



Legislative Assembly of Alberta

The 31st Legislature
First Session

Standing Committee
on
Alberta's Economic Future

Ministry of Technology and Innovation
Consideration of Main Estimates

Thursday, March 14, 2024
9 a.m.

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Standing Committee on Alberta's Economic Future

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Loyola, Rod, Edmonton-Ellerslie (NDP), Deputy Chair

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Standing Committee on Alberta's Economic Future

Participants

Ministry of Technology and Innovation
Nate Glubish, Minister
David James, Deputy Minister

9 a.m.

Thursday, March 14, 2024

[Mr. Getson in the chair]

**Ministry of Technology and Innovation
Consideration of Main Estimates**

The Chair: I'd like to call the meeting to order and welcome everyone in attendance. The committee has under consideration the estimates for the Ministry of Technology and Innovation for the fiscal year ending March 31.

Just for edification, *Hansard* is here today. They're going to be running their microphones. They'll be recording everything. We have things broadcasted live and streaming, all that good stuff. It's just like being in the Leg.

What we'll do is start with introductions. I'm Shane Getson, MLA for Lac Ste. Anne-Parkland, better known as God's country. I also have the opportunity to chair this meeting. We'll do our introductions going to the right. Minister, once we get to you, if you want to introduce the folks at the table you have with you.

Starting to my right.

Mr. van Dijken: Good morning. Glenn van Dijken, the MLA for Athabasca-Barrhead-Westlock.

Mr. Cyr: Scott Cyr, MLA for Bonnyville-Cold Lake-St. Paul.

Mr. Wiebe: Ron Wiebe, MLA for Grande Prairie-Wapiti.

Mr. Stephan: Jason Stephan, MLA for Red Deer-South.

Mr. Glubish: Nate Glubish, MLA, Strathcona-Sherwood Park, Minister of Tech and Innovation. I'm joined by David James, my deputy minister; by Maureen Towle, my assistant deputy minister of innovation, privacy, and policy; and Richard Isaak, senior financial officer.

Mr. Ellingson: Court Ellingson, MLA for Calgary-Foothills, the beautiful suburban area of Calgary.

Mr. Deol: Good morning. Jasvir Deol, MLA for Edmonton-Meadows. Thank you.

Member Loyola: Rod Loyola, Edmonton-Ellerslie.

The Chair: Perfect. Appreciate that.

We have one member, it looks like, joining virtually. If we could have you introduce yourself. Turn your video on and your microphone and go ahead, sir.

Mr. Wright: MLA Justin Wright for the charming constituency of Cypress-Medicine Hat.

The Chair: Perfect. Hopefully, you'll get seated so we don't have *The Blair Witch Project* later on in the proceedings. [interjections] Well, there has to be some humour here, guys. We've got to have some fun.

I'd like to note the following substitutions for the record. Mr. Wiebe is in for Ms de Jonge. Oh, he's in person now. This works out even better. Mr. van Dijken is here for Mr. Yao.

As I noted earlier, *Hansard* is running the items here. Proceedings are live streamed to the Internet and broadcast on Alberta Assembly TV. Audio transcripts and meetings can be accessed via the Legislative Assembly website. Now that we don't have any remote participants, we're good there. Please set your

cellphones to the least disturbing settings that you have. Hopefully, no ringers are going off during the meeting.

Here's the fun part. I have to read in all the items for the record on the process of how this works here today. Hon. members, the main estimates for the Ministry of Technology and Innovation shall be considered for three hours. Standing Order 59.01 sets out the process for consideration of the main estimates in the legislative policy committees. Suborder 59.01(6) sets out the speaking rotation for this meeting. The speaking rotation chart is available for the committee on the internal website, and hard copies have been provided for everyone at the table here.

For each segment of the meeting blocks will be combined only if both the minister and the members agree to the terms. If debate is exhausted prior to three hours, the ministry's estimates are deemed to be considered in the time allotted in the main estimates schedule, and the committee will adjourn. Should members have any questions regarding the speaking times or rotation, please e-mail or message the committee clerk about the process. The gentleman sitting to my left: if you catch his attention, he might be able to get to you there as well.

With concurrence of the committee I would like to call a five-minute break near the midpoint of the meeting; however, the three-hour clock will still continue to run. Quite frankly, you guys get a chance to leave; the chair does not. There is a certain capacity and a biobreak that may be required. I would really like it if you guys would consider that. Any concerns with taking a five-minute break partway through?

Mr. Glubish: That'd be great.

The Chair: Thank you. I appreciate that very much.

With that, I'll just kind of set the tone for how the meeting is running here. I run my meeting so that it's not like the Legislature. I'm not much for that bantering or heckling. That won't be permitted here. Obviously, we want to make sure that everyone can hear each other. What makes it really easy for the chair is if you reference the documents: the strategic plan, government estimates, fiscal plan, ministry business plans within the current calendar year. This thing would be, you know, within under consideration. It makes it way easier to go back and forth. I will participate if I hear language that starts to bring us off track. We'll make sure we bring it back, and we run this meeting like a boardroom. Does that work for everyone? Perfect. I appreciate that. There we go.

Ministry officials who are present may, at the direction of the minister, address the committee. Ministerial officials seated in the gallery, if called upon, have access to the microphone in the gallery area and are asked to please introduce themselves for the record prior to commenting.

Pages are available to deliver materials between the gallery and the table. Attendees in the gallery may not approach the table. Space permitting, opposition caucus staff may sit at the table to assist their members; however, members have priority seating at all times.

Points of order will be dealt with as they arise, and individual speaking times will be paused; however, the three-hour shot clock will continue to run.

Any written materials provided in response to questions raised during the main estimates should be tabled by the minister in the Assembly for the benefit of all members.

Finally, the committee should have the opportunity to hear both questions and answers, so, again, no heckling while we're doing this. Debate flows through the chair at all times. I'm awfully lonely up here. You'll probably find a kind face nodding and smiling back at you so we can keep things on the rails. Cast me a glance once in

a while. If I do get you guys locking horns, I'll pull you back to your attention and direct you back through the chair.

With that, now that we know the rules of engagement, Minister, it's open to you for the first 10 minutes.

Mr. Glubish: Well, thank you, Chair, and welcome, everyone. I'm really excited to be here today to talk about Technology and Innovation's 2024 budget and to present our estimates for the upcoming fiscal year. Let me just start by saying that there has never been a better time to be in tech in Alberta than today, and we're just getting started. Alberta's tech sector is growing faster than ever before. We have more tech companies than ever before. They are growing at a rate we've never before seen. They're raising more money than we've ever seen. You know, for the first time in my lifetime we can now say we've got 10 or 12 tech companies that are worth a billion dollars. This is really exciting.

I still remember when I started as a venture capital investor in 2004. I look at what the tech sector in Alberta looked like at that time and I look at what it looks like today, and there's no comparison. So when I say that there's never been a better time to be in tech in Alberta than today, I really mean it. The numbers speak for themselves. Let's just look at our venture capital numbers. If you look at 2017, we had about \$30 million invested into tech companies in Alberta; in 2022 we had \$729 million invested into tech companies in Alberta. That's exponential growth.

In 2023 we were holding steady just above \$700 million at a time when the Canadian market was down by 31 per cent. We are bucking the trend. It's because something special is happening here in Alberta in our tech sector. You know, you don't have to just take my word for it; consider what the Canadian venture capital association said in their year-end report, that in Alberta the investment activity has not only tripled, but also the investment value has nearly hit 7X since 2018.

The CEO of Ambyint, who left the province a few years ago, has recently returned, saying: the tech ecosystem in Calgary is alive and well; from an innovation, talent, and investment perspective it made absolute sense for our scaling business to return. He's not wrong. Start Alberta has calculated that Alberta saw more than \$500 million in clean tech investment in 2023. That's also one of the reasons why Startup Genome has named both Edmonton and Calgary the top clean tech ecosystems in North America.

My friend Nitin Rakesh from Mphasis, the CEO at Mphasis, has said: Calgary is attracting growing attention as a thriving technology ecosystem, and the launch of our new centre reinforces Mphasis's commitment to investing in this market, where we see considerable growth potential. For those who don't remember, we were able to attract Mphasis to come to Alberta a couple of years ago, and their plan is to build their North American headquarters here with a thousand people, high-paying tech jobs. This is great news. It's growing our economy, it's diversifying our economy, and it's adding more momentum to our tech sector.

And, of course, how could I not mention the largest tech-sector investment in Alberta history, the AWS western Canadian hub, which is likely the second-largest investment made in this province in several decades behind only Dow Chemical? That came online in December. This is over \$4 billion being invested into a data centre just outside of Calgary. It's so exciting.

As I mentioned already, we've got several tech unicorns, billion-dollar tech companies in Alberta. We've got Neo Financial, we've got Benevity, we've got Shareworks, we've got RS Energy Group, Parvus Therapeutics, many, many more and several that are growing quickly and are likely to reach that level soon: companies like Helcim and Jobber and Attabotics and AltaML and many more.

Another great piece of evidence of our tech sector being in a strong position is that PitchBook has named Calgary the 12th-strongest and -fastest growing tech ecosystem in the world. Let that sink in for a second. We've got so much to be proud of in Alberta. Start Alberta – I mentioned them before; it's a think tank funded by our tech sector – has determined that in 2023 Alberta raised more than \$1.2 billion in total private equity and venture capital. According to the Canadian venture capital association Alberta remained flat in venture capital investment while the Canadian market declined by 30 per cent, as I said earlier. Like, we are a fast-growing tech sector. We're booming. We're resilient, and even though there are headwinds in the global market and in the Canadian market, we are resisting those headwinds. So that gives me great confidence.

9:10

Let's also talk a bit about Edmonton. We don't want to forget about Edmonton. Edmonton tripled its VC investment from the year before, from \$58 million to \$188 million, and some of the biggest raises last year province-wide came from Jobber and Eavor. Collectively they raised more than 250 per cent of the entire province's venture capital raised in 2018, just two companies. So we're making great progress.

As a government we fund and support a number of accelerator programs designed to help Alberta start-ups scale and grow to a global level. We've got the Alberta Catalyzer, which is one of those accelerators, and they just announced their ninth cohort of applicants this week. All told, more than 230 companies have graduated from the five accelerators funded by the government of Alberta.

As we lead the implementation of several province-wide strategies that position Technology and Innovation as the driving force behind the growth and diversification of Alberta's economy, we of course have the Alberta technology and innovation strategy; we have the Alberta broadband strategy; we have the Alberta data strategy.

Technology and Innovation: we're also the engine for government innovation, working with other ministries to design and develop better, faster, and smarter services for Albertans. It's important to remember, like, we've got two key focuses as a ministry. There is of course trying to make Alberta a destination of choice for innovators and for investors who want to build new technologies here and to grow those technology companies, but we also are the lead ministry focusing on applying technology inside of everything we do in government so that we can deliver a better experience for every Albertan and make government perform in a more sustainable fashion.

A good example of one of the things we've been doing in that regard is our investment into govlab.ai, which is a partnership with Edmonton-headquartered AltaML, which is a world-class tech company that specializes in AI commercialization. We're working together, where we bring some problems we have in government that we want to solve that could benefit from using AI and they bring the senior-level AI expertise. Together we are able to rapid-prototype solutions, test things quickly, and find really exciting ways to solve problems in new ways with technology.

A great example is a tool that we're developing for the Ministry of Education that helps to better and more accurately predict enrolment growth across the province so that we can use AI to better plan where the next schools need to be built. I'll give you an example of why this is important. Currently province-wide our utilization rate of our schools is about 71 per cent, and for every 1 per cent increase in utilization we're able to save \$20 million annually forever. Put that into context. That's the equivalent of

building a new school for 300 kids every year for free. So if we could reach our target goal of 85 per cent utilization, that frees up enough money to build 14 new schools every year for free. How cool is that? That's the power of technology, and that's why the work we're doing with govlab.ai is so important. We've got many other examples of what we're doing with AI, and I'm sure we'll have an opportunity to get into that during the estimates.

Beyond AI, we're also looking at other ways to accelerate the adoption of new and emerging technologies across government. Some of that even just is as simple as moving away from paper-based systems. We've recently seen that with some of the work we're doing in the Ministry of Environment and Protected Areas with the digitization of water licences, which is going to really help us as we tackle the upcoming drought season.

We also manage the cybersecurity needs for all of government, which is a significant component of delivering trustworthy and secure online services. We're increasingly sharing our cybersecurity expertise with Alberta-based organizations as a means to protect all Albertans and their businesses from cyberattacks. Our leadership in cybersecurity is evident from the recent announcement by Fortinet that they are going to be building a facility in Calgary with a partnership at SAIT to train talent. This was a great, exciting announcement we had just a week or so ago. You know, Fortinet is going to be investing millions and millions of dollars to expand their presence in Calgary. This is going to create about 80 full-time, high-paying tech jobs, and it's just yet another example of the companies that are choosing to expand into Alberta or call Alberta home. As I said, there's something really special happening in Alberta's tech sector.

Our ministry also continues to work to protect the personal information and privacy of all Albertans. As I stated in an announcement in January, we are going to be giving Albertans the strongest privacy protections in Canada and the strictest penalties for privacy violations in the country. This is something that is very important to me. As we begin to do more and more with technology, we absolutely need to double-down on privacy. That is nonnegotiable. Make no mistake, Albertans' privacy protections are a critical priority of our government.

Tech and Innovation's consolidated expenses for Budget '24 are \$937.8 million. I know this will probably come up later, but I just want to point out that while this may appear to be a decrease year over year, it's really a function of reprofiling of broadband funding. In fact, if you look at everything outside of broadband, our budget is actually up in a meaningful way, and that's our way to demonstrate to Albertans that we're serious about innovation. We're serious about modernizing government services.

I look forward to discussing this in more detail.

The Chair: Thank you for that, Minister, for the opening remarks.

Now we're moving into the block time. Just for folks in the room the meeting time is on the board there in front of you. You'll also see the block time and then the speaking time. The option goes to the Official Opposition first. If you want block or combined, let me know, and then we'll see where their agreement goes. And then, just for consideration, no more than 10 minutes at a time for speaking at the first start, and you can cede time within your first blocks as well to other members of the table.

Over to you, sir.

Mr. Ellingson: Thank you, Mr. Chair. I would request shared time with the minister if he's open to that.

The Chair: Okay. Over to the minister.

Mr. Glubish: I think we'll go with block time. Thanks, Chair.

The Chair: Block time it is.

Please proceed.

Mr. Ellingson: Well, thank you, Mr. Chair and Minister. This is weird: looking to the chair, looking to the minister at the same time. More complicated than Thanksgiving dinner. We are here for a limited amount of time. I do have a few questions, and I do wonder if the minister, through all of this, would commit to tabling responses in the Legislature if we didn't get a chance to kind of answer everything today. I'll just leave that there.

Echoing the chair earlier with respect to tone, I am kind of building off of my predecessor, Deron Bilous, and the tone that he set with the minister in going through this and just looking for, you know, digging a little deeper into the budgets and answering some of those questions. I think that, for myself, being my first time through estimates is maybe a good lens for the public out there that might be looking through all of the documents and just trying to connect the dots between the multiple budget documents, the tech and innovation strategy that the province has, and seeing whether or not we're connecting all of those outcomes and providing some clarification.

Through the chair, I do want to open by saying to the minister that I think we both agree that there are incredible opportunities for technology and innovation in Alberta. I, too, have been working in the tech and innovation space for a while, and I think there are incredible opportunities in front of us. Tech: as the minister did outline, too, we have the opportunity to both enhance and expand services for our residents as well as grow our economy and create great-paying jobs for Albertans. Like the minister, I do hear success stories every day from entrepreneurs and service providers. I also hear some of the challenges that we face and how we might address some of those challenges. I was very thankful last week to have constituency week in connecting with service providers; urban, rural investors; entrepreneurs from a number of sectors.

We do have an ever-evolving and growing technology sector, and of course that requires us to respond to changing needs. I will look in the budget for maybe new and innovative programs that are helping us kind of grow into the future. I am going to start out with some broader questions, and I hope – as we go through, I will be linking to the budget documents, but I am a guy who has a history of, like, writing strategies and adhering to strategies, so I'm going to link those back to the strategies and the mandate letter of the ministry also.

The minister may have already kind of, like, delved into the first question that I had in respect to the broadband funding and the reprofiling of the broadband funding, so this question I might morph a little bit just to ask to kind of dig a little bit deeper into that reprofiling. We do know that the budget of the ministry has had some significant variations over the last few years, that over the last couple of years it has been largely underspent. I think we've seen a couple of years of reprofiling in the budget, so maybe if we could just – on page 211 of this year's government estimates the forecast for the current fiscal year, I think, was \$803.32 million, but budgeting this year \$865.92 million. So, Mr. Chair, my opening question would be around the broad brush strokes that explain that \$145 million, the reprofiling of the broadband, and kind of, like, just some more explanation around that.

9:20

We can also see on page 211, the government estimates document, that that widest variation is in technology support and operations. Just to confirm that that technology support and operations is indeed for rural broadband, and if maybe the minister

can take some opportunity today to talk a little bit about why the kind of continued need to reprofile that funding, the challenges that we face in getting the money out the door. Maybe just some kind of, like, further clarification around that.

Mr. Chair, if I could just dig a little bit further, there are a couple of other much smaller kind of variations in the budget, broadly speaking, that I'd like to look to. Just wondering if we can kind of talk about, with that tied to the reprofiling of the broadband – I'm wondering if the minister can assess some of the risks that go into that budget preparation, the awareness of what it is that might be blocking the ability to spend that money, whether or not there are some contingencies in the plans for the ministry to overcome those risks so that those funds can get out as committed.

I also just want to make sure, as we talk about the reprofiling of those funds, that they are still being used to deliver on the outcomes of the ministry and that we're clear in going forward that we're kind of stabilizing that spending and getting a little bit closer to, like, spending what is budgeted and being able to stick to that.

Now I'll look at item 1.3 on page 211 of the government estimates. This government has made clear their commitment to holding budget increases to no more than inflation plus population growth. If I look at that item 1.3, that inflation population growth would be about 6.2 per cent, I think, and we can see that the operating expenses for the ministry are increasing by about \$700 million. Mr. Chair, this is an increase of about 15 per cent to the operating expenses for the ministry. Prior to this, the couple of years prior to this, the operating expenses for the ministry were quite consistent year over year, so this is a bit of a jump this year.

I don't see in the budget any indication of significant increases to programs or new program delivery in the budget. I also don't see anything suggesting significant increases to operating expenses or net-new programs coming from Alberta Innovates or Alberta Enterprise Corporation. Through the chair, I'm wondering if the minister can just talk a little bit about that increase to the operating expenses for the ministry. How many new FTEs, if there are new FTEs, included in these expenses? And what tasks might those FTEs be undertaking that were new tasks for the ministry that weren't there before?

Oh, I've only got two minutes left. Okay. Another question that might help with some further questions to come. On page 215 of the government estimates approximately \$152 million is allocated to interministry consolidations. The item is bracketed, which I believe indicates that the funds are disbursed from this ministry to other ministries. Through the chair, I hope the minister can kind of help us with that trail of bread crumbs of where the funds are going, which ministries those funds are going to, how much to each ministry, and how is the Ministry of Technology Innovation ensuring that those funds are used efficiently to deliver on the outcomes for Technology and Innovation?

And maybe to close out this block time with – I've got a couple of minutes left, Mr. Chair. I hope the minister can also look a little bit – these are also smaller variations – at items 4 and 5 in the government estimates, digital design and delivery and cybersecurity. I hope the minister can provide some information on the activities that are undertaken in these items. Are there any new programs or projects that are being initiated on these items for '24-25? Are there any additional FTEs or contracts that are included in these items? And just to make that linkage, I believe that number 4 in the government estimates is linked to outcome 1 in the business plan, and number 5 in the government estimates is linked to outcome 2. If the minister could just confirm those linkages and how the activities deliver on the business plan.

Finally, if I can squeeze it in – oh, I still have one minute left – the budget allocation for 2.1 in the government estimates is

declining by about \$30 million. If this is linked to outcome 2 of the business plan, is this decline in funding in any way going to impact the ability to achieve the objectives in outcome 2? I just want to make sure that we're not risking anything where we were hoping to achieve those outcomes. For me, at the end of the day, I look for the key performance metrics and the outcomes that we're trying to achieve and just want to make sure that variations in funding aren't impacting the stated outcomes that we want to achieve, that we're just sticking to those outcomes.

With that, Mr. Chair, I guess that ends my first block, and it's back to the minister.

The Chair: Yes, sir, and well done, MLA. If you're following in the footsteps of your predecessor, he definitely had the right tone. Very much respected by the chair on this end as well.

Minister, back to you, sir.

Mr. Glubish: Thank you, Chair. Some great questions in there. I'll do my best to get through all of them. The good news is that we've got three hours, so if I don't get through all of them in these first 10 minutes, just remind me in the next block, and I'll be happy to come back to them.

Why don't we start on the broadband? What I'd like to do is just sort of start high level. You know, why is it that maybe it's taking a little longer than we initially had hoped to get some of the money out the door? It's a fair question. But, first, let me just say again, for anybody watching who's not familiar, that in 2022 we launched the Alberta broadband strategy. This is a comprehensive and funded strategy to get universal, high-speed, reliable Internet to every Albertan regardless of where they live, in every rural, remote, and Indigenous community in every corner of the province, because we know how important it is for our citizens to have that reliable access to the Internet.

There are so many reasons why that's important. You know, whether it's for a small business to be able to access global markets, whether it's for our kids in school to be able to do their homework online, or it could even just be for some of those folks who want to upgrade their skills through some postsecondary education but live in remote parts of the province and can't necessarily relocate to a major centre. The Internet is how they can participate in online courses and online programs. These things are so important, and Alberta's government is committed to ensuring that by 2027 every Albertan will have access to reliable high-speed Internet, and the Alberta broadband strategy is the tool we have to make that happen.

Now, we committed, with the launch of that strategy, a \$390 million funding envelope over four years from the government of Alberta, but we also were able to negotiate \$390 million of matching funds from the federal government, so that brings the total public investment into Alberta communities to \$780 million. Then, when we pair that with the partners, the private-sector partners who will ultimately build this infrastructure, that's going to push the investment north of a billion dollars, which is what we anticipate is required to ensure we have universal connectivity.

Once we did all the hard work to secure our own funding envelope and also to secure the funding commitment from the feds, which was no small task, I assure you, then we began the hard work of saying: well, what are the right projects that make the most sense in Alberta to get the job done? We had hundreds and hundreds of applications through the universal broadband fund, which is, of course, a federal program, and through our partnership with the federal government that's the mechanism we're using to determine what projects get funded.

The universal broadband fund has a clear list of all of our criteria. You know, our goal is to make sure that we don't duplicate, right?

We want to make sure we don't have one project with telco ABC over here and one project with telco XYZ over here and it happens to be that they're building infrastructure in the same community, both of which are subsidized by public dollars. That doesn't help anybody. Our goal is to make sure that when we're using public dollars to support the otherwise uneconomical connectivity infrastructure, you subsidize one region once. You get that built. You get that done. You get those citizens taken care of. Some telcos are going to have an advantage in one region of the province; others will have an advantage in other regions. Sometimes it's a big telco. Sometimes it's a smaller one. It doesn't matter to us. We're telco agnostic. What matters to us is who has the best plan, the most credible plan to not just invest the dollars and build something but to guarantee results for the customer, because if we spend all of this money and we build something that doesn't work or isn't reliable or it only works at off-peak hours, then we will have failed Albertans.

9:30

That's why the due diligence process of the universal broadband fund that is shared by us and the federal government is so important. We need to make sure that we select a partner we know can follow through and make sure that we've got the right checks and balances in place so that if we do commit the money to that project and to that partner, there is accountability, and we can ensure that we hold them to delivering those results.

So all of that's important, and that takes time, and we've been putting a ton of energy into that. But what has ultimately led to the delays has, unfortunately, just been that the federal government has chosen to slow-roll Alberta a little bit, and despite my best efforts, you know, when we had a large tranche of projects we were ready to announce, many times they would just say: "You know what? We don't want to do it right now." It's unfortunate, but it's just a fact.

Here's some good news. At the beginning of March we were able to announce \$112 million worth of projects. That one announcement alone will cover 22,500 households in a ton of different communities, all of which were in the news release. I think I have it handy if we want to dig into the details later. But this is covering communities all across the province. It's covering a ton of Indigenous communities, which we know is super important. So this is a significant step forward, getting us heading in the right direction. We've got a ton more that we're very eager to announce, and we're pushing hard on the feds to join with us in getting those ones ready to announce.

So what you've essentially seen with the reprofiling is us trying to anticipate what we believe the feds are willing to announce with us and when and signalling that in the budget with our anticipation of: this is what we're ready to do, and this is what we're eager to do. But one of the challenges of doing a partnership with the federal government is that we can't unilaterally just go and spend that money. We have to do it together. We have to agree upon the projects.

To my critic's question about: what contingencies do I have, you know, to just make sure we can get the job done? I think it's a fair question. This is one thing I've been sharing with municipalities. I said: look, at the end of the day, my commitment is to get the job done by 2027, and if the feds will get in the way of that by playing political games – my hope is that they won't. My hope is that we're back on track. But if they choose to play political games and hold up the projects, then we're going to have to consider something different, and I'm willing to do that. I'm not going to let the feds stop us from spending our financial commitment to Albertans to get Albertans connected, and if that means we've got to go our own

way and then fight with the feds later to get them to make good on their commitment, so be it. I'm cautiously optimistic it won't come to that.

You know, since the member raised the question, "What's your backup plan?" this is part of my backup plan, that we'll just need to start going it alone a little bit. But my goal is to try and play nice and do everything we can to get the job done in partnership with the federal government, and I think our announcement at the beginning of March is a good step forward. As long as we can continue in that vein, then we should be okay.

I hope that that gives a bit of a sense on the broader overview of the broadband and why we're having to reprofile and move things into later periods. It's not for lack of will or desire to deliver; it is simply the fact that the federal government has a lot of say in when we get to announce these projects.

In terms of the line item for technology support and operations, line item 3 on page 211, I think that was – no; wait. Was that the one that we're looking at? It was 1.3. No. Sorry. I'm looking at – that's the next question.

The technology support and operations question was about: is that represented by the universal broadband reprofiling? And I can say yes. I'm not looking at the right page, but it's under capital grants, line item 3. That's the one I'm looking for. So the change from the Budget '23-24 to forecast '23-24 changed from \$229 million to \$62 million. That was due to reprofiling of broadband. And then the estimates for '24-25 of \$98 million is what we anticipate we should be able to get out the door this year subject to the feds playing nice. That should tie that one up, I think, nicely.

Quickly, on 1.3, on the corporate services side, as you all may remember, Technology and Innovation is a relatively new department. There was a bit of a restructuring. We pulled some stuff out of service Alberta, we pulled some stuff out of what used to be jobs, economy, and innovation, and we married the two together. And when we did that in the first year, the first budget, there were some roles in the corporate services department tied to the ministerial correspondence unit and the strategic planning and financial services unit that, I believe, didn't quite find their way in in the first year but always were intended to be a part of Tech and Innovation. So this is just a bit of follow-up on the restructuring to get things rightsized to where they were supposed to be.

I'm just going to look to see if I accurately covered that or missed it. Okay. My officials are confirming that I've recalled that correctly.

I hope that that kind of gives some clarification. It's not that we're doing anything new. We were already doing all of this stuff. It's just that those head counts at the time were still being covered by a different department, but they needed to follow through to us, so now we've got everything established to the baseline of where it should be.

On the interministry stuff on page 215: yeah, this would account for the types of things that we would spend on behalf of other ministries . . . [Mr. Glubish's speaking time expired] Oh, actually, I guess we'll have to come back to that.

The Chair: Ten minutes goes by fast.

With that, we'll put it back to the loyal opposition.

Mr. Ellingson: Thank you, Mr. Chair. Thank you, Minister, for getting to some of those questions. There are just a couple more that maybe we can get back to if we have time in this block. But I have lots more questions.

Now, Mr. Chair, if you can be patient with me, this is where I'm going to maybe get into a little bit on the technology and innovation

strategy and make the linkages between the technology and innovation strategy and the business plan.

The technology and innovation strategy, of course, is also one of the things included in the mandate letter for the minister, so I'll also kind of, like, progressively go through the items in the mandate letter as we go through the questions. Of course, that strategy, I think, is reflected in budget outcome 3 on page 136 of the ministry business plans. I think the technology and innovation strategy is largely covered under "Alberta is the most attractive jurisdiction for innovators in Canada." On page 137 we see that there's \$22.5 million that has been allocated for this strategy. I think last year this was included under innovation system integration. Through the chair, I just wonder if the minister can clarify if this item is now included under 2.2 on page 211 of the government estimates, just to follow kind of the item of where it is. I think it's just a change in the name.

And the investments made in Alberta Innovates and Alberta Enterprise Corporation: a couple of my friends in the room here today also play, obviously, incredibly important roles in implementing the technology and innovation strategy as well as the other work that the department does. I think the minister, like, laid out some of those examples earlier.

Just wrapping it all up and tying it back to the strategy, through the chair, can the minister let us know what programs and funds might be included in that \$22.5 million for the tech and innovation strategy? How much is for administration of the strategy, and how much might be allocated to some programs included in that strategy?

And I'm wondering, just for me and maybe for the public, about some clarity in looking through the multiple documents. If the minister can clarify the funds that are allocated to Alberta Innovates. On the third bullet point under supporting key objectives on page 137 of the business plan I see \$190 million. On the following page, 138, it indicates \$254.73 million. And then I see in the estimates on page 211 of government estimates I think it's \$182.79 million. So I see just three different numbers there that are tagged with Alberta Innovates. I think the minister can appreciate that for members of the public who are looking through these documents, they could benefit from the clarification in just understanding how much money is attached to that organization and what the expectations are from the funds.

9:40

Now to get back to the tech and innovation strategy, the first outcome in that strategy is to increase the depth of the talent pool. The minister's mandate letter also points to this, specifically asking the minister to create a job-attraction strategy for talent and innovation. The ministry's business plan doesn't have a performance metric that's specifically tied to this goal in the technology and innovation strategy. We now know, through Bill 10, that the government's job-attraction tax credit isn't going to address the attraction of skilled workers into technology and innovation, but I think we can all agree that it's important to have skilled workers come to Alberta to address these rapidly growing companies and help them grow and thrive and grow our economy.

Through the chair, can the minister identify any funding in his department estimates that will achieve this outcome or maybe give some indication as to whether or not these funds – maybe it's part of the interministry transfers to Advanced Education; Jobs, Economy and Trade; or Immigration and Multiculturalism that help us achieve this outcome of the talent pool. But I would ask why talent is not included as a metric in the minister's business plan. If there's no explicit measure in the business plan, is the government

measuring it internally? How are we measuring talent in tech and innovation, and how are we reporting that out to the public on how we're meeting those objectives? Yeah. I'm hoping the minister can have some information on that in sharing today around this critical component. I think that we hear from tech companies every day that maybe their most critical challenge they're facing is access to talent, which I think is why the minister was excited about Bill 7 in the fall. Yeah. Just hoping that the minister can chat about that a little bit.

Mr. Chair, the second item in the Alberta technology and innovation strategy is access to capital. I think the minister and I both know that Alberta has been attracting significant venture capital in the recent past. The minister referenced, in his opening comments, about the success that we're having, growing year over year, that the Canadian venture capital association did note: let's call it Alberta. But they're only talking about Calgary and Edmonton, so the numbers may be higher. This is great news for Alberta: \$689 million in venture capital funds in 2023. It is significantly higher than it was four or five years ago. It is kind of bucking the trend from the rest of the country, which noticed a decline in 2023, but it is a bit of a flatline from 2022, a slight decline from 2022. I'm wondering whether or not this is potentially a signal of any kind of risk for Alberta in the future, and will we return to, like, rapidly growing, or are we flatlining?

And I'm going to tie this to Alberta Enterprise Corporation. On page 138 of the business plan we see \$3.84 million allocated to Alberta Enterprise Corporation. I believe this is for the administrative costs of the corporation. If I was looking back at the *Hansard* notes from last year, I think it's the similar or same number as it was for the administration for AEC last year. But what I don't see in the budget is recapitalization for AEC. In last year's estimates discussion the minister had clarified that – I think the most recent recapitalization was in 2020; \$175 million over a three-year period. And the conversation last year was that recapitalization wasn't included because maybe that three-year period did not expire and we hadn't really absorbed kind of, like, what the outcomes were from that. But I think we could probably both agree now that that three-year period of the last recapitalization would have passed through, and I think some in the community might have been expecting a recapitalization for AEC this year. Through the chair, if the minister can clarify that AEC is not being recapitalized in this budget. If not, do we feel like the continued attraction of venture capital is at risk by not recapitalizing Alberta Enterprise Corporation?

I'm wondering whether or not there's – obviously, Alberta Enterprise Corporation has the ability to recycle capital as funds come back through exits and successful transactions, but that's not the same as, you know, new capital being infused into AEC. So I would like the minister to chat about that a little bit.

And if that recapitalization isn't there, I wonder if the minister could talk about any other items that are budgeted to facilitate access to capital and to talk a little bit about: as our ecosystem grows and matures, how are we maybe supporting scaling companies? I think the minister might also agree – he discussed it a little bit in opening comments – through the last few years it's reprofiling a little bit, but the venture capital deals in Alberta historically have been smaller than the venture capital deals that we see in other jurisdictions; that those deals may now be getting larger and whether or not we have the approaches in place, the programs in place, and the funds in place to facilitate those larger capital deals.

Mr. Chair, just – do I only have 29 seconds left?

The Chair: Twenty-six.

Mr. Ellingson: Holy crap. Did I go through – damn. Okay. I have a whole lot more. The next time I come up to talk, I'm going to talk about how the government can do more to facilitate the growth of our tech companies, like the govlab.ai example that was there. I'm going to have a whole bunch of questions about how the government can facilitate the growth of tech companies here in Alberta. [Mr. Ellingson's speaking time expired] I can't believe I used 10 minutes.

The Chair: Perfect. Yeah, Member; the time goes by quick. At the front end, when we keep decorum in here, we're not wasting any of your time on points of order either, as well.

Over to you, Minister.

Mr. Glubish: Thank you, Chair. Just quickly to come back to the first block, page 215, the interministry transfers: that's essentially when we're spending money on behalf of different ministries, and this is just the consolidation of all of that. For example, some shared services: one example would be \$39.1 million for technology services like application maintenance, Microsoft licences, mainframe application hosting, and other IT-related services that we provide to other government of Alberta entities. There was also \$110.5 million dollars of grants to postsecondary institutions. So it just gives you an example of what some of those dollars would be coming from.

And then, still in that first block, there is the question for line 2.1 in the estimates, the decline of \$30 million there. What that actually was is just moving that out and then moving it into what's now line 6, the data and content management. You'll see that that's a new line item this year. So if you take those two line items together, you'll see that the total for those two functions is actually up year over year. But we also just felt that the work being done by data and content management was separate enough that it'd be helpful to report that separately going forward so that folks don't – like, that covers this block of things, and then the innovation, privacy, and policy covers a different block of things, and it's just useful to see that. So just more transparency on the reporting: that's ultimately what that came from.

Moving into this next block of questions. Where to start? Why don't we try it on the Alberta Innovates piece because – yeah – the three different numbers, I think, are useful. One high-level thing I can say is that we have a block of funding that we provide to Alberta Innovates out of Tech and Innovation, but they also then go – and one of the things that I love about Alberta Innovates is that they're able to stack funding from other sources, so sometimes it will come from, for example, Emissions Reductions Alberta, which is not Tech and Innovation, but they're still invested in delivering new technologies to reduce emissions. Alberta Innovates has received funding over time from them that they deploy to environmental-related innovation projects, so that would be on top of what our funding commitment is. So that starts to take it from our, you know, voted expense on the operating side of \$182.8 million – give or take – to the \$254 million.

The other difference, then, on "how do we get from \$182.8 million to the \$190 million that you referenced in the other document?": that took the operating piece together with the capital piece, which was \$7.3 million, so if you put the two together, that should come up with your number. And then the difference from the \$190 million to the \$254 million is just those other sources of capital from outside of Tech and Innovation, which is complementary to our overall goals with providing funding towards new and innovative projects.

There's a quick question about budget outcome 3. You know, it was the \$22.5 million. I think you had referenced 2.2, but is it actually 2.1?

9:50

Mr. James: It's under section 2.

Mr. Glubish: Yeah. So that's under section 2.1. Do you have examples for me on that one? You had a page over here with that. Perfect.

This is tied to, you know, again, Alberta tech and innovation strategy work. The 22 and a half million dollars for '24-25 is for key initiatives, including some support for emerging technologies like artificial intelligence, quantum science, entrepreneurship, training and development of recent graduates. These would be master's and PhD graduates in science, tech, engineering, and math disciplines. So that's what that is tied to, which is all complementary to the overall Alberta technology and innovation strategy objectives.

Maybe that's a good segue to the talent conversation. Some of that work ties to developing talent. You know, some of our programs through that go to providing supports to postsecondary institutions for their recent graduates in STEM disciplines to help them pursue their research and to take what they've done during their graduate studies to now building something. The idea is that if we can give them a little bit of an uplift while they're recently coming out of their graduation, there's a greater chance that that will turn into a spinoff company, ultimately leading to more jobs and more investment and some really exciting technology commercialization. So that's one angle that we, through our funding envelopes, help to develop talent, and it's very much in partnership with our postsecondary institutions.

A general comment, though, stepping back maybe to the 30,000-foot view. The member was right to mention that my mandate letter includes some direction to work on the talent development, but I'll also point out that pretty much every minister had a similar direction to do that, because we know talent for Alberta is a key component to our future. Ultimately, I think that Jobs, Economy and Trade, which includes the labour portfolio, and then Advanced Education are the primary leads for the government on the talent strategies. At Tech and Innovation we plug into the work that they're doing. We support the work that they're doing, and that's one of the reasons why you wouldn't necessarily find a specific entry in our business plan on this, but it's still very important.

I mean, as the member mentioned, that's one of the reasons why I was such a big champion of Bill 7, because we knew that one of the biggest obstacles to technology companies growing in Alberta was the threat of not being able to use the term "software engineer" freely in the way that every other major jurisdiction in the world does. Alberta's regulator was taking things in a very different direction from the rest of the developed world, and we felt that that needed to change. You know, the good news is that didn't cost us any money; we just had to have some policy discussions in the Leg. about it and ultimately make a decision and pass some legislation to provide clear direction to the marketplace that this is the way that Alberta is going to do business. That has made it a lot easier for tech companies to be able to attract talent from other jurisdictions to come here because they can use the terminology for the jobs that everyone else uses.

Sometimes the solution doesn't always have to cost money. It's nice to always be thinking outside the box and to say: "What are the things that we can do from a funding perspective and a program perspective? Are there other things that we can do from a policy

perspective that might have been a roadblock that we can remove that roadblock?" This was one of those examples.

Another example of ways that we're investing in talent is through the money that Alberta Innovates puts into the Alberta Machine Intelligence Institute here in Edmonton. You know, they do a lot of work on developing talent. They've been creating some new courses; the AI everywhere course is a good example that just launched this January. I'm really excited about this. This is a university-level course that's open to anybody. It's not designed for computer scientists; it's designed for everybody else to say: "AI is going to touch every aspect of your life. It's going to touch every business and every industry you can imagine." If you want to stay ahead of the curve, this is a great course to help you understand the power and the possibilities of AI and how to integrate it into your everyday life and into your business.

We also have a bunch of work going on through AMII, through the Alberta Machine Intelligence Institute, into developing reskilling programs so that if folks want to get into the computer sciences fields and into the AI fields, we can help them translate from maybe traditional engineering fields or other areas that are complementary into these spaces. Those are just a few examples of some of the things that we are doing on the talent side because we know that talent is going to be critically important.

On the access to capital side, just quickly – yeah – the \$3.83 million for AEC: that is the operation cost line item, so the member is correct in his assumption there. That helps to cover their overall costs of doing due diligence on new funds, on overseeing the reporting from the funds we've invested into, and making sure that we're satisfied with their performance and also some of their development activities that they do. I mean, they're responsible for Start Alberta and a few other things and some work in developing the tech ecosystem. So that's covered there.

In terms of the recap the member is correct; the most recent recap was the \$175 million in 2020-2021 I think it was. Those funds have been committed. Now, the way it works is that we've committed the funds, but AEC hasn't drawn them all down yet because as they make a commitment to a fund – if they make a \$10 million investment into a fund, they don't cut a \$10 million cheque right that minute. They do the initial funding amount, which is an initial advance, and then as the VC goes and makes deals, they issue a draw, so then AEC issues the money. We have an ongoing accounting relationship where we're monitoring their draws, then they do a draw with us. [Mr. Glubish's speaking time expired] Anyways, we'll get into that in a little more detail in the next block.

The Chair: With that, we'll just keep the ball rolling. Back to the loyal opposition.

Mr. Ellingson: Yep. I'll let the minister continue that path of how much of the \$175 million maybe hasn't yet been drawn down and what's there.

Okay. I had many questions, so now I'm going to go rapid fire; please forgive me if I'm speaking too quickly. Linking the government activities to other ways we can be supporting tech and innovation – the govlab.ai project with AltaML, I think, is a great example of how the government can position itself as a customer for local tech and innovation and for local tech and innovation to be, you know, stepping in and supporting government in dealing with some of the challenges that we're facing. Maybe the minister can talk about some of the successes that have already been seen with govlab.ai and talk about any other partnerships that maybe are being considered by the ministry with other local tech and innovation companies to face some of the challenges that we have.

And if you could, maybe draw some relationship to the innovation office within AHS and maybe talk a little bit about: is there a relationship between Tech and Innovation and the innovation office at AHS, and what role might Tech and Innovation have in supporting those activities?

Okay. Accelerating commercialization: we talked about \$20 million. The minister talked about a couple of programs there. There's also the \$22.5 million for the tech and innovation strategy. I think it's not where the funds come from for the innovation catalyst grant program. I'm just curious on where the innovation catalyst grant program funds might be coming from or if there are other programs there that are embedded within different line items that maybe can be highlighted, just so we have an idea of what's in those line items.

Mr. Chair, I want to talk a little bit about the funds that are allocated, again, to some of the agencies like Alberta Innovates. Forgive me if we can't really dig into the programs that are delivered by a Crown corp, but Alberta Innovates' funding, that \$190 million that we've seen earlier: it does do things like cover the Regional Innovation Network program. One of the components of the innovation strategy is building out the ecosystem; the Regional Innovation Network program, I think, is an important component of that. This is critical to regions across Alberta: aligning services, identifying and filling gaps, making the journey of the entrepreneur easier. If the minister can clarify if the RIN program funding continues under Alberta Innovates, but I'd understand if that can't be responded to because it's the decision of Alberta Innovates.

10:00

Alberta Innovates also funds the scale-up and GAP program. You talked about the accelerators that have come that are leveraging funds from the cities and prairies for these global recognized accelerators. It was a three-year program. We might be in year 3 now of the three-year program. If the minister can confirm that these programs would continue under Alberta Innovates, if there's a future plan for those to continue. I wonder if there are other grants or anything that's kind of embedded within the ministry's government estimates that are writ large, kind of like helping those programs accelerate or Alberta Innovates with their programs.

I want to ask a little bit about how we talk about growing entrepreneurs, and I want to dive specifically into our clean tech sector. The government has said that they're committed to net zero by 2050. Through the chair, I wonder if the minister can talk about how his department is leveraging or deploying funds to advance our local clean tech sector and how supporting that clean tech sector here in the province is helping us achieve net zero by 2050. Maybe as part and parcel of that the minister could talk about – knowing that Alberta Innovates leverages from other areas, are there TIER funds that go through Alberta Innovates or maybe some other programs specifically helping our local clean tech grow and thrive? As noted, Startup Genome did say that we're one of the strongest clean tech centres to watch in doing that work.

Okay. Five minutes left. I do want to dig a little bit more into the Alberta broadband strategy. We've heard some responses from the minister already about the Alberta broadband strategy. Mr. Chair, if I can just dig into some of the numbers that are there, if the minister can clarify. Out of the ABF I think I've seen three announcements: 10,400 households in September 2022, 10,000 households in July 2023, and 22,500 households just 10 days ago. This brings us to about 43,000 households out of the 200,000 households that we were targeting by 2027. Understanding that we're facing some challenges, as the minister talked about, in leveraging the feds, that maybe there's some struggle in working

with the feds, I'd like the minister to maybe just elaborate on whether or not – is the 2027 now at risk? Given that we're two years in and that we're at 25 per cent of our targeted number of households, knowing that it does take time to both sign deals but also deliver on those projects.

My understanding is that the most recent project in that announcement would take three years to deliver on. So if we think that that project is announced today and the homes that are going to have access from that project are still three years out, I think we could assume that for announcements that come in the future, the access is actually coming in 2028 or 2029. I wonder whether or not the minister can just talk about, again, that status of where we are at our midpoint. You know, we've achieved, like, 25 per cent of the homes, about 23 per cent of the funds, knowing that there are challenges there and that it takes time to deliver. Through the chair, I wonder if the minister can just talk about providing some reassurance that both the funds will be deployed by 2027 but maybe different from that whether or not the objective of the 100 per cent of accessibility will be achieved by 2027. The funds might be spent by 2027, but the homes might not realize it until 2029 or maybe 2030. And I think it's okay to acknowledge that and to share with Albertans that that might be what's going on. Yeah. Just having a chance to talk about that.

If the minister could maybe also talk about the modalities that are being used. I think in the announcements that we've seen – and we saw a project. I think there was a partnership with Starlink that was actually outside of the ABF. I think those were separate funds outside of the ABF funds. So I think we've seen projects that have been using fibre, fixed wireless, and satellite. Through the chair, I'm wondering if the minister can comment on if the government has conducted their own studies in understanding what services are best suited to which households in Alberta and whether or not that helps them kind of accelerate the programs that are coming through RFPs.

I'm wondering if the minister can comment on the effectiveness of those different technologies and modalities for farmers and First Nations and Métis residents that are maybe more remote. It may be more difficult to gain that access, but we still need to make sure that the access that they have allows them to use the technology as everyone else would use the technology, especially farmers who are using more and more advanced technologies today, that we get that high-speed Internet to the most remote parts of the province.

I'm wondering if the minister can talk a little bit about: are we looking at explorations with partnerships with – I know that electric co-ops, gas co-ops have been maybe asking about how they could be partnering and delivering. Would that help us kind of accelerate some of those?

I'm wondering if the minister has a map also, in the last 30 seconds, just in general clarifying for Albertans, like, which areas have been covered, which areas are still to come. With respect that we don't want to overlap regions, but we have seen in the three announcements to date the names of towns and villages repeated in announcement 1, in announcement 2, and announcement 3. So just to be sure that – reassuring Albertans that we are not replicating services, how do we know that we've not replicated services, and is there an easy way for Albertans to see the progress and understanding where it's happened and what's still to come?

The Chair: Excellent. Great usage of time, Member.

Over to you, Minister.

Mr. Glubish: Okay. Thank you. Yeah. Why don't we start off the top? So govlab.ai: I've been super excited about this. This was something that I cooked up a few years ago just, again, thinking

about: look, we've got lots of challenges that we want to overcome in government that are data-oriented challenges, right? Like, we've got lots of data, and if we used AI tools to analyze this thoughtfully, we could come up with ideas that, you know, humans with pen and paper could never do. I also realized – you know what? – if I wanted to try and build this from scratch inside a government, well, we'd have to go and recruit a bunch of data scientists, and we don't even know how to interview a data scientist. We wouldn't even know who's a good data scientist from a bad one. I thought, "Well, maybe the best way to begin is to partner with some of the best AI companies in Alberta and work together, because by doing so we'll develop that talent in-house but do so with a credible partner who knows what they're doing." So that's how govlab.ai was born.

We did a competitive RFP; AltaML won the bid. In the tech sector they're a household name, that's for sure. The idea there was just: let's bring some thoughtful problems that we want to tackle using AI to the table; AltaML brings the expertise, and then the idea is let's rapid prototype. We don't want to sit here and analyze something for 18 months before we do something. We want to do something quickly in a few months, try something, and, you know, if it doesn't work, that's okay. You look at a cohort of problems, then you get a few teams looking at four or five different things at a time, and if one or two of them advances to something meaningful, great, and then the other ones you put on the shelf and you move on to the next cohort. And that's the innovation model. We see that in accelerators; we see that in all kinds of different analogies in the tech sector. So the idea is to innovate like the tech sector innovates but do it inside a government. What a novel concept.

The comment the member made about this being an example of the government just being a customer of local tech is a great example. That's been a part of my vision from the beginning. Certainly, we talk about ways that we can encourage innovation by providing grants and supports and financial dollars to local tech companies, and, yeah, there's a place for that. But one of the things that I think has largely been untapped before I got a chance to do some of this work is to be deliberate about saying, "How do we be a customer of local tech?" I know that when I was a venture capital investor, one of the things that I looked at that was most important as a criteria was: who are your customers? Do you have a customer? Or do you at least have someone who has said, "If you meet these milestones on your product, we will buy, and we'll pay this much for it?" That signalled to me as an investor that you were on to something and you were a legitimate player in your space, that you were good at what you do and you were solving a real problem and there was a real market for it. Of course, then I'd be much more interested to put my capital at risk in your business to help you achieve your goals, because there was evidence of something real being built there.

10:10

The thought process I had was: well, we use technology all day long; why not look for ways to use more local technology? If we could vote with our wallet, hiring local tech companies and entrepreneurs to help solve problems inside our government, we make them more investable. And then other VCs, private-sector VCs, will be more likely to invest in those Alberta companies because when they ask them, "Who's your customer?" and they can say, "government of Alberta is my customer," that's really compelling. You know, govlab.ai is one example of that.

We're also working on developing what we're calling the Alberta digital marketplace. This is a way to try and say: let's think outside the box; let's think about doing pilots; let's think about doing challenge programs so that we're not stuck always having to just do

this big RFP. RFPs are typically a block to local entrepreneurs doing business with government. You know, RFPs are there for a reason; we want to protect the taxpayer, make sure we're making wise decisions with good due diligence, but our RFP process is more so designed for building roads and building bridges and building hospitals. It's not well suited to building a new technology system or using technology to solve a problem that has never been solved before. You can't articulate everything perfectly in an RFP for a technology solution because you don't necessarily know all the answers yet. That's part of the reason you want some technology folks to help work with you on something. We're trying to create an environment that will make it easier for government in the early stages of solving a problem to engage with local tech players, voting with our wallets, being a customer. That work continues and is under way.

In terms of the AHS innovation office, I mean, AHS is of course funded by Alberta Health, so any of that stuff would be tied more under the Health estimates. We're aware of them, certainly eager to partner with them when we can, but none of that would fall under sort of our specific budget.

The ICG, innovation catalyst grant: that falls broadly under the Alberta Technology and Innovation strategy. We've got \$20 million over five years for the ICG. Again, this is to support graduates from STEM disciplines in our postsecondary system to help them pursue entrepreneurship, to develop their business skills. Sometimes you've got, like, a researcher who's really good at a technology and something to do with their innovative – they're building something really innovative, but they have no idea how to run a business or how to turn it into a business. So this helps us to pair them with some of that expertise and get them some training so that there is a greater probability they'll actually be able to commercialize their idea and their research and their technology.

On Alberta Innovates. When it comes to the RINs – I know that was a specific question, so I've got an easy answer. Yes, that RIN funding continues. A good example locally in Edmonton: the RIN funding helps to support Edmonton Unlimited, which is a local hub for entrepreneurs and innovators. Yes, that funding will continue. Also, when it comes to the scale-up and GAP program, that funding is continuing, too, going forward as a part of this year's budget. We've added, I think, specifically \$5 million in this budget year to continue that momentum.

Some general comments on clean tech. Certainly, the member mentioned some of the other sources outside of Tech and Innovation. You've got the TIER program, clean environment. You've got Emissions Reduction Alberta. Those are certainly a part of the government's overall goals for net zero by 2050, and those programs are making investments in environmental technologies to reach our emissions goals. Certainly, carbon capture and underground storage is a big focus for our government and, of course, the hydrogen angle. You'll see through Alberta Innovates that we've got the Hydrogen Centre of Excellence that we've stood up. That's been, I think, something that's going to be important for testing new hydrogen-related technologies, new use cases. You know, we're not just looking to supply hydrogen to the rest of the world; we're also looking to say: how do we develop domestic demand for hydrogen? We know that we can produce the hydrogen probably better than anywhere else in North America. It's just a question of what the demand side of the equation looks like. We can do the supply, but what does the demand side look like? That's part of what the Hydrogen Centre of Excellence will be for.

So that included \$20 million, which has been awarded to 21 projects, and those projects, then, are leveraging other sources of funding, so those projects have unlocked a total value of about \$129

million of funding. That's one of the exciting things about this, too. When we're able to lead as an anchor supporter or investor in a project, if we can unlock federal dollars or other research dollars, that can just help us take the ball further down the court faster.

Here's an example from the technology innovation and emissions reduction fund, the TIER fund. There's \$25 million that will be awarded in another competition related to these types of technologies. Here's another good example. Through Alberta Innovates we have the Carbon Fibre Grand Challenge, and this ties into the bitumen beyond combustion concept, the idea being that whenever the world does decide that they're not going to burn our oil, whether that's five years, 10 years, 20 years, 50 years – we don't know, but we've got to be thinking about that. That's what this program is for.

The Chair: Perfect. Well, that ends our first block.

We'll now turn it over to the government caucus, a 20-minute block. The first one up, and then your question, I would assume, would be whether you're having block time or back and forth.

Mr. Wright: Yeah. Thank you, Mr. Chair. In all honesty, given the fact that there's a lot of in-depth questions, I would appreciate if we could go block time. Just that way we can maximize an answer for some of these questions.

Mr. Glubish: Sure.

The Chair: Okay. Away you go.

Mr. Wright: Well, thank you, Mr. Chair and through you to the minister. I really appreciate you being here today to talk about your estimates for the budget. You know, across Alberta you've touched on the growing innovation and technology industries that are kind of emerging. In Medicine Hat we've got a growing aerospace, aviation, and defence industry going on, lots of drone development, rocket development. I look at Hut 8 and what they're doing. But what's being done in this ministry is also being seen internationally, and we witnessed that when we were down in Oregon for a capital visit with the Pacific Northwest Economic Region.

When we were in Oregon, they were talking about our TIER program, and it gave us an opportunity to really lay into what that meant and what that looked like. A number of other jurisdictions were talking hydrogen, and as soon as we brought out the hydrogen road map for Alberta, they also stopped talking about hydrogen because they knew that there was a jurisdiction that was significantly further along than they were. To be honest, international markets are very starved for our hydrogen innovations.

So my first question is around Alberta Innovates as well as kind of technology in rural Alberta and supporting the growth of these industries there. In your budgets encouraging the tech sector in rural Alberta is something that also needs to be balanced. When I look at the investments in the urban centres like Calgary as being the tech hub, what kind of metrics are being taken to address rural growth of technology and organizations in addition to the urban centres?

And then, Minister, when I look at line 2.2, I see that Alberta Innovates is a significant part of the budget. With a nine-figure budget this agency has a huge value for Albertans to be successful and to really grow this industry, but I think many Albertans don't know much about what they're actually up to. I know that in recent months we've made announcements around health care. Actually, I was able to present in Edmonton at an announcement for health care. We've seen projects bring better health care to rural and remote communities as well as providing health care through things like AI. They've also been playing a role in distributing the TIER

funding, which I mentioned before, while providing funding for projects to reduce emissions, enhance hydrogen, clean energy, and more. Can you tell this committee more about what Alberta Innovates does and why they're valuable to our economy, not just at home here in Alberta but also internationally, how we're playing to new markets?

When I continue to look at Alberta Innovates, you know, it's obviously come that they are accelerating Alberta's transition in the technology hub across the country. They're working hand in hand with the private sector. Can you elaborate on some of the biggest achievements that Alberta Innovates has had in the past couple of years?

10:20

If I could throw a caveat on to that question, you had talked about the slow roll of Ottawa. Minister, I can tell you that last week, during constituency week, I met with a drone manufacturing organization in Medicine Hat. They had spoken with a number of federal ministers to try to get the ball rolling on their new programs that they're looking to develop. But I can tell you that they allege that the ministers in Ottawa said: we can't fund you if you stay where you're at; if you went to Quebec, this would be an absolute guarantee of funding. You talked about slow rolling. I'm experiencing it in rural Alberta with organizations that are being told to kind of move on.

I'm going to have one more question, if you would permit me, before I cede my time over to my colleague from Red Deer. When we take a look at technology support and operations, you know, Minister, on line 3 I see that technology and support operations is the largest line item in your budget. Now, coming from the private sector myself, nobody really thinks of government as an innovative organization. We know that it usually means paperwork on literal paper, so if your ministry is investing such a huge amount into technology and support, it must mean that we are moving away from paper, as you previously mentioned, and into the 21st century. Maybe we could even get rid of the fax machines within our ministries. Can you explain what this part of your budget is for, and what this year's increase would be?

I am actually just going to throw one more in. You had talked about that this year's spend was going to be less but more in the coming years. Can you explain why this approach was taken and why it is in the best interest of Albertans?

With that, Mr. Chair, I will cede my time over to my colleague from Red Deer.

The Chair: Go ahead, MLA Stephan.

Mr. Stephan: Thank you. Through the chair, Minister, it's great to see someone who has the stewardship of Technology and Innovation who has real-world experience and competency in their ministry. I've just actually enjoyed learning a few things, including some of the good questions from the Member for Calgary-Foothills. I think it's helped me actually appreciate some of the good things that are happening.

My first question. I'm going to ask a little bit about the broadband strategy. I know that you mentioned it in the business plan. I know that it is somewhat related. I also note that there was an announcement earlier this month, as I understand it – it's on the government of Canada website – of a \$112 million joint investment to provide broadband to about 22,500 households. Just doing some quick math on that, that's about \$5,000 per household. I do appreciate that cost. My understanding is that a Starlink hookup is about \$1,000 per household. I'd be interested in terms of ensuring that broadband resources, which are limited, are used in the most

effective way. I don't know if we can provide broadband everywhere in Alberta. Sometimes it may not make sense if it's very remote. I'd be very interested in terms of how we make determinations on the allocation of those resources.

Minister, I wouldn't mind you talking about the merits of the strategy overall. You know, when I see some of these – if I compare it, for example, to the EV battery subsidies that are being provided in eastern Canada, it works out to about \$4 million per job. Very, very concerning, frankly, Chair. Such a questionable use of taxpayer dollars. This seems to be, of course, a much lower cost, and it's capacity building for individuals who perhaps don't live in larger urban centres. So I'd love to hear how this will actually impact, increase economic opportunities for families and individuals who live in more remote rural communities.

I'd also like to be – I'm very interested as well in knowing, you know, because there does seem to be a disproportionate amount of money from the federal government not going to Alberta on a per capita basis vis-à-vis other parts of the country. Are we able to maximize – it's always good when the federal government actually gives some money back to Alberta because we, unfortunately, disproportionately fund the rest of Canada and receive disproportionately too little in return, so I'd love to hear. Are we able to utilize – what's the split in terms of what they're actually contributing to this important capacity-building, long-term economic prosperity initiative?

And then I'd like to know a little bit about your flow chart. I know I don't have much time; we can maybe get back to this in the other block. But just looking on page 134 of your business plan, we see – and I like the visual. I just want to understand it a little bit more. We have, I understand, agencies and delegated entities, which is AEC and Alberta Innovates. That seems to be outward facing in terms of supporting the great success it seems that we are having for attracting venture capital into Alberta in this area. Then the other side of the flow chart talks about the Department of Technology and Innovation. That seems to be inward facing.

The Chair: Time goes fast.

Over to you, Minister.

Mr. Glubish: Okay. Thank you, Chair. Yeah. Why don't we talk a little bit about – well, first of all, you know, it's always encouraging to hear that when our members are travelling around the world representing Alberta, as the member mentioned with heading to Oregon and some of these other places, and then hearing that when the conversations are being had, people are noticing what's going on in Alberta and that we're leaders. I think that's certainly our goal. We want to be seen as one of the most innovative jurisdictions in Canada and certainly in North America. I think some of the things that we're doing really speak to that and show that that is the case.

Certainly, the Hydrogen Centre of Excellence and our overall hydrogen strategy and road map speak to that, and I think we've proven that we can act quickly to remove regulatory barriers to make it easier to succeed and that we can create the most attractive place to succeed. You know, we have the lowest tax jurisdiction. We are the friendliest market to develop a new technology company. Even though the feds might try to undo that by trying to bait people away and say, "We'll fund you if you move to Quebec," I think a lot of folks are still choosing to stay here because the conditions we've created are irresistible. We're proud of that, and we're going to continue to build on that advantage.

When it comes to rural and some of the things that we're doing there, I think certainly the regional innovation networks that we mentioned, that are funded through Alberta Innovates: that's part of that strategy, right? You know, we don't just have that in Edmonton

and Calgary. That's some funding that goes to support some boots on the ground and some important work in the rural areas. We've also got, through Alberta Innovates, an investment into an agricultural facility in Vegreville that's doing some interesting research on looking for ways to add value to our agricultural products. We've talked about this a lot. In the same way that we have a petrochemical industry to add value to the raw oil and gas, we can also have technologies and exciting innovations that will add value to our raw agricultural products, so I think some of that work that's going on there is very important to Alberta's future and to our economy.

There's some funding for ag tech in general through SVG Ventures' Thrive and other VCs, and those – I think that's one of the venture capital funds that AEC is invested in. Is that correct? I think so. You know, we've got a few different irons in the fire but certainly believe rural is super important to Alberta's – it's a part of our DNA. It's part of who we are, and we want to make sure that rural Albertans can succeed and be a part of an innovative future. That's also why the broadband investments are so important. We want to make sure that everyone everywhere can access reliable high-speed Internet because without that it's hard to compete and participate in a modern digital world. I think that gives a bit of an idea.

10:30

There was the question about the technology support and operations. You had something for me on that one. I mean, I guess, generally speaking, our TSO division is what provides, like, IT services to the rest of government, supporting them to help them meet their business goals. Absolutely, yes; our vision has been to do more with technology in every department of government. The way I look at it is that, you know, our job is to go to every department in government and say: "Tell us what your business objectives are. Tell us: what service are you providing? What problems do you want to solve? What objectives do you want to meet? Don't talk to me about technology; just tell me about the running of the day-to-day business. Help me to understand your business."

Because I'm not going to understand that. I'm not going to go and micromanage Health or Education or Justice. They know their business better than I ever will. Our job is to go to them and say, "Help us understand what you're doing, and then let us come in once you've told us that and give you ideas on how we could use different technologies that we're experts in," to say: "We can help you eliminate waste in your process. We can help you to digitize this. We can help you to give a better experience to your customer, to the Albertan that you are serving, by using technology." That's a big part of what we're trying to do here, so then providing the support for all of the technology tools that they use: that's a big part of what TSO would be doing.

Looking at the time, I should probably provide a little time to the MLA for Red Deer-South's questions, too. You had some good questions on the broadband, and, you know, you're right; the \$112 million was the most recent announcement, and when you average that up by household, it is around that \$5,000 per household.

What we found – and this ties into the different modality question, right? Do you do fibre to the premise, do you do a fibre backbone with wireless towers to extend the signal farther, or do you do low Earth orbit satellite? Those are the three primary modalities, and that's what's articulated in the broadband strategy that we published in 2022. What we've said all along is that we are open to all of the modalities, and some are going to make sense for some places, and some are not going to make sense. Fibre to every premise is not realistic. You can do fibre to the premise for some

places for a reasonable price, but for some it's going to be \$20,000, \$50,000, \$100,000 per house. Obviously, we can't do that. That's why the other two modalities, the wireless and the satellite, have to be on the table as well.

I want to provide just a caution because a lot of people have asked me: well, why don't we just do Starlink for everybody if it's only about \$1,000 per house? The fact is that the Starlink network can't scale to do 200,000 households. If you were to do that tomorrow, then we'd have everybody complaining about how bad Starlink is. The reason we've had such good feedback on Starlink is that they're still building out their network and there are not a lot of people on it yet, so there are not constraints on the bandwidth. But, you know, when we asked and said, "Hey, we want to scale Starlink; what would it look like?" we were told that there would be a significant investment required by the government to subsidize Starlink to accelerate the rate at which their satellites would go up, so that has been a factor in our decisions. It's not as simple as just saying that it's only \$1,000 a house. It wouldn't have been that case.

We're absolutely looking at the price per household as one of the key metrics to say: what makes the most sense? We want to make sure that the infrastructure we build is scalable so that 10 years from now, as bandwidth demands are different – as we saw, over the last 10 years it's grown significantly – that infrastructure can scale and meet the needs of the communities they serve in the coming years. That definitely factors into our decisions on the broadband.

I know that you were kind of beginning, before we ran out of time, to talk about some of the elements in the business plan. I guess I can just comment to say that, you know, you're correct in that Alberta Enterprise Corporation, Alberta Innovates, our agencies there: that is very much our outward focus piece. That's how we're providing supports to the local tech ecosystem to help new companies get their start, to help folks find their way to attracting investment, to increasing the access to growth capital in the Alberta marketplace. I think we've had – I mean, we've seen over the last four or five years the fruits of that labour. We're seeing great progress, great momentum. And then when it comes to the internal function of our department, that's where we're managing the implementation of technologies across government.

You know, there are some good examples of some of the tools we've been developing there. I guess one of them would be the affordability payments portal that we launched last year. This was a critical tool to help support vulnerable Albertans who needed a little bit of help during the affordability crisis. We were tasked, at Tech and Innovation, to develop this online portal. We were given two months to build it from scratch, but we did. We built it, and a lot of that is because we've been investing over the last number of years in a lot of cloud-based technologies and capabilities so that we could build a portal on top of a cloud-based system that could scale to help a million people and be stable and secure. In fact, that's exactly what happened, and we were able to get hundreds of millions of dollars of supports out the door very quickly to Albertans in a way that helped us also to mitigate the potential for fraud and to ensure that the right people were getting the right supports at the right time in a very easy way using technology.

I think, you know, that it's always helpful because it's so easy, when we talk about the technology implementations, for it to sound very abstract and unrelatable. For me, I like to tell stories about something that everyone can relate to, and I think that that affordability payments portal is one that everyone can say: okay; maybe I didn't use it, but I know someone who did, and I know that they had a good experience in using that. And it wouldn't have been possible without the investments we have been making over the last several years into increasing our capabilities in the technology side.

Looking forward to having many more exciting stories like that in the days to come.

The Chair: Right to the wire. Well done, Minister.

With that, we'll take a five-minute break. We will start without you, so please be back in your seats in five minutes. Thanks.

[The committee adjourned from 10:37 a.m. to 10:42 a.m.]

The Chair: Thank you, everyone. Please grab your seats. We're back.

As promised, we are starting within the five minutes, and the first block, the rapid-fire round, as someone had called it earlier – this is what it is – is 10 minutes. You can't cede your time to another member at the time. Again, it's no longer than five minutes of speaking, and it's up to the discretion of the minister and the member asking the questions if they want to have combined or block time.

With that, I'll turn it back to the loyal opposition.

Mr. Ellingson: Thank you, Mr. Chair. Rapid fire it is.

I don't see the block time up on the screen.

The Chair: It'll be up shortly.

Mr. Ellingson: All right. Let's go with rapid fire. When we left off, we were talking about the funds that were remaining to be deployed with Alberta Enterprise Corp. If the minister could go back to responding to that question. The \$175 million from the 2020-21 budget: it was to be over three years. We've heard from the minister that the \$175 million has not yet been fully deployed. If we could talk about kind of, like, maybe where we are in that and what we can expect from that in the future.

Just picking up on some of the questions that I left off with, with respect to rural broadband to help Albertans understand what has been covered, what's not been covered, do we have a map of coverage in Alberta? Can we talk about the actual progress that has been made? We know from the most recent announcement it's going to take three years for those projects to be delivered. I'm wondering from the previous two projects: are they complete? Have those 10,000 and 10,400 homes been reached, or do they have access, as we hoped for two years ago and one year ago?

I'm going to say just kind of, like, a comment on Starlink not being able to scale to 200,000. I've also had conversations with Amazon, and they kind of, like, stuck a stake in my heart right in the very beginning when they said: we will only be covering up to 55 degrees north. I think I've shared with some people here that I grew up in Valleyview, Alberta, which is conveniently 55 degrees north. Everything north of Valleyview would not be available for the technologies that are the low Earth satellites that are being offered by Amazon, which aren't up and ready yet for Alberta. I'm sure the minister has had conversations with Amazon also. So to all of our friends in High Level, La Crête, Fort Vermilion, Grande Prairie, Fort McMurray: maybe later if you're looking for Amazon.

I'm wondering if we could, again, just reiterate this question: is it time to start broadcasting, like, a change in timeline? Is it still real to say that we will deliver by 2027? I think it's okay for us to say that this is where we are, these are our plans, we're going to work really hard to deploy the funds by 2027, but access might be reached in 2028 or 2029. So I'd like the minister to comment on that.

Back to the question that I asked about whether or not the government has done its own work on those modalities of, like, where which modalities are most appropriate or the combination of those modalities. Would that work help kind of accelerate the approval of projects? Would the incorporation of AI in the process

help accelerate those projects? Appreciating that, you know, maybe we won't be able to help the feds move faster.

This might not be a question that you expect to hear from an NDP member, but the affordable payments portal: maybe that was an example, appreciating that the department did roll it out in two months, where the private sector might have said, "Hey, I can do that project, too," – right? – and help part of our private-sector tech companies in Alberta move forward. Like I said, maybe not a question you're expecting to hear from an NDP member.

I do also have some net-new questions I still need to get through. Mr. Chair, the minister is also mandated to explore options to expand Alberta's digital media sector, but I'm looking at outcome 3 on pages 136 and 137 of the business plan, and I don't see any references to the digital media sector. I think that the minister and I can both agree on the potential value of the digital media sector, that the video game industry in the United States is responsible for about 143,000 direct jobs and about \$41 billion in economic activity. I know that many stakeholders in the ecosystem were hoping to see a digital media tax credit maybe appear in this budget, and I don't think we're seeing that.

Mr. Chair, I would like to say, you know, giving credit to the UCP government, that when removing the caps on film and television, on that tax credit, we saw production values in Alberta approximately double overnight. I'm wondering if we could, you know, potentially see similar growth in digital media if we were to introduce a similar tax credit. We've seen in British Columbia that they have experienced kind of that doubling effect in the number of game studios. We see it in Ontario and Quebec, which also have tax credits in place, a number of game studios significantly higher than we find here in Alberta. So, through the chairman, if the minister . . . [Mr. Ellingson's speaking time expired] Oh, I'm out. Confirm why there's no funding for . . .

The Chair: You can keep talking, but no one's hearing.

Minister, over to you. Five minutes.

Mr. Glubish: All right. Thank you. Yeah. Let's try and pull together the outstanding broadband questions here. First of all, one thing that I'd like to offer that I think will be helpful, and that is: what is the status on the total number of households that have access to Internet now or where projects have been announced and funded and are under way compared to when we got started? You know, we've talked about that there's this 201,000 household underserved number that we inherited sort of at the very beginning. How are we chewing through that?

Through the UBF and our partnership with the feds we've got about 33,000 households that have been met or funded, announced, under way, et cetera. Also, the federal government had their own rapid response stream that was under way simultaneous to that. That's got 25,684 households. There's the CRTC program, which is a smaller, targeted one. That's done about 1,465 households. But there's also been work done by the private sector in expanding their networks without subsidy into some of the next closest lowest hanging fruit, and that actually has got 51,000 households. When you add that all up together, we're at about 110,000, give or take, so we're actually closer to 55 per cent instead of the 25 per cent that the member had included in his question.

I offer that as some context to say, you know, that this is why I feel confident in saying that we can still get this job done, and we're working hard to make that happen. We're pushing hard with the feds to make them move faster. I'm sure there's a joke in there somewhere about artificial intelligence to make the feds move faster, but I'm just not going to explore it. I hope that gives some sense that we're taking this seriously and we've made great

progress. Some of it is through projects that we are putting dollars towards, and some of it is going to be through private-sector expansion and investments that we know are coming anyway.

10:50

In terms of the modalities, look, we're going to do the modality that makes the most sense for the region. Sometimes it will make sense to do fibre, sometimes it will make sense to do the wireless, and sometimes it will make sense to do the satellite. We've got to be open to all of them, and we've got to be thoughtful in choosing projects that make the most sense, and that's exactly the way in which we're doing things, and we're doing that in collaboration with the federal government.

On the government of Alberta website the Alberta Broadband Strategy site does have a map with ongoing projects. So, you know, the question about a map: that's a good place to look, and then the federal government also has a coverage map. We work closely with them.

On the digital media side, look, we looked at this really closely. Obviously, the video game industry is really exciting, fast growing, lots of opportunity, but ultimately what the industry wants is a refundable tax credit. It's not really a tax credit. You don't have to make money. You don't get credit on your taxes. It's a grant. It's an outright subsidy. What they want is about 25 to 30 cents on the dollar for every job, for every piece of labour, and when we looked at the math, you know, there are about 1,000 jobs today; they're averaging about \$80,000 a year. If you were to pay for just the tax credit on those existing jobs, that's \$20 million a year to do nothing net new for the industry, just a \$20 million handout, nothing net new. And let's say that they doubled. Let's say that we were able to double. Well, then that's \$40 million a year that we've got to spend just to get 1,000 new jobs.

When we look at the economics of, "What does that cost, what kind of economic activity does that generate, and what's the return on investment for every Alberta taxpayer?" my job is not just to say that I'm here for the recipients of a grant or a subsidy; I'm here for all Albertans, and the fact is that the math just doesn't add up.

The other challenge, too, is that the talent that these folks are competing for also work in the rest of the tech sector. So are we going to subsidize one segment of the tech sector for 25-30 per cent of every salary no matter how good of a job they're doing, no matter whether they create a profit? At the end of the day, then that's going to create cannibalization of a finite resource of talent that is going to hurt the rest of our tech sector. So when we actually got into digging into this, we realized that it's not in the best interests of Alberta as a whole to join the rest of the country in a race to the bottom to subsidize this labour.

The fact is that we have the most attractive place to run a business, grow a business, invest in a business, and if you are a successful business, you keep the most amount of your money. If you want to do that in Alberta, we're thrilled to have you and we're going to work hard to make sure that this is the best place for you, but this kind of a corporate handout is not going to work for us.

The Chair: That five minutes goes fast.

Over to the government caucus. MLA Cyr.

Mr. Cyr: Well, thank you. Minister, would you be open to block time?

Mr. Glubish: Yep.

Mr. Cyr: Okay. Thank you, Minister. Minister, I just wanted to point out a couple of successes that I've seen up in my constituency that have gone through your office. It's always great to see

something actually happening in northeast Alberta. One of the ones, the recent one, is the MCSNet announcement that you just made for broadband. That one there: MCSNet is actually based right out of St. Paul, which is right in my constituency, Bonnyville-Cold Lake-St. Paul. That announcement is actually earmarked to help 15 counties and MDs, sir, for northeast Alberta, and that's a \$22 million investment that the governments have made as well as a matching investment by the MCSNet as well.

When we've got these kind of moves forward for my local area, it's very impressive. And when we're talking about the numbers, sir, because that's what we've been talking about lately here, actually seeing how it's helping rural residents through initiatives like what you're doing today is something that I am very encouraged with, sir. I'm also glad that you're looking out for all of Alberta and making sure that we're all represented well.

In that case, what we're looking at is almost 35,000 households that are going to have improved access to broadband. This is quite a remarkable move for us at least. We're excited. For my constituency I'm seeing that two of my local municipalities, the MD of Bonnyville and the county of St. Paul, are going to be benefiting from this of those 15, sir, so thank you for that. I'm very impressed with how you're rolling that out even though you've been getting a lot of slowdown from the federal government to roll these out.

The next one is actually on a different part, the hydrogen and energy storage. Minister, you had sat with one of my local companies that's looking to bring a billion-dollar project into my constituency. That one there is the Marguerite Lake compressed air energy storage and the Marguerite Lake hydrogen hub. That was put forward by Federation Engineering and the Cold Lake First Nations, sir. This is one of those projects that even though they weren't successful for the Alberta Innovates hydrogen initiative program and the Emissions Reduction Alberta Emerging Innovators Challenge – what I will tell you is that after they had met with your office, you actually came back with constructive feedback on how to improve their applications for that. This is something that I know I value and I know they value as well, and that shows that you're ready and willing to work with industry through this.

And your role just really shows how big it is. You're dealing with broadband, you're dealing with hydrogen, you're dealing with all these things, and I know you've taken the time to actually meet with real Albertans, especially up in my area, Minister, and I'm very thankful.

Now, one thing that I think a lot of us have on top of mind is cybersecurity, sir. People are affected by fraud. They get their accounts hacked, and their systems are compromised. It happens every day. It's an ever-growing issue. It's obvious that when people are being targeted in their everyday lives by bad actors and threats, this is a real concern. Can you tell the committee about the work that the cybersecurity team does and what some of the results have been? Minister, how does your cybersecurity team collaborate with the public and the private organizations to strengthen Alberta's overall cybersecurity posture, as per page 210 of your government estimates?

What I will more or less say is that in my first term we saw breaches of cybersecurity specifically, and I know this is outside of your mandate, but our colleges and universities were targeted. That is a real issue not only for Alberta, but I will tell you that it's affecting each and every one of us, no matter whether you're a not-for-profit, a government agency, a business, or a homeowner. So, Minister, it would be great to hear exactly what your thoughts are as to the best way to defend ourselves.

Again, thank you for what you're doing, Minister.

The Chair: Over to you, Minister.

Mr. Glubish: Thank you, Chair, and thank you to the Member for Bonnyville-Cold Lake-St. Paul for those thoughtful questions. You know, just off the top, certainly, we're just as excited as you are about some of these projects going up in your area, and I think these are just evidence that we care about rural Alberta. We want to solve these problems. We want to get them connected. One step at a time we'll get there. Just happy to continue working together to get that done.

Yeah. I was happy to meet with the proponents of that compressor station and just hear their story, hear what they're proposing to do. You know, I always try to think of – like, I put my venture capital investor hat back on from my old days, and I try to say: if I were a VC, what would I tell them to give them advice to help advance their interests? I'm hoping they found that helpful and looking forward to see what comes of it.

Cybersecurity: this is a topic that's near and dear to my heart. I mean, this is super important, right? Like, of course, we're responsible for protecting the government of Alberta's technology infrastructure and all of the data that we're stewards of, but it's bigger than just that. I mean, it's important for Albertans to be protected from threats to their critical infrastructure and threats to the province as a whole. This is why I've pushed, over the last number of years, to increase our cybersecurity budget significantly, and we see yet another meaningful increase this year. That has enabled us to do a number of things. It's enabled us to get some state-of-the-art technology that we didn't have before. It helps us to monitor for fraud.

11:00

It helps us to monitor, using artificial intelligence, in real time any attempts to start poking around inside of any of our government systems. We're able to see that in real time and respond in real time so we can close those doors before anything is compromised. We've been really good at doing that these last several years, and we're just getting better and better every year. We're serious about investing in the right tools and technologies and people to protect Alberta's interests.

When we talk about the broader interests across Alberta, this is something that's important to me, too, to say: how do we support the postsecondary system, right, or a small business or individuals? That's why we created something called the CyberAlberta program. This is a program where we're essentially saying that anybody can join it for free, and you get access to our threat reports on a regular basis.

We already invest a bunch of money into evaluating and monitoring threats, identifying potential vulnerabilities in common systems that are used not just by us but by everybody, and in developing best practices and ways to respond. Our thought process was: let's invite anybody from Alberta to join us in this so that they can benefit from all of that. It doesn't cost us a lot of extra money to make it available to everybody, but it can be extremely meaningful to folks who don't necessarily have the same critical mass of cybersecurity resources that we have as a government. That's something that I have really been excited to see develop over the last couple of years.

I guess another thing that we've been really focused on is just making sure that we're updating our older systems and technologies so that we're able to have the most modern tools that are the most resilient to potential threats and then just making sure that as new vulnerabilities arise, we address them real quick.

A great example of that is that there is a common tool used by almost every business you can imagine, and the vulnerability was

called the Movelt vulnerability, I think it was. If you would have followed this last summer, there was a big story because the government of Nova Scotia actually suffered a breach because of it. We were monitoring this, and as soon as it came up, we were able to identify the fix, patch the fix, get everything stabilized, support our partners through CyberAlberta, and good news: no incidents here. It was really unfortunate what happened in Nova Scotia, but in fact our chief information security officer got the phone call from his counterpart in Nova Scotia saying: can you give us a little help? We did. We helped because, at the end of the day, we're all in this together and we're wanting to try and make sure that we protect Albertans and Canadians. This is just one of the ways that we're investing in and demonstrating that Alberta is a leader in Canada in cybersecurity.

You know, I say all that to say that we're taking cybersecurity very seriously. We are investing record levels in cybersecurity, and I think we can credibly say we are a leader in the country.

The Chair: Over to the loyal opposition.

Mr. Ellingson: Thank you, Mr. Chair. Okay. One dangling question about the deployment of the \$175 million from Alberta Enterprise Corp. I think we didn't get to that.

I really thank you for the clarity on that rural broadband access, talking about, like, what's been reached through your partnership with the feds. What have the feds done on their own? What has the CRTC done? What has the private sector been doing just over the last two years? That's very helpful. Thank you for that.

I think it's fair to say that we'll keep watching to see, and I just want to go back to that partnership with the feds. If I'm not mistaken, last year you had made a comment that you were on the edge of, like, a really big announcement with the feds. I'm wondering if maybe that was the announcement from 10 days ago because there was no announcement between then and 10 days ago. Is that an expression of maybe how that relationship is going? Maybe we'll be sitting here next year talking about how some additional funds are being deployed so that you can go it alone.

Appreciating also the minister's response, Mr. Chair, to the digital media tax credit that I slid in in the three seconds over that I went on the last block, maybe if just the minister can talk about how it's clear that the digital media tax credit is not the approach that we're looking at. Is there anything else that we're looking at, other than just that Alberta is a great place to do business, to be supporting the growth of digital media? I think there are a lot of people out there in the public that would be interested in hearing that.

Now I'll jump into – my net new for this round is another item from the minister's mandate letter, Mr. Chair, that I don't see mentioned in the budgets or the budget documents, and that is exploring the feasibility of a health spending account. I did want to put out there the question if the minister can clarify if there are any funds in this budget that are being applied to investigating a health spending account for Albertans. If there are funds, what line item would they be in, and what dollar amount is applied to that? If we're already working on that project, is that something that we're doing in-house, or have we hired a third-party contractor to do that work? And would that have been put out to RFP, or was that sole sourced? Those are all questions around health spending account, again, tying back to the minister's mandate letter.

Now, in tying back to the business plan, another net-new item. This ties into the work of the ministry and the health care system. On page 135 of the business plan I'm looking for areas here that show the efforts of digitization across the government. Maybe we can talk specifically a little bit about how that might be helping in health services. I think we have \$7.5 million to continue on

Alberta's data strategy, and I'm wondering, through the chair, if the minister can talk about – if these funds are coming from item 4.1 on page 211 of the estimates, if we can talk about, you know, like, what funds might be specifically directed to IT for health care, for our health system.

I do want to ask, too: if we know that there are some reorg changes happening in our health system, is any of that digital work that Technology and Innovation is doing that might be supporting Health? Would anything be interrupted as the health system is reorganized or restructured? Do we see that this ministry may be impacted by the reorganization that's being led by another ministry? If the minister could comment on that.

I think we've talked about the – it says that there are 140 government services that are now delivered online. I'm wondering how many of those might be health related and kind of the direction there and, you know, how we're continuing to deliver health-related services. I think we've already talked a little bit about the importance of tech across all of Alberta, and I think specifically through – when we talk about mental health for Albertans, digital services from the government of Alberta and mental health across Alberta, I think, are critical.

The Chair: Thanks.

Minister, back to you.

Mr. Glubish: Well, thank you. Let's do the AEC thing first so that we don't slip that again. Just picking up where we last left off on that one, yeah, AEC commits money into a venture fund. They put an initial tranche in, but then they receive a capital call over time, and then they manage their own budget so that they can maintain all of their capital calls into all of the funds they've committed to. Then in a regular cycle they submit a capital call, essentially, to us, and we fund that. With all of the investment commitments they've made to date, we continue to draw down on that \$175 million recap from a few years ago.

That deals with their current commitments to existing funds that they've already invested in and also, then, addresses the amount that they have available to make new investments. They continue to do due diligence on a number of funds and prospective investments. For the foreseeable future we know that we can maintain the trajectory that we're on for now. We're watching it closely, and certainly eager to continue working closely with Kristina Williams and her team to ensure that we can keep that momentum going in our tech sector.

We know that, you know, a conversation about future recapitalization is one that is going to be important for us to keep on the horizon, but what we found is that we did not need it right in this period, so that's why you don't see a recapitalization for Budget '24. Hopefully, that gives you the context you need on that one.

11:10

In terms of the health spending account – this ties to section 4.1 of the budget – there are a few dollars there to help with developing sort of the foundational tools that would be needed to support this kind of a program. But I will just say that, obviously, a health spending account, as it was originally anticipated, with about a \$300 benefit for every man, woman, and child: that's about a billion and a half dollars a year forever. Given the important work that the Health minister is leading right now on some of the reorganizations with AHS and so forth, we want to get through that before we broach bringing on a new program that's a billion and a half dollars a year. We're doing a little bit of the foundational work behind the scenes on the technological infrastructure that would be required to support that. Then, you know, in terms of the actual timing of when

this would be brought forward, that's going to be a little bit dependent on the progress on the overall restructuring.

In terms of dollars for IT in health care, I mean, Health has its own IT budget. When we consolidated the technology backbone of government, beginning back in 2017-2018, we basically brought everything into then service Alberta, which now is the technology piece of Technology and Innovation, but Health retained its own, so all of the technology systems that power our health care system and power AHS are held under the Health budget or AHS's budget, which is still funded by Health. So while we certainly work closely with the Health minister to provide advice and to provide support, historically we have not managed the IT systems in Health.

But the Premier has given me a mandate to work much more closely with the Health minister than in the past, so we're looking forward to looking at all of those systems and providing that advice and sort of – as I alluded to before, my job is not to go and be the expert in the health system. My job is not to be the expert in justice or in social services. My job is to come alongside them and say: help me to understand what are the challenges you're trying to overcome, and then how can we work together to use technology to solve those in the best way? So we will be having those conversations, working closely with the Minister of Health. You know, the budget envelope for those types of investments is primarily in Health, but our team will come alongside them and offer support and advice and insights. I hope that kind of gives a little bit of insight into: what will the next year look like as we're working together?

But certainly very keen to use more innovation in health care. We can certainly find ways to deliver better results. You know, some of my most exciting investments as a VC were in diagnostic imaging technologies that have made cardiologists and radiologists far more productive. They can see more patients, give them better outcomes. Everybody wins when you have new technology.

The Chair: Over to government caucus. MLA van Dijken.

Mr. van Dijken: Okay. Thank you, Chair, and through you to the minister, thank you, Minister, for spending the time here this morning to explain a little bit of the work you're doing within Technology and Innovation in this province. I reflect on MLA Cyr's comments with regard to the work that's being done in rural Alberta, and I know I had a meeting with MCSNet on Friday to just talk about all the challenges throughout my rural constituency, all the way from Swan Hills over to St. Paul. The work that they're doing is as a company that's born and, like, grown in the rural Alberta environment. They really understand where the need is and how to work together with partners in rural Alberta. They work together well as a corporate citizen with ag societies, with community associations, the municipalities, and all of these partnerships are very important in being able to actually get to a place in rural Alberta where broadband access is able to be essentially accessed by all and a very important part of the future in development throughout Alberta. So thank you for the work that you're doing there.

I'm going to reference outcome 1 in the business plan. Outcome 1 of the business plan: having access to high-speed Internet is such a vital part of economic development. It's needed for businesses to reach their customers, for them to purchase supplies but also for students to do their school work and for families to stay in touch. In 2021 our government signed a memorandum of understanding with the federal government committing to get Alberta fully connected, and we allocated funds for the same. I'm pleased to see that it's starting to progress and get some traction.

Your ministry has placed a priority on broadband funding. Have you explored any other forms of Internet connectivity? You know, we've talked a lot about the different options out there. I think it's important to have many different options because one option quite often gets oversubscribed and becomes difficult to actually manage.

I also have questions with regard to, in your business plan, performance metric 3(a). Alberta is home to multiple top-notch universities and many of the brightest and most creative minds in the world. Performance metric 3(a) in your business plan speaks to attracting funding into academic and research institutions. This may not seem like a major economic driver, yet there are many industries in Alberta that grow out of these efforts such as artificial intelligence, clean technology, and more. I see in 2022-2023 Alberta's academic and research universities attracted almost \$1.2 billion in sponsored research revenue. I also see that this year your target is \$1.22 billion and \$1.26 billion in the following year.

Maybe, Minister, just speak to some of the work that you're doing to try and help meet these targets, and what is your plan to keep this on a sustainable path? What steps is your ministry taking to further encourage growth in the sector as well? Also, maybe you can discuss some of the important studies or projects developed in Alberta, accounting in these figures.

I want to talk a little bit about that your business plan talks about funding quantum computing. Quantum computing seems to be generating major interest around the world. If Alberta wants to compete, we need to attract the best and the brightest. Minister, if you could talk a little bit about what you are doing, what your department is doing to help to attract these individuals into Alberta, and what is your plan to continue to do so on an ongoing basis?

That's it for me today.

The Chair: Okay. Thank you, MLA.

Over to you, Minister.

Mr. Glubish: Thank you. Yeah. Some great questions there. Look, funding into our research institutions is so important. You know, we have some really brilliant researchers operating in Alberta. Some good examples would be that we've got Richard Sutton, who's the inventor of reinforcement learning, which is a subdiscipline of machine learning. He's one of the top three minds alive today globally in the areas where he's an expert, and he's right here in Edmonton. He's been here for 20 years, and people from all around the world choose to come to Edmonton, to the University of Alberta, to be around him and to study around him or to collaborate with him. That creates this just sort of ripple effect of innovation and expertise, and it's really exciting to watch.

Another good example is that we've got Nobel laureate sir Dr. Michael Houghton – he was recognized with the Nobel prize for his research on hepatitis C, ultimately discovering the drug, and his research has saved millions and millions of lives around the world – right out of the U of A.

Those are just two examples. There are so many more. That's why, with some of the work that we do, whether it's through our major innovation fund or our research capacity program, the kinds of supports we provide to our postsecondary institutions in those areas help to keep some of this research going and expand on it. That's why, for example, some of the work we've done with funding through Alberta Innovates is to fund the Li Ka Shing institute, where a ton of this medical research is going on, and that's where Dr. Houghton is from.

11:20

Then, also, our investment into API, the applied pharmaceutical innovations: the whole idea there is, in partnership with the federal

government, setting up the Canadian critical drug initiative so that we can fast-track the commercialization of new therapeutics and new drugs and new medical technologies that are coming out of our research institutions in Canada and to be able to manufacture them here and to do the clinical trials here and get them all the way through to a finished product.

We're doing a ton of really exciting stuff. Maybe it's not all household kitchen table conversation, because not everybody is a tech nerd like me – and that's okay – but this just is a good reminder to us all that we've got world-class research institutions in Alberta, and we're doing a lot as a government to support them and to drive this kind of research and to attract this kind of talent.

You know, I'll give you another example. You mentioned quantum. We know what attracting Rich Sutton to Alberta did for Alberta's reputation as an AI leader globally over the last 20 years. We know that quantum is going to do for all things technology in the next five, 10 years what AI has done for all things technology in the last 10, 20 years. We want to find out: who's the Rich Sutton in quantum, and how do we get them to come to Alberta?

We've worked with the University of Calgary to try and bring some world-class expertise here. I even went to Ed, the president of the university. I said: Ed, if you need me to fly anywhere in the world with you and go and sit down and have lunch or dinner with some of these researchers and just tell them that, like, the government of Alberta is really interested in this field and we want to be leaders and we want you, I'll do it. Now, he didn't end up needing that, but the offer is on the table. I'm willing to do whatever it takes to bring the next Rich Sutton here in some of these other areas that we're really keen on. I'm pleased to say that the University of Calgary has recently recruited Dr. Urbasi Sinha, who's a PhD from the Raman Research Institute in Bangalore, India, as a professor in the Faculty of Science and the Canada excellence research chair in photonic quantum science and technologies, which is quite a mouthful. But, in a nutshell, this is a globally respected researcher who's one of the best alive today in the entire world in this space.

They're choosing Calgary. They're choosing Alberta. It's because we're working hard to show the rest of the world that we aim to be a global leader in this space. Quantum is going to change everything. It's going to change our communications networks. It's going to change cybersecurity. It's going to change computer processing power, which then will also open up all kinds of exciting opportunities. That's just scratching the surface of what quantum research is going to unlock for us.

Alberta definitely needs to be on the forefront of this, and we're making significant, targeted investments into Quantum City, which is our partnership with the University of Calgary, and to ensure that we've got the best and brightest researchers in the world doing this kind of work right here in Alberta. You know, to my earlier comment, there's never been a better time to be in tech in Alberta than today. This is yet another example.

The Chair: With that, that block has ended.

Back to the loyal opposition.

Mr. Ellingson: Thank you, Mr. Chair, and thank you for some of the questions from the members opposite. I think we can agree on the incredible importance of the research work and the researchers that are at our postsecondary institutes. I think we've got examples that have been put out on the table. You know, one of the other things that those researchers do that I think needs to be commented on is that the students, the really bright students that are in high school today everywhere in the world that are interested in pursuing something like quantum, follow those researchers. So we will have

students show up from all over the globe to follow a researcher that might be at the University of Lethbridge or the University of Alberta. It's incredibly important work.

You know, I heard the minister talk a little bit about how the Premier has asked you to work a little bit more closely with Health and IT. Obviously, that's led by Health, and the budget is with Health. We've heard some examples of how Alberta Innovates is already, through the government, making some strategic investments in Health. I look forward to that maybe opening up some more opportunity – I'll go back to the innovation group within AHS – and maybe there still remains some opportunity to be doing some additional work with them, Mr. Chair.

I think what I've heard from stakeholders is that that group doesn't necessarily have the fiscal capability to support testing or the proving out of technologies. Then maybe there's some opportunity with Alberta Innovates or with the ministry to support that work that the AHS innovation group is doing.

I'll use that as a segue to some other areas. I'm wondering whether or not the minister could speak to how organizations that are funded by Technology and Innovation or Technology and Innovation programs themselves might be deployed to be working towards some of our other great challenges.

I think we've heard a lot in the House recently about housing. Could the minister speak to: how can Technology and Innovation be deployed, you know, in working with Seniors, Community and Social Services and using data to address some of our housing needs? Can data in AI help us understand, like, where to deploy, when to deploy, what services to deploy to be most effective with our funds and deliver those critical needs to Albertans?

I think housing is an interesting area. Can we use tech to be predicting vacancy rates? Can we be using tech to predict rental rates? Can all of that information be used to help us both in, again, going back to building a tech industry here but also addressing those very critical needs for Albertans today?

I want to bring the minister back to use some of those examples, too. We've got a virtual program in Alberta for mental health and, again, deploying Alberta Innovates and Technology and Innovation to be just pursuing, ever pursuing how tech and innovation can be supporting and addressing a growing need by Albertans for mental health. We talked earlier about how Alberta was able to help Nova Scotia. Maybe Alberta will be in a position to help other provinces also in housing and mental health as we kind of do more work in deploying our local tech and innovation and the Ministry of Technology and Innovation.

We can be there to support other provinces. We know that they're also facing similar challenges, and I think we already know that as provinces we work together across ministries; we work together. Maybe the minister can talk a little bit about how Technology and Innovation as a ministry through its organizations is deploying to help grow our local tech community and address these critical problems: mental health, housing.

The last one I would want to get into: agriculture. I would also be interested in hearing more specifically on ag. I think that ag is historically and continues to be today an incredible backbone, along with energy, in our economy. In addition to rural broadband, what are some of the things the ministry is doing to support the deployment of tech in ag?

The Chair: Back to you, Minister.

Mr. Glubish: Thank you. Just to pick up on some of the opening comments the member made at the beginning, he's right: students from all around the world are attracted by these brilliant researchers

we have here. That, I think, just expands on the point I made earlier, that when you've got folks like Rich Sutton or our new researcher in quantum, people from all around the world are going to want to come to Alberta because they're here, and that's exactly what we want.

We want the smartest people who are that next generation to come and train here because then they're more likely to stay here. Then whatever they do next with their life, with their expertise, they'll do it here, and that would be to the great benefit of all Albertans. So that's why it is so important that we work hard to attract these brilliant researchers and give them something meaningful to do here. I think we've got a good track record of that, and we're going to continue pushing hard to do that.

Some interesting questions or comments about, you know, just other creative ways to use technology to solve problems. I mean, I think these questions about housing and using data, et cetera: they're all very much in line with what we're trying to do. Today, right now, we do have a service we developed called the housing provider portal digital service. We've done that in collaboration with the Seniors, Community and Social Services ministry. This is to sort of help and support the ever-changing shelter landscape. This makes it easier for shelter operators to collect and report on provincial shelter occupancy data and enables them to open and close and reopen shelters in real time. It also helps to streamline the information exchange between the ministry and the stakeholders working in this space, eliminating or reducing manual effort involved. If we can make it easier for the providers to do their job, then they can offer a better service and help their clients.

11:30

In terms of just the overall way of using data to solve these problems and to come up with new innovations, I mean, this is a perfect example of ways that we can use govlab.ai, and I know we work closely with seniors, housing, and community and social services there as well. I don't know necessarily if we've got something on the go right now, but that's one of the reasons why we have govlab.ai, and that's why we have the resources there, so that we can bring these kinds of tasks and challenges forward and see if we can come up with something together.

You know, one of the things when it comes to data that we have to be mindful of, too, is making sure that we can access the data so that we can do this research, so that we can develop these technologies, so we can better meet the needs of the Albertans that we serve. Right now there are some policy barriers that prevent one department from talking to another when it comes to the data, and we're working on addressing that. Of course, we want to make sure we've got the strongest privacy protections in the country with the strictest penalties for any privacy breaches. I mentioned that earlier. That is absolutely table stakes for us. But we also know that when you have different departments in government serving the same Albertan, that Albertan doesn't care about the inner workings of government. They just care: am I getting the service that I need? So we're working to remove those barriers today that stand in the way of, say, Health and Mental Health and Seniors, Community and Social Services supporting the same client.

As we solve some of those problems when it comes to just the legislative hurdles on being able to use the data that we are stewards of in the various different departments in government to serve that common client and to better anticipate their needs and meet them where they're at, that's going to open up even more opportunities for innovation, which will in turn make our health care system function better, our mental health supports function better, and all of the supports we offer to vulnerable Albertans through the Seniors, Community and Social Services ministry function better.

I think this is an example of where my critic and I are aligned. You know, we want to use technology to solve these problems and to better serve Albertans, a hundred per cent, and I think we've got some good tools like govlab.ai that will help us to do that, but we've got to also look at the legislative and regulatory framework and say: if there's a barrier there, like there is right now in terms of being able to communicate between departments, that doesn't make sense, let's fix that.

So stay tuned for more on that yet to come. That'll be a big part of opening up a whole new landscape for opportunity of innovation, and I'm very excited about it.

The Chair: Back to members of the government caucus.

Mr. Wiebe: Thank you, Mr. Chair, and thank you to the minister for answering all these questions. I love technology, but I don't like it when it doesn't work. But I've never been one for all the details, so I've learned a lot here today, Minister, and also from our government colleagues and even from the opposition. One of the things that really stuck out to me was the hon. member from across the way when he talked about something that might not come out of an NDP's mouth when he talked about in this sector here. He also said that he was from Valleyview, and I recently saw him in Grande Prairie at Growing the North, so he may not be as NDP as he thinks he is.

With that, on government services your business plan also states that your ministry will "develop and deploy modern, accessible, secure, and sustainable government digital and data services that allow Albertans to more easily access services, and government to operate more efficiently." We all know that governments are not the most efficient organizations in the world, and we've seen huge blunders in IT like the Phoenix pay system and countless others. Can you explain how you will use your budget to fulfill that goal?

Also, on item 4.1, digital delivery and innovation, this seems like a division of your department that works to create new products and programs. Canada as a whole and other provinces are lacking a lot in innovation that we see in other jurisdictions such as online services, paying of fees and permits, and integration with financial institutions. I've heard you say that you want to deliver better services to Albertans, and this division had an increase this year. Can you explain what that increase is for and what this part of your department does? Government services should be transparent, easy to navigate, and simple to understand so that Albertans are able to access the services they require. Performance metric 1(b) on page 135 is about the total number of active basic and verified alberta.ca accounts. I see that in 2023-2024 there were about 2.5 million active basic and 1.3 million verified alberta.ca accounts that would allow Albertans access to government services and online programs. Can you elaborate on what basic and verified accounts are and how they differ from each other? Also, how does this figure compare to previous years? Can you also expand on the ways that the ministry will work on increasing the number of active accounts? How do you plan on increasing accessibility and awareness of the site amongst Albertans?

Lastly, Mr. Chair, I see that your key objective 2.2 is to develop and implement a comprehensive data ethics framework to guide strategic direction, subsequent policy instruments, and training and the processes to ensure ethical creation, collection, management, and use throughout its lifecycle. Can the minister elaborate on how Budget 2024 will support these key objectives? This work sounds like it's very interesting. Can you elaborate on how and what some of your ministry plans are to develop this data ethics framework?

Thank you.

The Chair: Thank you, Member.

Back over to you, Minister. The reason why I said that I love your cup is because I caught what was on it. So you might hold that again for product placement: I love tech. That's wonderful. Thank you, sir.

Mr. Glubish: I'm waiting for the camera to change.

The Chair: Let's get it there. It's got "Alberta tech" on it.

So now I'm going to let it go to you. There we go. Thank you, *Hansard*.

Mr. Glubish: Yes. Thank you for the questions. You know, some of your early remarks about governments historically not necessarily being the best at implementing technology: I think that most of us inherently can relate to that, right? We can all relate to endless paperwork, endless forms, waiting in line at registries for in-person stuff. Like, we're not naturally the early adopters and the leaders, but that gives us a huge opportunity because there's so much we can learn from others who have implemented technology. We don't have to invent it ourselves. We don't have to figure it out for the first time. We just need to see what works somewhere else, and let's start implementing it, and let's learn from the best practices.

That's why I travelled to Estonia to learn from them. They're the most digital government on the planet. They've been doing this for 25 years, and it's why we're continuing to look at other jurisdictions all around the world who have maybe been a little bit farther advanced than us so that we don't have to spend 20 years figuring it out. We can just spend, you know, the next three, four, or five years implementing it bit by bit, byte by byte. How do you eat an elephant? One bite at a time. We're not going to be able to flip a switch and all of a sudden be equal to Estonia, but bit by bit we can work our way there, and it won't take us as long or cost us as much to do because we don't have to do it from scratch by ourselves. We're very, very motivated to catch up to some of those really innovative jurisdictions because we know that their citizens enjoy far more convenience. Whatever they need to access with their government, they can do it just through their mobile phone.

11:40

I know that I was talking to some of the folks from Nortal the other day. Nortal is a company based in Estonia. Their founders were some of the ones that were actually inside of government when the beginnings of their digital government revolution began, so they had a front-row seat to actually building all of this technology. They were telling me that their new philosophy is: nothing you need is more than three thumb swipes away, right? Like, it used to be three clicks away because you used to use a computer, but there's a whole generation of people here that don't even use a computer anymore. They don't use a laptop or a computer; they just use a tablet or a phone. We need to be developing tools that make it easy for the next generation to interact with whatever they need and make it easy to find, easy to use.

That's why our digital strategy is all about: be user-centric; be focused on the end-user. Whatever you're going to use technology to do, who's using it? In a registry scenario you've got the customer, and then you've also got the registry agent if they need to be involved. So what do they need in terms of the tool, and how do we make it easy for them? In health care you've got the patient, you've got the doctor, you've got the nurse, right? Like, there are a number of different users, so whatever tools we're building and going to use and implement, we've got to think about, "Who's the user, and what do they need out of this?" and then work backwards from there.

Don't start with: how do we deal with the accounting of how we bill, how we collect, and how we report the numbers? Let's start with: what does the user need? The other stuff is easy, but if you build something for an accountant or if you build something with cybersecurity as the first and the only priority, then the user is not going to want to use the tool because you haven't thought about them and you've given them something that is clunky and not intuitive and not useful. That is our philosophy. We are focusing on the user first, and I think as we've begun to do that, we're getting a whole lot better at implementing technology.

When it comes to the basic versus verified alberta.ca account, a basic account gives you basic access to basic things. The verified account gets you access to more secure information. If you want to access your MyAlberta health records, for example, you would need a verified account. That added level of security makes sure that you and only you can access the information that's very private to you, and this is part of our commitment to protecting the privacy of Albertans. We're going to be working to strengthen and make it easier to use a verified account down the line using some more best practices and more secure technologies, including two-factor authentication.

We're always evolving. We're always investing and improving, and as we do that, the tools that we can offer to Albertans will give them better choice, more convenience, more options, and put them more in control of their own life and their own information and the way in which they want to interact with their government. I think that over time folks are going to really appreciate having more of that power in their own hands and more options and more choice and convenience.

In terms of the data ethics framework you mentioned, I will just highlight: on January 26, I think, we released that along with the privacy management framework, so you can refer to that government announcement for the details.

The Chair: Over to the loyal opposition.

Mr. Ellingson: Thank you, Mr. Chair. Next time I come in the room, I'll be sure to bring my mug that was from my mom as she went on strike in 1980 to get better wages for the nurses.

The Chair: Did they get the wages or just the cup?

Mr. Ellingson: I mean, they did get better wages in 1980, not just the cup.

All right. I've got four minutes and 30 seconds. This might be my last kick at the can, so I wanted to maybe just kind of pursue a little bit the use of data in some of the areas that we're working in. We've also talked quite a bit in the House about drought and forest fires and climate change and funds that are allocated in the budget. Are there areas of the budget about drought and wildfires? I'm wondering whether or not the minister could comment if there are any collaborations between the ministry of environment and ministry of forestry, and are any of those funds being used to apply technology and innovation in addressing drought and wildfires?

I think at the outset, in one of the examples of your opener, you talked about data being used for water, so maybe there are some other examples of – and I will say that I was at an event last year in Calgary. It was a Startup TNT event. The Premier was there, and one of the pitches was from a company that has a technology to, like, contain wildfires. There are technologies in Alberta out there, so I'm wondering if the minister can talk about whether or not that is being used.

I wonder if the minister can talk about the use of data. Again, I'll kind of go back to talent. Do we know, like, which students from high school are tracking into which programs in university and

whether or not through those programs in university they get deployed into or secure work in the area that they were looking for when they entered those programs?

I've always kind of been a fan, when I worked at Calgary Economic Development, when it came to postsecondary, and I know the tech and innovation through Advanced Ed in their investments there. For me, in tech and innovation it's okay to overindex in training students because we could have something like what happened in Waterloo, where students were – Waterloo became known because their students were getting jobs with tech companies all over North America. Those tech companies then started to pay attention to where their students, where their young people were coming from, and then they planted companies in Waterloo because they knew that talent was coming from Waterloo. Is that something that Tech and Innovation can be kind of, like, sorting through? Are graduates getting jobs elsewhere? Can that help us attract with our business attraction efforts?

Quick question. Alberta Innovates: some of the stories that I hear in the community are that sometimes the grant application process can be maybe more onerous than the companies are hoping for and whether or not Tech and Innovation does anything in working with AI through that process. But I'll also ask: you know, as the ministry looks at deploying programs and services, are they always looking to partner with the Crown corps that they've already got there with the expertise to deploy those programs and services?

We will continue to, obviously, watch on rural broadband.

I'm curious. With govlab.ai, that's been mentioned now a few times, of the original funding that was set aside for that program, how are we doing on that funding? Would more be applied to govlab.ai? Is there the potential to grow govlab.ai? Would more money be applied to that?

I'll also just ask about reporting. We've heard so much today in this room that many Albertans, I think, just simply do not know. I'm wondering: how can we get, like, the richness of this conversation out to Albertans other than a printed version of *Hansard* or what social media we as members might do? The ministry has a technology and innovation strategy. If I'm not mistaken, I don't think there's been any progress reports issued on that strategy. Could we be issuing progress reports on that strategy? Would that help get the richness of this conversation out to Albertans?

The Chair: Well done.

Over to you, Minister.

Mr. Glubish: Thank you. Yeah. A lot a lot to cover here. In terms of the context of using technology and using AI and using data to help with some of the environmental challenges, you know, as the member mentioned, we're facing a tough drought this year and, of course, forest fires. We know what last year was like, and if this year is anything like that, there are some challenges there. So I'm happy to confirm that, yes, we do work with both environment and with forestry through Tech and Innovation.

One of the things we do is we have a project through govlab.ai that is looking at all sorts of data sources to help us to better predict where a fire will start, when, under what conditions, and how fast it would grow so that we can more proactively deploy firefighting resources to contain it and prevent it from getting out of control. If we can keep a fire from getting out of control, that can have exponential benefits in terms of reducing the damage the fire causes, reducing the cost it takes to protect against its spread, and also to reduce the environmental impacts of that fire. We've had some really early successes with that, so that's something that continues. Our thought there is that that's a perfect case study of

something that if we get that ready for prime time, it's not just going to help Alberta; it could be used the entire world over.

We're also working with, I think, environment on – well, we're digitizing the water licences and providing a move-my-water-licence service so that we can help them with just dealing with the back and forth between all the water licence holders as they need to work together and negotiate a path forward in a time of drought. Those are just a couple of examples, but yes. The short answer is yes; we do work with both those departments in looking for creative ways to use technology.

11:50

In terms of the journey of talent from, like, K to 12 to postsecondary, et cetera, I mean, it's certainly an interesting concept. You know, I agree that we want to be telling Alberta's story wherever we can. I mean, in terms of managing those roles, that's probably a better question for Education and Advanced Education rather than us, but certainly we're good partners with them whenever they need help with the technology.

I can tell you that everywhere I go, people that I talk to all around the world are taking notice of Alberta and of the talent we have here. That story is getting out. People know that there is outstanding talent here, that we've got something really exciting happening, and they're wanting to be a part of that, whether that be opening up an office here or starting to make more investments here. I think we're already starting to see some of that positive momentum.

In terms of growing govlab.ai, I think one of the ways that we're actually doing that is – my concept for that was that it didn't always just have to be the government of Alberta doing it. We wanted to create a model that was scalable. I'm pleased to say that the cities of Edmonton and Calgary have both become tenants in govlab.ai, replicating the same model, where they're bringing a little bit of their resources and a little bit of their problems, and then the infrastructure and resources we built there are able to support them to tackle some of their problems.

Then we have a number of other interested parties that are in negotiations with us right now to join govlab.ai. That includes the AHS cancer care centre, Alberta Health as an entire department. PrairiesCan is looking at it to look at bringing some federal government resources and problems to the table and to replicate this model with our team, and then the University of Alberta proper is also looking at it. We're very excited about the possibilities of expanding this to work with more players who, you know, bring both new, interesting challenges to tackle but also some additional resources to expand and build on the talent that we've been building here. I think that's positive.

In terms of, just maybe in closing, like, to get the message out, step one, follow my LinkedIn. That's my main channel where I talk about what's going on in tech. There are so many exciting stories here. You know, most players in tech are on LinkedIn, and they're telling their stories there. If we can all as legislators use our platforms to share those stories, I think that can help. That's something I've been very deliberate in doing over the last little while.

Of course, I go and tell the story everywhere I go. That's partly why we have a Ministry of Tech and Innovation, so you have a single minister dedicated to telling these stories everywhere they go. Whether I'm travelling across Alberta, I tell these stories to, hopefully, inspire people, get them excited about what's happening and how they can participate in that. Also, when I go around the world, I say: there's no better place to put your money, there's no better place to expand your business, there's no better place to send your talent than to Alberta; come to Alberta.

The Chair: With six minutes left in a 10-minute block, it's over to the government caucus.

Mr. Stephan: Thank you very much, Mr. Chair and through you to the minister. Thank you for just a very informative discussion that we've been able to enjoy this morning. Just because there is limited time, I'm actually going to try and shorten my question block to make sure that we have some time for you to provide some responses.

I'm just going to have three questions for you. The first question that I have. I know there was some discussion earlier on about the recapitalization of the Alberta Enterprise Corporation, and I appreciate your background as an investment banker. I'd like to understand the return on investment on taxpayer dollars that have already gone out and have been invested by the Alberta Enterprise Corporation. The intent, as I understand, of AEC is, you know, a win-win proposition to help support these entrepreneurs in the technology area but, as well, respect and seek to grow, frankly, taxpayer dollars. I would like to know what the return on investment has been as they are looking to recapitalize from an accountability perspective.

The second question I have is: I'd like to understand, because we are being impacted by volatility in the climate, how tech, perhaps artificial intelligence can look at, as we build out our irrigation infrastructure in Alberta, which is such a growing, important industry in Alberta – it's the second largest, only behind oil and gas – how we can use technology to help with our irrigation systems, especially in the face of volatility with the climate, including drought.

And then the third question I have is – actually, our largest single line item in government is physician billings, and I'd like to understand: as we look to use technology as an important tool to make sure that government is efficient and effective, are we using technology in terms of an audit and verification function in terms of physician billing? You know, we need to make sure that all Albertans are concerned about the sustainability of our health care system, to make sure that physician billings are accurate and appropriate. I'd be interested to see if we're looking at using technology as a verification step and artificial intelligence.

I'll turn the time over to you, Minister, with those three questions.

Mr. Glubish: Thank you. First question. On AEC and return on investment I think what we can say: our internal rate of return on that to date has been about 5 per cent. Yeah. What that means is that for every dollar we've invested, we have had a positive return. I think that's important to note because AEC has got sort of a dual mandate. Yes, they have a mandate to go and invest in the venture space and make a profit, but they also have a mandate to go into the earliest stages, which is the highest risk stage, which is where the largest gap has been historically. They call that the valley of death, right? It's where early-stage companies just can't quite make it if there's not enough early-stage capital. So given that high-risk nature that they're playing in, to have a positive return like that is really impressive.

When you think about it, for every dollar that AEC has invested, they brought \$5 of outside investment into Alberta tech companies. Where else can you have such an enormous economic development outcome and still make a profit while doing it? Most government programs that deliver that kind of an outcome are a cost centre. This is a profit centre. That's one of the reasons why I believe that AEC has been such a successful tool for us and why we continue to be excited about working together with the team at AEC in the years to come.

In terms of, you know, ag, irrigation, et cetera, certainly these are all great opportunities for us to use technology to deliver better outcomes, to become more productive. More and more opportunities for that will come as we get more sensors deployed in those spaces, because you can only use AI when you have data. If you don't have data, then there's not an application for AI. As more and more sensors get deployed and as better connectivity is available in the rural areas where all this agricultural production is happening, there will be more rich data sets for us to use and new use cases for AI, and we're very interested in that.

In terms of partnering with Health in terms of audit and verification, I think that as we work closely with the Minister of Health in the upcoming year to get a good understanding of all of their technology systems that they have, including, you know, the systems that physicians would use for billing, then we'll have a better idea of how we can add value and better support the health care system.

I think you've raised some fair points about: how do we make sure that everything is being run correctly and accurately and all the i's are dotted and t's are crossed and that every dollar that is spent through our health care system is being spent the right way and getting the best outcomes? I think you're on the right track, that there are lots of opportunities to use technologies to get better

outcomes and better value for the Alberta taxpayer, and I'm looking forward to working closely with the Minister of Health to support them in this important work and to make sure that our health care system is able to meet the demands of our population in the next five to 10 years. I'm really excited about the opportunities of using technology to strengthen our health care system, so I think if we keep up the work that we've started, Albertans are going to enjoy the benefits for that for generations to come.

The Chair: Excellent. And by the sound of the bell, that concludes our time as the committee here today reviewing the minister's estimates. Really appreciate that.

On a personal note from the chair to everyone in the room here today: well done, great meeting, great conduct, good questions, good answers. The decorum was phenomenal. Thank you so much for all of that, folks. Really appreciate it.

I'd like to remind the committee members that we're also scheduled to meet on Monday, March 18, 2024, at 7 p.m. to consider the estimates of the Ministry of Jobs, Economy and Trade.

With that, this meeting is adjourned. Thank you.

[The committee adjourned at 12 p.m.]

