. I should like to know what the successes of the office are since the ministry was formed under this member and what he thinks the priorities should be for his office; not for research in general but for his office. If he intends to represent the people in this case, then he should be able to answer those quite easily. I'd like to move to the goals of the Alberta Science and Research Authority and ask what requires a specific minister to oversee a board such as this when the board fundamentally reviews applications for grants, I suspect, on a technical basis and I suspect also, from what I've read on their application, commercialized. As well, it says in the goals here, to enable them to review all government science and research projects, priorities, and programs. Well, I presume that means that they go into the other departments like Energy and Environment. I don't know of any others that do, in fact, have research arms, but I suspect those two at least will have arms that need review. Beyond that, I'd like to know what the rationale is for the minister to review the reviewers.

Then to understand the Alberta Science and Research Authority, what amount of their resources, aside from the resources they're granted – that is, their administrative resources – goes to either the grants administration or the review of these government offices. Because it seems to me there could be a great deal of duplication here, which this government says doesn't occur.

I wonder, if there are these research arms in the other departments, why they simply wouldn't be consolidated. I'm sure there's some rationale for not being consolidated, and I'd like to hear it. I'm sure it must be discussed now and again.

Also, I'd like to know how the development and monitoring of

“a financial management plan for the science and research investments of the Government . . . maximizes returns.” How does one measure the maximizing of a return? Having a science background myself, “maximizes” is not one of the words one would use; optimizes, perhaps, but not maximizes. I wonder how that’s done and how in fact it’s measured. Although I do see some attempts at measurement here, certainly there isn’t anything quantitative at all.

Then, too, I’d like to understand: “promote communication on matters related to science.” I generally read what I receive, and I have received painfully little over the last couple of years from this part of government. I spend a great deal of time reading technical documents because that’s my area of interest. I just sent a book back to the library today on inventors of Canada. Quite frankly, I didn’t see any contributions in that book from this province. Mind you, it was limited to quite famous ones, Banting and Best and others in many, many, many fields of endeavour. I would like to see something such as that. I know a number of success stories in the science and technology areas of this province, not all in the pure science, some in the application of the science and sometimes of the selling of the applied science, that in engineering.

I’d also like to ask how one would “encourage the science and research community and infrastructure in Alberta to attain international excellence.” Encouragement: is that a cheerleader? Tell me how this is this done. I mean, you don’t just sort of go out and say: okay, guys, go out and do it. There has to be some kind of plan here and some kind of expenditures of money. Or is that what it’s referring to? Is that what we’re talking about, the grant money? If you’re encouraging people to be excellent in their fields internationally, money certainly would help.

I’d like to move to the performance measurement of the Science and Research Authority. I would like to think there is some kind of quantitative measure. Although when your business is encouragement in giving out grants and evaluating government departments, I suspect it’s rather difficult to quantify that. In fact, it would be foolhardy to try in some areas. Certainly if you can’t do it quantitatively, then do it at least qualitatively and write a paragraph or two about the kinds of successes that have been occurring in the area, those that the authority would have some influence on. I would think that would not be that terribly difficult to come upon.

### 9:51

I’d like to move now to ARC. First of all, I’d like a further discussion of why ARC does not seem to involve itself at all in the pure science, or the basic science or fundamental science. As the minister would have come to know now, I’m sure, having had the benefit of a great deal of discussion with those in the field, science is built on these fundamental blocks. It may be mundane to some, but the discovery of all the properties of water certainly was a building block for so many other sciences. Without these blocks and without funding for these blocks, which ARC does not seem to provide – there is no listing here anyway of what the authority’s funding is for. It appears to me that at least ARC does not do any of that. So how is one to try and get the application of science and apply this science and have an evolution and a flow of science if you don’t build the fundamental building blocks down below, an encouragement of those things? I suspect the minister should be spending some time on the funding or the lack of funding in the pure science areas, the basic science areas, at the universities of this province and understanding that they are in fact underfunded. Now, if the minister is going to be successful at all, they should be funded too. I think one of the things he should be interested in is that if he is to have a ministry, then maybe that’s

one of the areas where he should have some influence. [interjection] Madam Chairman, there seems to be some kind of scientific aberration on the other side, some ministerial flap over there. There are gums flapping and ears flailing and glasses clicking, so I’m having difficulty understanding what he’s trying to say.

There are a couple of other areas, before I do take my seat, that I’d like to speak on too. I’d like to know the broad areas of ARC’s intended areas of specialization. They have been known in the past in a number of areas that I know of, and I would like a brief description of those. I’m sure the annual report, which I wasn’t able to review this year, would have some of them, but if that’s the intent of the current direction, by extension are we to be able to just say that that’s going to be extended in the future? Or are there some other changes there?

There is a mission effectiveness indicator on page 347 which leaves me a little bit aghast. I mean, coming from science, there aren’t any indicators that continually head in one direction. If there is, somebody has been juggling. You look at these numbers in the middle of the page; they continually ascend. Well, I’m sorry; the world is not like that, as the Energy minister will know with his energy prices. There are humps and hollows, and we can understand that. So I look at these indicators and say: well, from where did this come? I guess I’m from Muskogee and I’m an engineer and I say: look, the fundamental elements of a building of these numbers are not here; they’re not discussed or disclosed. I’m willing to believe that, yes, ARC has been and will continue to be effective, but I’m afraid this leaves me a little cold and feeling that perhaps there’s a little bit more snow in these numbers than there is actually hard evidence to prove out these numbers. Now, I can be convinced. Perhaps that’s for another time and place, but don’t try and just throw out numbers and expect everyone to believe them.

The last area I’d like to speak on are these tax incentives. If these tax incentives, in the minister’s own words, are not about money, why weren’t they about money five years ago? I arrived in this House, and it was one of the first speeches I delivered in talking to members opposite and it fell on worse than deaf ears. It was: oh, we can’t do that; it’s spending money. It’s all a bunch of deleted expletives. Now, wait a minute. I mean, you can’t just say it was bad then and it’s good now. If it is good now, which I believe it is – yes, it’s a good end and a reasonable end, and I think the minister is probably working to that. It would be one of the justifications for having a minister in this office if he can accomplish something like that. If that’s the case, if you are going to accomplish that, then admit that you were in error from your Deep Six days five years ago, that this was not something that was high on your priority list – chop, chop was on the priority list – and now this is a reasonable thing to do.

I would think that if the minister is truly successful to his claim of \$117 million – if in fact he can bring in some tax incentives to the extent that he thinks he can, then I can’t see how you can’t move from your approximate number of \$117 million for last year to \$130 million this year and then \$140 million, increments of \$10 million there. It’s pretty, pretty light. Either you’re underestimating the value of incentives by your numbers here or you really don’t expect to be able to get them through your cabinet and caucus and then have them implemented as they should be.

The very last item on the list I’d like to ask about is: how is it that this questionable office of this ministry, anyway, can move from \$226,000 to \$250,000 in one year and then still purport to be a frugal office? Quite frankly I have a little difficulty with a minister that has yet to justify his existence as a minister in this House and the price of it going up.

There are some questions surrounding the Barriers to Technology Commercialization in Alberta, and in this fiscal year they

centre around the implementation of the recommendations of that report. How many do you expect to implement, and what will be the cost of those implementations?

I'd also like to know about discussions you've had and how successful you are with the Alberta Treasury with the tax measures you expect to bring forward in the near future, I understand.

I'd also like to know what mechanism the minister is using to select members for the international expert review panel, which, of course, is statutorily required for ASRA. Will in fact there be any members appointed from Alberta's research community, and will you allow that community to in fact nominate those people to do that review? Will the minister commit to report the findings of this international expert review panel and therefore make them public in this House? I'd commend the minister if he'd do that. It certainly would prove openness and accountability.

The ARC had business plans that project about a 9 percent increase due to the sustainable fibre initiatives. Can the minister comment on the development plans for the project and the commercialization of this technology and how feasible it is for this commercialization?

**10:01**

You've undertaken some global benchmarking studies in the business plan. How much of that work will be contracted out, and how much will be able to be done internally? When would the minister expect that to be completed, and will he in fact make those documents also public?

What specific initiatives will ARC be focusing on in pursuit of their strategy to develop the new science and technology opportunities in support of Alberta's three key economic drivers, which the minister mentioned before as agriculture, energy, and forestry?

Can the minister comment on what progress has been made in locating a private-sector partner for the human health biopharmaceutical initiative?

How much in royalties has ARC received from Glycomed of California as result of commercialization of applied cancer research and formerly conducted for Chembiomed?

Thank you for your time, Mr. Minister, and for listening intently as you have done. Thank you, Madam Chairman.

DR. TAYLOR: Madam Chairman, I'd like a chance to respond.

THE CHAIRMAN: Hon. minister, we have indications that there's one more person over on this side that wants to speak.

MRS. SOETAERT: She passed it to him because we were afraid we wouldn't get up, Madam Chairman. Thank you very much.

THE CHAIRMAN: Hon. minister.

DR. TAYLOR: All right. Well, Madam Chairman, since there was no content and little substance in the political polemic from the Member for Edmonton-Calder worth responding to, I move the committee rise and report progress.

THE CHAIRMAN: Having heard the motion by the hon. minister to rise and report progress, are you agreed?

HON. MEMBERS: Agreed.

THE CHAIRMAN: Opposed? Carried.

[The subcommittee adjourned at 10:03 p.m.]

