

HANSARD

NOVA SCOTIA HOUSE OF ASSEMBLY

COMMITTEE

ON

ECONOMIC DEVELOPMENT

Tuesday, January 12, 2016

COMMITTEE ROOM

Department of Business, re: Rural Internet Service

Printed and Published by Nova Scotia Hansard Reporting Services

ECONOMIC DEVELOPMENT COMMITTEE

Mr. Joachim Stroink (Chairman)
Ms. Suzanne Lohnes-Croft
Hon. Margaret Miller
Mr. Derek Mombourquette
Mr. David Wilton
Hon. Pat Dunn
Mr. John Lohr
Hon. Sterling Belliveau
Hon. Denise Peterson-Rafuse

[Hon. Margaret Miller was replaced by Mr. Bill Horne]
[Mr. Derek Mombourquette was replaced by Ms. Patricia Arab]
[Mr. David Wilton was replaced by Mr. Brendan Maguire]

In Attendance:

Ms. Monica Morrison
Legislative Committee Clerk

Mr. Gordon Hebb
Chief Legislative Counsel

WITNESSES

Department of Business

Ms. M.J. MacDonald
Acting Deputy Minister

Ms. Monique Arsenault
Business Alignment Strategist



House of Assembly
Nova Scotia

HALIFAX, TUESDAY, JANUARY 12, 2016

STANDING COMMITTEE ON ECONOMIC DEVELOPMENT

1:00 P.M.

CHAIRMAN
Mr. Joachim Stroink

MR. CHAIRMAN: Order, please. I'd like to call this meeting to order. This is the Standing Committee on Economic Development. I'm the chairman - Joachim Stroink, MLA for Halifax Chebucto. This committee is receiving a presentation from the Department of Business on rural Internet service.

Going from there, I would just ask everybody to turn off your phones, and to understand where the fire exits are - one on the right and one on the left. If we do end up in a situation, please make your way out to the Grand Parade Square in front of St. Paul's Church and we can convene there.

If I can start with introductions.

[The committee members introduced themselves.]

MR. CHAIRMAN: I just remind the witnesses to be introduced before speaking, to ensure that Hansard can keep up to our presentations. I will now turn it over to the presenters for introductions and you can start.

MS. M.J. MACDONALD: Good afternoon, and thank you for inviting me to join you today. My name is M.J. MacDonald and I'm the Acting Deputy Minister of the Nova Scotia Department of Business - day two on the job.

With me today is Monique Arsenault, Business Alignment Strategist with our Department of Business. She is leading the department's work on this file and has been instrumental in developing our approach to this issue.

I look forward very much to taking your questions as I see this as a wonderful opportunity to inform and to have dialogue. Before I do, I would like to provide you with a brief update on where we stand in Nova Scotia on access to Internet service and how we got here.

Government and the Department of Business completely understand how important it is for Nova Scotians to have full Internet access. In 2016, not having a connection is unacceptable. It is also a problem if you have a connection that is slow, unreliable, and expensive. This is as true for families as it is for businesses. We can all appreciate that emails, websites, credit card machines, and so much more, are the necessary tools businesses require today to be able to compete and to export goods around the world. That's why the Department of Business has been tasked with taking the lead for government on this important priority.

Our mandate is to make Nova Scotia the most business-friendly jurisdiction in Canada. Having the right infrastructure to compete globally certainly supports that objective, and I think it's clear that quality Internet access is part of that equation. Unfortunately, as important as it is for everyone to have access to quality Internet service, it's a very difficult problem to solve. We have to be honest with Nova Scotians: costs and technical barriers may mean that connecting 100 per cent of Nova Scotians may not be achievable or realistic.

Increasingly the problem extends far beyond making that initial connection. It's about existing connections that are too slow or that cut out. It's also about the fact that too many Nova Scotians are paying a premium for inferior service. We are doing our part to address this problem but a fix will not be fast nor easy, so let me tell you a bit about our approach.

We firmly believe that one of the keys to success will be a solid understanding of this complex situation. That's why we've been taking the time to do several things. We're doing a thorough assessment, studying what has worked before and what hasn't worked, to learn from it. We're also looking at what has worked in other jurisdictions, both in Canada as well as around the world.

We're engaging with subject matter experts, we're involving our public and private sector partners, and we're thoroughly thinking through the appropriate role and options for the provincial government. Throughout all of this we need to continue to respect what we can afford given our fiscal situation and our need to be responsible with taxpayer dollars.

The Nova Scotia Government has been involved with Internet access for over a decade now. In the mid-2000s, we supported several community-led initiatives to deliver access to rural areas. By 2006, government had decided that a pan-Nova Scotia approach was needed to address this problem.

A pilot project was launched in Tidnish and Port Howe. The results of that pilot project provided the basis for the Broadband for Rural Nova Scotia program which was launched in 2007. At the time, Nova Scotia had more than 93,000 civic addresses without Internet access. The stated goal was 100 per cent coverage by the end of 2009 and that was later extended to 2010. Under the program companies were required to provide service at a speed of 1.5 megabits per second for a maximum cost of \$46.95 a month, and that price remained in effect until December 31, 2014.

For this process the province was divided into seven zones. This was done to ensure smaller companies could compete for this business opportunity. Each of the seven zones - and you'll see those on the map there - was based on the number of unserved civic addresses in that particular area. Contracts were awarded to Seaside Communications, Eastlink, and OmniGlobe. The OmniGlobe areas in HRM were later acquired by Seaside.

The Broadband for Rural Nova Scotia project extended coverage to about 99 per cent of the province. It's not a small achievement; however, we appreciate that if you are one of the people still waiting for a connection that's of little consolation. The other reality, of course, is that the speed required for a quality Internet connection today is much faster than it was in 2007; 1.5 megabits per second can be okay if it's a consistent, reliable speed, but for many rural Nova Scotians they don't even get half of that on a regular basis.

By comparison, the federal government launched the Connecting Canadians program with the stated goal of giving rural Canadians at least 5 megabits per second. Internet customers in Halifax and other cities can easily receive 50 megabits per second or more. In fact, some service providers are now rolling out gigabit services in high density areas, and that's 1,000 megabits per second.

That map doesn't show very well, but at last count in 2010, more than 1,000 potential customers said they did not have access and wanted to be connected. The overwhelming majority of these individuals are in southwest Nova Scotia which was the area served by Eastlink under the broadband program. As you can see, these people are spread out over a large geographic area. This lack of density makes it more difficult to justify these connections. Much has changed since 2010. Some people have been connected through various technologies; many more, however, have seen their service get worse as more people join the broadband network. It is probably safe to say that there are far more than 1,000 people in Nova Scotia who want to be connected or who, in fact, want or need better connections.

The Broadband for Rural Nova Scotia project was a three-way partnership with two levels of government and the private sector. By far, the largest financial contributors were the service providers: Eastlink, Seaside, and OmniGlobe. These companies collectively contributed more than \$40 million to the project, which is more than half the total cost.

The Province of Nova Scotia spent almost \$19 million and the federal government contributed approximately \$14 million. In total, the Broadband for Rural Nova Scotia project cost almost \$74 million.

Beyond the Broadband for Rural Nova Scotia project, government continues to support efforts to improve access to Internet service in rural Nova Scotia. In 2014, the provincial government committed \$250,000 to support a community-led project that would expand cell service and cell-based Internet access in Victoria County. This is a great example of what can be done when communities take initiative in identifying the problem and developing a solution.

Department of Business Minister Mark Furey has also met with at least eight service providers in the province to better understand their abilities and challenges. In addition, he and our staff have attended several community meetings on this subject.

I personally had the opportunity to speak with residents in Greenfield this past November. For me, this underlined just how important quality Internet access is for all Nova Scotians.

Parents told me about children struggling to complete school assignments. Business people told me about having to go to the local Tim Horton's at night to use WiFi. Everyone had a story and the ending was always the same. This has made their lives more difficult, and in many ways it's not fair.

Within government, the Department of Business is leading an active working group with the Department of Internal Services, the Department of Health and Wellness, the Department of Service Nova Scotia, the Department of Transportation and Infrastructure Renewal, and the Department of Municipal Affairs. The purpose of this particular group is to help inform future needs and help us to forecast where the service needs to go as we develop solutions.

Where are we heading? Most recently, my department hired a consulting team from Ernst & Young with Concertia Technologies to recommend a set of options to help define and inform our decisions and particular roles, as well as inform our approach. These consultants provide government with subject matter expertise that we currently don't have. They are also providing and assisting with a barrier assessment - so helping us to understand what the barriers might be to rolling out improved, enhanced Internet service to rural areas; conducting a jurisdictional scan; as well as an analysis of technologies, service providers, and potential partners.

All of this will help us to define the appropriate role for provincial government in this critical area. We're also working very closely with our regional partners to gather intel on the size and scope of this issue. We are looking for your support to help advance our efforts in your communities.

As I mentioned earlier, looking outside our borders is very important. Our early findings are that other jurisdictions are taking some innovative approaches to solve this problem. Where possible, we want to learn from them and apply those successes to our situation.

The one thing we know for certain is that we are not alone here in Nova Scotia nor are we unique in this particular situation. So you'll see on the map - it shows where facilities-based service providers are located in Canada and it gives you a snapshot of what that looks like. These are service providers that own a piece of the main Internet infrastructure. Blue indicates there is one service provider in that particular area, orange signifies there are two service providers, pink means three, and green means there are four; the white areas, which, as you can see dominate, especially in the northern areas, show where there are no major service providers. So in short, Internet access is an issue throughout rural Canada.

Even when we looked to other countries south of our border or to Europe, Scandinavia, we're finding the same thing. Delivering quality Internet service in rural areas is difficult and largely incomplete. However, we know that the situation we have here can be improved, and that's what we're working very hard to advance.

Another important aspect of our work is that we are closely monitoring our federal partners and working with them. At the end of the day, telecommunications is a federal jurisdiction. We need to make sure our work complements and does not duplicate ongoing efforts by the Government of Canada. As mentioned, one of the programs Ottawa is currently delivering is connecting Canadians. This is a \$290 million program aiming to connect 98 per cent of Canadians to have access to 5 megabits per second by 2017. Seaside has received funding to upgrade its network in northern Nova Scotia and Cape Breton.

We also know the CRTC is assessing if Internet access should be deemed an essential service. This includes a study to measure the performance of service levels being delivered by the service providers across Canada, with public hearings being held in April. We expect direction on this question at the end of this year or possibly into 2017. The Department of Business will continue to meet with our federal counterparts to advance this file.

I hope this gives you a sense of how this is a priority for government. We need to understand what has worked and what hasn't, to avoid costly mistakes as we go forward. As I mentioned earlier, this is not an easy problem to fix and it's highly unlikely that one solution will be the answer. However, we are making progress. If you look at past projects as well as what's happening across Canada and around the world, it seems clear that the way forward is to work together with our partners and let the private sector and communities lead.

Thank you for listening and I'm happy to take any questions you may have.

MR. CHAIRMAN: Mr. Dunn.

HON. PAT DUNN: Thank you for the presentation, and Happy New Year. I can remember back in 2006 when this first sort of got off the ground and it was a pretty exciting time - exciting because of the fact that I was looking at the province, looking at remote areas and saying wow, maybe we can slow down the out-migration from these areas. From an educational point of view, there's so much at their hands if they can have this high-speed Internet in their areas - bed and breakfasts, tourism, it just goes on and on. It was a very positive feeling at the time. It didn't take very long before we realized there were a lot of difficulties that would get in the way.

We do have businesses and families in Nova Scotia that have high-speed Internet and it's fine, and in other areas the quality is poor. I guess my question is, has the Department of Business done any analysis on the amount of economic growth that has been hindered, due to the lack of high-speed in certain areas of the province?

MS. M.J. MACDONALD: It's an excellent question, thank you for that question. It's very hard to say what the impact has been economically, as you mentioned, by not having a particular service. We know anecdotally, we hear quite frequently from business that it is indeed having an impact.

We're not able to measure what that impact is at this point in time, however, but I can say that based on what we're hearing, it is clear there is some impact. To be able to quantify it, no, we haven't been able to do that at this point in time.

MR. CHAIRMAN: Mr. Belliveau.

HON. STERLING BELLIVEAU: Thank you very much, Ms. MacDonald, and welcome to your third day of work.

MS. M.J. MACDONALD: Thank you - it's day two.

MR. BELLIVEAU: I was listening carefully to your comments and you used the example of the Greenfield school and I want to get back to that with my questions. You also suggested that this is a difficult problem to solve, and from my notes previous governments have committed to 100 per cent coverage of Nova Scotia since 2006. Just to highlight that, the Liberal Party in 2012 passed a resolution or policy at their policy convention that says the Liberal Government will work exponentially developing IT infrastructure across the province. In your statement you said this is a difficult problem to solve and you were going to look at other jurisdictions. The question that really bothers me - and I'll go back to the Greenfield school - is that we don't have to look at other jurisdictions, we can look within Nova Scotia and see that there is 100 per cent coverage in northern Nova Scotia, am I correct in that?

MS. M.J. MACDONALD: I think it would be close to that, yes.

MR. BELLIVEAU: I'll leave you that to consider, but I want to finish my point. My point is that we have infrastructure and my observation is that the companies that have gotten these contracts in those zones and put their money forward, to me it's just a simple thing as - I'll cut to the chase here - it appears that Eastlink and the ones that have the contract in southwest Nova Scotia just simply do not want to pony up the money, and they want to nickel and dime at the expense of not getting the infrastructure in place. That leads to my question - and I'm going back to the Greenfield Elementary School, here is a good example in southwest Nova Scotia and this was brought to the floor of this House two years ago saying, here is an example, why don't you put the infrastructure in place and . . .

MR. CHAIRMAN: Mr. Belliveau, do you have a question?

MR. BELLIVEAU: My question is, we do not have to look to other jurisdictions. There is 100 per cent coverage in Nova Scotia and why haven't we achieved it? My point is that this present government has negotiated to extend that contract, so why haven't they held this particular company's feet to the fire and achieved this? We have to hold these people accountable or they're just going to keep saying, we can't achieve it. I think that is inexcusable.

MS. M.J. MACDONALD: Thank you for that question. The history on this particular file, as you mention, dates back to 2007, when the contracts were put forward and the number of households that it self-identified at that particular point in time to be connected through that particular program. The program was extended in 2009 to 2010 to get that 100 per cent aim or target and the contract was paid in full because the terms of that contract were deemed to have been met at that point in time. The program itself expired in December 2014 and that was the price point and so on, so that was a fairly recent development.

There were no penalties in those contracts from 2007 in terms of being able to follow up so we don't have any contractual or legal mechanism to be able to avail around that. They were at that time, and after an audit, quite frankly, so there wasn't due diligence done around whether or not the proponents met the terms of their contracts and they were paid . . .

MR. BELLIVEAU: But my question, if I could just interject.

MS. M.J. MACDONALD: Sure.

MR. BELLIVEAU: My question, if I could just interject, Mr. Chairman, is that there is 100 per cent coverage in northern Nova Scotia. It appears that the company that holds the contract in southwest Nova Scotia is not willing to make that financial commitment to achieve this. It can be done so to go out and do this evaluation is a waste of time. That is being achieved in half of Nova Scotia, that is my question.

MS. M.J. MACDONALD: So I think the piece is around can the provincial government force the private sector to build out or enhance service once a contract has been expired and has been fulfilled. What private sector then chooses from a business case perspective for their business model to do going forward is the challenge.

To your point, different providers have made different choices around that business model. Seaside has been successful in obtaining extra funding, as you point out, and they have enhanced their structure, kept adding to it in northeastern Nova Scotia; Eastlink has not. That doesn't mean to say they are in contravention of any legal contract with the province. It means they've made a business decision based on their business model which, as you say, has very unfortunate consequences for that part of the province. So where we have been focusing our work is around what other models might be there.

From a consumer point of view, the best possible model is consumer choice in the marketplace, where you have competition and those kinds of things and working with communities to have other choices - where the business case is there. So for some of those particular businesses and providers, that business case hasn't been there and they've made that choice about how they grow their business and enhance their infrastructure. I would agree with you that that is an unfortunate choice, and I know that the Premier and the minister certainly have spoken about that.

The model - and I guess where we're focusing our efforts going forward is on some of the successful community-led initiatives. I'm going to mention Brier Island as a great example, where they've gotten together as a small community. They've hired a small Internet service provider and come up with a very feasible model to provide service for that particular area.

MR. CHAIRMAN: Mr. Maguire.

MR. BRENDAN MAGUIRE: A great second day, huh?

MS. M.J. MACDONALD: It's going well so far.

MR. MAGUIRE: I just want to make a quick point and then ask questions. I remind the member for Shelburne that while I do admire his passion, that these contracts were paid out in 2011, under his government, of which he was part of the Executive Council and he would have had first-hand knowledge of why the previous government decided to pay out these contracts and that these contracts were met. These contracts were not extended, so let's just clear that up first, but I do appreciate his passion.

Let's talk about Nova Scotia for a second, the topography of Nova Scotia. Is it fair to say that the solution for southwestern Nova Scotia and central and northern Nova Scotia is one blanket solution? I mean we have Tancook Island, we have Cape Breton, and we have Pictou. Is the solution as easy as the member for Shelburne is saying, that it's all one

solution? So what works in northern Nova Scotia, does that work in southwestern Nova Scotia, or does that work in Cape Breton?

MS. M.J. MACDONALD: The answer is that it depends. Depending on what your solution is and the technical assessment of the topography, the costing model, the number of residents, so the density or sparsity, if you will, of your particular population - these are sort of the factors that go into understanding the affordability and the type of technology. It's really that sweet spot, if you will, of those several factor areas in terms of determining feasibility and what a consumer, quite frankly, is willing to pay for a certain level of service.

Part of the analysis that our subject matter expert and the consultant is helping us with is that technology assessment and looking at the topography of Nova Scotia to say what the possible solutions are for the different areas but also working in close partnership with the communities. They really know their needs best so we're really looking to working with the municipalities and the small communities in that one as well.

The shorter answer is, it's highly doubtful that there's one solution that fits all; it's highly probable that it's going to be tailored to a specific instance and it'll take a suite of solutions, if you will.

MR. MAGUIRE: To give credit where credit is due, multiple governments have worked on this, three different Parties have worked on finding a solution for high-speed Internet blanketed right across Nova Scotia.

My question is, the definition of high-speed changes every couple of years; it's just continuing to get faster and faster. Also, if we're looking at covering 100 per cent of Nova Scotia, are you taking into account somebody who moves into a remote area and there are two homes there, I mean is that all part of 100 per cent coverage? With the definition changing, does this mean that this 100 per cent coverage is going to continuously change and it's going to require, every five to 10 years, multiple investments to upgrade systems?

MS. M.J. MACDONALD: Our minister has indicated that he doesn't feel 100 per cent coverage is likely feasible and he has made a point - he has been in the media to indicate that was an optimistic target. The cost of connecting in a remote area may be so prohibitive that it may not be feasible or realistic to be able to connect 100 per cent.

In Nova Scotia today, we have about 99 per cent coverage. However, I appreciate in having spoken to many people who are not getting good service - even though they're connected - there is a slightly different issue there. So there is a piece around - you're not connected, but there is also really the piece around how good is the connection that you might have. For many we know in the rural area - because those rural infrastructure enhancements have not been kept up - that service has not been good.

MR. MAGUIRE: Could you go back to the map of the coverage? Like I said, I understand the passion from the member for Shelburne, but if you look at the provinces and territories across Canada, it looks to me like Nova Scotia may actually be the leader in coverage for high-speed. So is anyone else in Canada anywhere near 99 per cent? Like I said, this is multiple parties.

MS. M.J. MACDONALD: I'm actually not sure. I would have to check on that question.

MR. MAGUIRE: Is it fair to say we're a leader?

MS. M.J. MACDONALD: Again, I'd hate to commit to something. I'm really not exactly sure. I'm going to invite my colleague here to weigh in.

MR. CHAIRMAN: Ms. Arsenault.

MS. MONIQUE ARSENAULT: What you're looking at on the map here is fixed access services, so these are companies that have the actual infrastructure in the province. So in Nova Scotia we're looking at Bell, Rogers, and Eastlink that has actual infrastructure that other companies can then attach to and re-sell their services from.

The other jurisdictions, as you can see, are quite covered in some instances. Based on percentages, we're mid-pack within Canada. This is part of the work that we're having the consultants do with us, is look at what this means, what this means in the rest of the country and elsewhere in the world, and how this relates to Nova Scotia and where we do position ourselves and what these other jurisdictions may be doing that could apply here and be relevant to use here as well.

MR. CHAIRMAN: Mr. Lohr.

MR. JOHN LOHR: Just a comment on the map. I can tell you that Kings North, which I can see - the scale of that map is very large. There are spots in Kings North that don't have three service providers. They don't have any. There are certain roads. I would say that's a pretty big paint brush on that map. The reality is that there are many people who don't have service.

I appreciate your presentation. My colleague was asking earlier about rural businesses and clearly for a rural business, download and upload speeds are important for a business to have a presence. We know that the world of tourism has changed a lot and that people when they travel want access to high-speed Internet. Even tourist businesses need to be able to have access to high-speed Internet to upload and to interact.

There are pretty big swaths of rural Nova Scotia that don't have really good Internet. They have high-speed, but it's even very slow high-speed. It's at one meg per second, it's pretty slow. One of the issues is for tourism. My question is, will the problems

with rural broadband be factored into decisions on the visitor information centres? Has the department decided if these visitor information centres will be open next year? If you are a rural tourism operation, you may be relying on that visitor information centre to a pretty big extent.

MS. M.J. MACDONALD: The work that we've been engaged in so far has been really focused on understanding what has happened and the technologies that could be put into place in the going-forward piece. So no, to answer your question, we haven't looked at anything as specific as what you're suggesting, but I do agree with you that the tourism piece is an important one and we've heard quite a bit from many in the tourism industry around those particular elements.

Where we're focused right now is on understanding what the potential solutions could be across Nova Scotia, if you will. So no, we haven't looked specifically at the piece that you've mentioned, but I think you make an excellent point and we're certainly happy to consider that.

MR. LOHR: So just to ask a second question, has there been a decision on the remaining visitor information centres? Will they be open this year?

MS. M.J. MACDONALD: It's not actually a file that I'm able to comment on.

MR. CHAIRMAN: Ms. Peterson-Rafuse.

HON. DENISE PETERSON-RAFUSE: I appreciate you both being here today, and to come in just a couple of days into the job is pretty difficult. I imagine you were up late last night doing a lot of studying. I want to address responsibility and accountability levels and partnerships in my question so it's like a two-part question, if I may.

The first part of my question is looking at Eastlink with respect to their responsibility. Now I know you said that the contract was paid out so that legally you do not have any avenues. However, I'm wondering with respect to the Department of Business and the minister and the government - if they've had some conversations or actual serious meetings with Eastlink in terms of putting pressure on them. I know you say, well, they are a private corporation. Well, there's a lot of examples of pressure being put from government and Opposition on Nova Scotia Power, as a private corporation, to offer the services that are expected from Nova Scotians when there's a storm and they don't receive their electricity in the turnaround time of fixing the electricity.

I wanted to ask with respect to the contract for \$100,000 that now the people of Nova Scotia are required to pay for - why that has not been turned around to Eastlink to say look, you ran into a problem, you could have done the same thing that we're doing, contracted out a service that may have a bit more knowledge on what the problem is, do an analysis of that.

I know you're saying that legally we had no power over them, but how come we haven't taken the avenue of publicly pressuring them? The Premier did say this is not acceptable and something will be done. That's why I'm wondering - we do that with Nova Scotia Power, why aren't we doing that with Eastlink?

MS. M.J. MACDONALD: You're entirely correct, the Premier has a very well-known opinion and has been in the media, as you mentioned, and has certainly expressed his opinion and dismay, I think - dismay may be too mild a word. He also has said and has respected the fact that the private-sector business piece, if you will, they are making their own business decisions around what business model makes sense for profitability for that particular business.

I think it's fair to say that again through the media there were certainly messages delivered to that particular entity, but at the end of the day it is an independent, privately-run company and they are going to make decisions based on what's going to be profitable for their company. I think that's basically where he has landed on that particular issue.

MS. PETERSON-RAFUSE: Following up to that, I've talked to Minister Furey a number of times and he has also said in public that it's a partnership going forward, to try to be able to get to the 100 per cent. We may not get there but at least we need to do it through community and municipalities.

My question to follow up with that about the participation and the accountability, has there been anything sent out from your department or from the government making municipalities aware that they need to step up to the plate? I know that in any relations that I have or business with municipalities, often they'll say that's a provincial responsibility or that is a municipal responsibility. Unfortunately we don't have that attitude that sometimes we're going to - especially when it costs money.

So you'll see some municipalities that have different people around the council table that would take that lead, and then others that say no, that's a provincial responsibility, we're not touching it. So those communities and the community members get left out because you need that type of leadership when you say communities need to take the ball and run, often that means the local government. Can you comment on what has been done with respect to that and what may be done to make sure that they're aware that they're part of this solution now?

MS. M.J. MACDONALD: It's an excellent question. Part of our project work is, in fact, reaching out - and there is an engagement piece of that. A couple of weeks before Christmas, mid-December, working through our partner department, the Department of Municipal Affairs, we sent out a survey for exactly that reason to all municipalities, mayors, CAOs, a long list of stakeholders in the communities to invite their feedback and find out what they're doing. That's going to help us formulate a plan to understand how we can help in that work, recognizing that it is, we believe, community, private sector-led, and it is a federal jurisdiction.

So a key piece of the work that we're doing and figuring out is, what role is appropriate for the provincial government going forward? How can we help enable this? We do believe that enabling and bringing together parties is a key piece of this because one of the nice pieces is that through collaboration you get that economies of scale that actually starts to make the business case look a lot stronger than having one act alone. So we are actively engaged in that.

MS. PETERSON-RAFUSE: I just want to know quickly - can you provide that information to us? We are trying to encourage our municipalities to get involved in this in the community, and I think that if we're going to resolve this it's going to be a restorative come-together approach. I need to know - I have two municipalities in my constituency - if they even have an interest. How do I approach it to encourage them if they're not interested? So that information that you're receiving would be very vital for me. Is that possible?

MS. M.J. MACDONALD: It's not only possible, but we would really welcome that, as a matter of fact. We'd be quite thrilled.

One of the pieces - and I mentioned this in my opening remarks - is we're here to also seek your support for some of this work in the communities as MLAs and so part of our project plan includes a communications piece with all the MLA offices. We're just in the process because we're in the middle of the project in figuring out what those solutions and connection points look like, but we would absolutely welcome that.

MR. CHAIRMAN: Ms. Arab.

MS. PATRICIA ARAB: I represent an urban riding. There is pretty decent coverage, I would say, for high-speed Internet in my area, but prior to coming into politics I spent the bulk of my career in rural Nova Scotia - southwest Nova Scotia. So as an educator I always felt that this issue of rural Internet was a great example of people working in silos: the federal and provincial governments not talking to each other, and departments not talking to each other.

As a teacher I had a mandate to create 21st Century learners and working in an environment that the school itself was not capable of being a 21st Century learning environment because of infrastructure and then having a handful of students who didn't have basic connectivity, so couldn't. So it hindered a lot of their progress.

So when you talk about the different departments working together, it's very encouraging. It's encouraging to hear that you're looking at it more from just a business perspective, but to see the other areas.

The answer that you gave to Ms. Peterson-Rafuse about working with municipalities, I think, in my inexperienced opinion, working in collaboration is going to be the best way to deal with this issue.

We have two issues that you've already highlighted - the issue of no coverage and the issue of very poor service. There is talk about caps on data usage. That frustrates people because their service is poor to begin with and then to have to be paying another fee for poor service, but this is all part of business structures.

I have two very quick questions. My first one is, when we're looking at other areas of the country, what have we already learned from them? Understanding that topography is different there are provinces that have similar geographic makeups as our province. How quickly or how are you working to see what's working for them to see if it's something that could work for us? That's the first part.

MS. M.J. MACDONALD: We're just in the middle of that analysis actually. We just received some information from our consultant who had been engaged in that particular aspect of the work. We're also engaging with our federal counterparts, we've had some frequent conversations with them around what they're doing, so we don't have a full answer on that one yet, that is actually the work that we're in the middle of doing with that viewpoint so to understand what they've done that might be applied here. Also, with respect to the comments from other committee members is that there are some excellent success stories here in Nova Scotia which can also be looked to and that we indeed need to be leveraging those as well.

The elements for success seem to be community-led, so knowing the particular community, working with a service or a couple of smaller service providers because there is a sweet spot for the smaller service provider where they have a better business case, their business structure is different and their overhead and so on. That's why we like to cite, for instance, what Brier Island has done. We expect through the course of this work and the production of a final report we will have much better information around that regard because we absolutely do agree that is a key piece.

MS. ARAB: Secondly, when you're talking about the practicality of the infrastructure that's currently in place in the province - so when you look at that map, assuming it gets zoomed in and you see exactly where the infrastructure is there - what role do you see the Department of Business, if any, do you have in trying to bring in either new service providers and connecting them with the owners of the infrastructure? Is it the owners of the infrastructure that should say okay, we haven't been successful so maybe we need to be looking to see who we can rent, or whatever the term would be, that equipment? Or is it the responsibility of providers from outside of the province to say oh look, this is somewhere we can be effective, let's see who we need to talk to, to get our company into this province? What's appropriate and what role have you already played?

MS. M.J. MACDONALD: Again, it's a piece of the work that is in progress so one of the elements in the statement of work for the expert is that inventory of vendors, and to your further point, not just who presently is in the province but who might be interested - so working with some of the jurisdictions across Canada and understanding who those players are - generally speaking, what we find is that businesses that are interested and that

have a business model and structure where it's profitable to be doing business, they are actively prospecting and looking for those market areas. Having said that, through the course of this work, if we determine that there are some that would be a good fit, then we'll be reaching out to have those conversations as well.

There is that piece - there are many providers here in Nova Scotia of various sizes, and for some of them they're quite keenly interested in doing business in the smaller communities because they have a different model. The other factor around that would be in terms of some of the federal programs so recognizing that the build-out for some of those infrastructure pieces is cost prohibitive, that's where the federal program actually came in. So Seaside, as an example, secured \$6 million and they're enhancing service to 14,000 customers in northeastern Nova Scotia. Other service providers haven't decided, they've chosen not to do that which is unfortunate. So the short answer is yes, absolutely.

MS. ARAB: Thank you.

MR. CHAIRMAN: Mr. Dunn.

MR. DUNN: Over the last six years there have been a lot of figures thrown around with regard to the number of households that do not have access to high-speed Internet. I think in your initial comments you mentioned that in 2010 there were maybe 1,000, the ballpark figure.

I guess my question is, does the department have an updated and accurate statistic on the number of households that still do not have access to high-speed Internet today?

MS. M.J. MACDONALD: We've been working on that particular piece. The measurement is actually a little more complex than you would think, certainly than I had thought coming into this particular file. The interesting piece is the 93,000 and the 1,000 that were cited were generated through self-identified households in the original Eastlink/Seaside contracts so the data was collected through them.

We are working now with several communities and indeed, one of the asks reaching out to the municipalities was to help and assist us with the data collection because we need to update those numbers. We recognize that they are out of date. What we're looking to do is actually extrapolate some of the surveys that are in progress right now in many communities, find out what's in play, and where we can expand them or extrapolate to get a sense of what the numbers are. Again, it's a piece in play, I don't have firm figures as of today.

MR. CHAIRMAN: Mr. Belliveau.

MR. BELLIVEAU: You made reference or we had made reference earlier about the success of getting the coverage in northern Nova Scotia, and actually in your last few minutes, the earlier speakers made reference to a success story of Brier Island in southwest

Nova Scotia. Earlier in the presentation it talks about the geographical areas, it may be more difficult in southwest Nova Scotia so it raises a question in my mind, we have a success story in Brier Island, which is in southwest Nova Scotia. It comes back to my initial question about it appears to me that Eastlink does not have the investment in the infrastructure to achieve this 100 per cent coverage and every party has committed to that.

To me it's a simple question, is it going to be public pressure to ask this company, you either make the investments - and you earlier suggested that Seaside has done that and achieved this, this is one of the reasons. This is the point I'm trying to get to, that if they're not going to make this commitment, they should simply get out of the way and we should be asking the question to Seaside, can this be done in the remaining part of Nova Scotia? I would think they would say yes.

To me the Premier has suggested that he is dismayed, that's his opinion, he wants the full coverage but it's action and that's the point I'm trying to get to. This can be achievable. The question I'll ask you is, Greenfield Elementary School is a good example, this is an educational tool, so why isn't that being addressed on a one-to-one basis as a good example, to achieve that and for us working together put public pressure on Eastlink, you either make the investment or get out of the way? There's my question - is that something that's attainable?

MS. M.J. MACDONALD: I'm not aware of any plan to do that, other than what has already been stated publicly. The plan we've been formulating has been looking to communities and other private sector entities where there is a business interest and case to be made, as well as looking at some of those federal programs that can augment and make it a stronger business case, if you will.

One of the pieces you mentioned was around Brier Island and some of the technology mixes and business cases. It is difficult, I guess, for government to compel a private sector company to move into a business area if it's not going to be profitable for them. I think they have had considerable public pressure put on them and they have chosen to make some decisions for their business.

MR. CHAIRMAN: Mr. Horne.

MR. BILL HORNE: Technology seems to be good for us; technology is bad for us. We're always trying to catch up. I guess what I'm wondering, a lot of the problem is just technology itself has evolved so fast in the last few years that the older technology to new technology hasn't caught up yet.

I'm just wondering, what considerations are you giving to new technologies that may alleviate some of the problem now? Another year it will be something more. Another year something even more and different. So we're always catching up and I think that's part of the problem of why we haven't got 100 per cent. Maybe we're realizing now that it can't be done. It's going to be piecemeal trying to catch up and get all these different

communities - for whatever reason it is - that can't be on the system. I was just wondering if you could comment on technology and where you see that leading us.

MS. M.J. MACDONALD: We are doing that technology assessment because we agree that part of the challenge, when you look back to 2006, 2007 and the technology solution that was selected for that contract, which was fixed wireless, that at the time was probably a good solution. It was one solution to fit all. I think one of the lessons that we've learned is in reviewing what was done and how that turned out was the fact that there were some limitations to that, as you say.

The piece around sustainability - in fairness, I would say 10 years ago none of us probably ever imagined the explosion, frankly, of how the Internet is used today. The demand on that service and the types of services that are now being rolled out across everywhere, globally, is a huge one.

Monique, my colleague here, has been quite involved in some of the detail around the technologies so I'm going to invite her to give a little bit of rundown on some of those technologies, and as you mentioned, the scalability - what the emerging ones look like, which is a piece of the work and what we'll be working on.

MS. ARSENAULT: Absolutely, as you said, there are a number of different technologies and it is changing rapidly. The technology used at the time, as M.J. mentioned, was fixed wireless, which is one solution to be able to get Internet to the residences and to the businesses. There are a number of different ways that you can do that today, and that's part of why we're working with the consultant, is to understand those different ways.

Depending on the region that you're in, that solution that you may need is going to be different and it may be more than one type of solution. It could be accessing a mobile network to get your Internet, which is feeding off your cell service to get Internet into your house. It could be the fibre op services that we're seeing rolled out in other places. It could be satellite services. There are multiple different ways that you can get Internet into your house or business.

What we're looking at is understanding the needs in Nova Scotia - what some of the barriers are in some of the different regions and then taking that, looking at the technologies that we have today and what companies there are that offer those and what makes sense for the different regions. In southwest Nova Scotia it could be multiple things that are going to supply different regions. It could be one, it could be two, or it could be a whole mix of those. What we're looking for from the consultant is guidance on the best way to approach that so that we're making the right decisions as we go forward with this project.

MR. CHAIRMAN: Mr. Lohr.

MR. LOHR: I know that there have been many people in rural Nova Scotia really upset by the data cap that was brought in. That has been a huge issue. I'm just wondering what your department's position is on this data cap imposed by Eastlink on its rural customers.

MS. M.J. MACDONALD: As I mentioned earlier, we were aware of that and we've certainly received much correspondence to your point. This particular area is a federal jurisdiction and CRTC does allow that type of structure - they do allow capping.

Interestingly enough - or perhaps not, depending on, as you mentioned, what that means for consumers - we do know through the course of our research, many other jurisdictions do have cap model cost structures. I guess there are many reasons for that.

We don't have an official position on it. It's federally regulated. They allow it. How a business chooses to conduct and deliver that service and their business models around it, that's within their area of responsibility. It's certainly something that we are keenly aware of, however.

MR. LOHR: I know you're waiting for an Ernst & Young report right now; have you given any direction to that report in regard to data caps, will that be part of the future for Nova Scotia consumers?

MS. M.J. MACDONALD: Well as mentioned, it's a federal jurisdiction. What we're encouraging people to do is to make their views known directly to the CRTC. The CRTC is actually in the process of collecting data and feedback from Canadians on their viewpoints around their service, as well as cost structures and things like that.

They are hearing not just - obviously, as I mentioned, this is not a problem unique to Nova Scotia, but across Canada there are many other jurisdictions that have a very similar problem.

The challenge for them is seeking out that input and then deciding, from a business perspective, how they're going to regulate. That's the work that we're expecting probably by the end of this year or sometime in 2017. We've been encouraging people to speak with them directly in that regard.

MR. LOHR: I'd like to follow up on that.

MR. CHAIRMAN: Real quick, Mr. Lohr.

MR. LOHR: It might not be quick. When I look at your analysis of the four types of service we could have - we could have fixed wireless, mobile, fibre op, or satellite - of those four likely the only one that would not suffer a data cap would be fibre op. I'm just

wondering if you'd comment. I think that ultimately fibre op is going to be the only solution the consumers are going to be happy with of those four, even though I recognize what you're saying about the difficulty of getting to rural areas.

In reality, if we look at the way the trend has gone with data usage, fibre op is probably the only one of those four that has the capacity to deliver the type of service that consumers want. I wonder if you would comment on that.

MS. M.J. MACDONALD: You know I think it's well recognized, to your point, that from a technological perspective, fibre op is absolutely the gold standard. Because of that it's extremely expensive and it needs a direct connection, so cable right into your house, and that's an extremely expensive thing to do. If you are remotely located it is even more expensive because you are running cable further away.

Having said that, there are emerging technologies. Satellite has come a long way over the last little bit, so it looks promising. There are other types of delivery. It really comes down to what your needs are, the density and the price point. It really comes down to those three factors at the end of the day.

What might be quite feasible, say, for an urban setting where you've got a high density population, it's going to be quite different perhaps than for some of the other rural locations.

One of the pieces I would mention is with the Brier Island solution, it's satellite and because they've got good, clear sightlines in that instance, they're getting around 10 megabits per second, no cap, for I think it's around \$60 a month. That's a nice piece for that perspective.

We agree with you and we're exploring what the future looks like with that and whether indeed it's fibre op and what that might mean and where that might make sense, because absolutely it might be the gold standard but you don't necessarily need that for every application. If you can consistently get five to 10 on a reliable basis, that's quite a good speed service.

I think for many in rural Nova Scotia the biggest piece that we're hearing from people about is that they are not even getting anywhere near the 1.5, and that's a challenge.

MR. CHAIRMAN: Ms. Peterson-Rafuse.

MS. PETERSON-RAFUSE: Before I ask my question I'm going to actually ask you, as the Acting Deputy Minister, if you wouldn't mind helping me because I have a list of residents and businesses throughout my whole constituency - everywhere from New Ross, Windsor Road, down to the Dovers - that have Internet issues. They are all different, as you said, there's a uniqueness here. There are some that have neighbours on both sides that have Internet and they don't, and I'm not convinced that those ones can't be resolved.

I'm just wondering, would you work with me on this list and also the department - and perhaps even the consulting firm would like to, as this is the grassroots list right here so perhaps they may be interested - is that a possibility?

MS. M.J. MACDONALD: Yes, absolutely. We'd be happy to. As I mentioned, we've been working with and reaching out to community-based groups, so many communities have formed a bit of a group so they've got folks active and sort of organized, if you will, and as well some of the municipalities that we've been working with. We're happy to collaborate, and as I mentioned earlier, happy to collaborate with the MLAs and we're very interested to hear what you're hearing and how that can inform . . .

MS. PETERSON-RAFUSE: Okay, I'll ask you afterward what format you would like this to be in and get the contact.

MS. M.J. MACDONALD: Perfect.

MS. PETERSON-RAFUSE: My question is just a clarification and understanding of the process of the contract because that seems to be a controversial issue, about the contract with Eastlink. You had mentioned about the payout in 2010; I think it's important for people to understand that contract existed until 2014, so Eastlink was still under the same obligation as when they originally signed the contract back in 2007, that did not change, so it's just what changed is not having, afterward, I guess, you're saying there wasn't the legal ability to go after them.

My question is, at the time, Minister Samson had said publicly that before the contract finished in 2014, Eastlink was still accountable and responsible to fulfill that contract, and obviously today we know they did not. Can you tell me what process took place in that time frame from 2013 to the end of that contract in order to put pressure on Eastlink to say to them look, it's still a contract, whether it's paid out or not you're still responsible? The legality at that time from 2013 to 2014, if you took them to court, they were still under a contract that they signed for 100 per cent coverage. So I guess I'm asking, what took place that we didn't start a legal process with Eastlink or put some fear into them that this is what we're going to do if you're not going to fulfill your contract to the people of Nova Scotia?

MS. M.J. MACDONALD: My understanding of what had transpired through that piece is that the installation piece of the contract, if you will - the audits that were performed around performance and coverage and so forth in 2011, when the contract was paid out, that in the course of that due diligence it was determined that they met the terms of the contract and those installation costs were paid out, so the contract to install the service. The other piece of it going forward was the provision on a monthly basis, the cost of that service if you had signed up for the program was fixed at \$46.95 a month for that 1.5. I think what happened because the government's commitment, if you will, ended in 2011 with the payout of the installation costs, so that's kind of where the end of that particular contract was.

The \$46.95 then became that agreement between the consumer and Eastlink and Seaside for the levels of service. To your point, how well they delivered on that service promise, I think there's considerable angst around that. I would also say that the demand for bandwidth in those particular areas expanded quite rapidly as well, so it outpaced the enhancements, if you will, to the infrastructure, the original infrastructure that was envisioned and it outgrew it quite quickly. As you had more people and traffic on those lines then the speed of the service went down.

They went through the right due diligence for the contracts, they've ended. There was no penalty contract or term or clause, if you will, contained in them and so governments going forward after that period didn't have a lot of other mechanisms to make any other influences, if you will.

MS. PETERSON-RAFUSE: So in the original contract there was nothing to say this is what the penalty would be if you didn't hit 100 per cent. That was left open and it was up to the company. For example, Seaside, it seems to me has taken every possible turn and turned over every stone even though it was costly for them to try to reach that 100 per cent goal; whereas Eastlink made the decision that financially it wasn't worth it for them and there was nothing in the original contract that we could hold their feet to the fire. Is that what your understanding is?

MS. M.J. MACDONALD: My understanding, as we mentioned earlier, is there were about 1,000 addresses in the Eastlink contract that were not connected so they were complete, I believe, past the 99 per cent.

The contract terms had some provision around "within reasonable means." So if it was so remote and so costly, there was some determination, and that could be negotiated.

MS. PETERSON-RAFUSE: Their legal catchword.

MS. M.J. MACDONALD: There was some legalese around that. So they did, I think, anticipate perhaps that 100 per cent may not have been a realistic true number, or they allowed themselves enough leeway through that contract to say - in the case that we were talking about some of these very remote places are very hard to reach and so forth that would be building them out. So when it came to the audit and did they meet the performance requirements of the contract, then indeed they did, and they were paid out. The challenge, as you say, is that there was no subsequent penalty mechanism included in that monthly go-forward cost to the consumer. That would be correct.

MS. PETERSON-RAFUSE: Thank you for such a clear explanation - really appreciate it.

MR. CHAIRMAN: Ms. Lohnes-Croft.

MS. SUZANNE LOHNES-CROFT: Although communications is a federation jurisdiction, I hear complaints at my office daily from constituents by phone and email that they're either not connected or they're not getting what they need for Internet. One of the confusing points to me is - I'm getting more "scrap broadband and go with high-speed Internet." I don't quite understand why people make those remarks to my office. Is there an issue there?

MS. M.J. MACDONALD: The technology, as we alluded to, is one of the very confusing areas and one that I've certainly spent some time getting myself up to snuff on. As mentioned earlier, Monique has been our business lead on this so, again, I'm going to invite Monique to speak to that Internet broadband piece and elaborate.

The other offer that we would make, we do have a considerable body of information around some of these pieces and if it's helpful we'd be happy to share that with the committee or, indeed, all MLAs, if that's helpful. I'll ask Monique to speak to that.

MS. ARSENAULT: Broadband essentially is a type of Internet connection and what you run into - and what your constituents are likely running into - is the way in which you get that connection to them. There are different ways to take it from the actual infrastructure that in our case is in the ground so it's literally a ring that's in the Province of Nova Scotia, and it's getting the technology from that ring to your house and/or to your business.

In the case of this contract, which was fixed wireless, it's a tower that sends a signal out to a broad range. So if you have a tree that's in the way, a mountain, a valley, whatever it may be, that's going to cause some difficulties in getting access to that. So it's not the broadband itself that is the challenge; it is the technology being used to get the broadband to the consumer. That's where we're looking at what the different options could be going forward and why we've engaged the expert to help us do that. So there are different ways that you can access that. They're going to be faster and more reliable, depending on which technology is used.

The complaints that we're receiving really are, again, back to the type of technology the companies are currently using to get it to your clients. The technology at the time that it would have been put in place would have been good quality for the 2007 contract that was used. What we've asked today is, what are the new technologies, what are the new options? What is the right mix to take that Internet out of the ground and get it to our consumers in the right way that it's going to work more reliably for them and get them those speeds that they really need?

MS. LOHNES-CROFT: So since it is a federal jurisdiction - I know the new government is still getting a handle on all their mandate, but is there work going on between your department and the federal government in helping us to ensure that we have better coverage?

MS. M.J. MACDONALD: Yes, we've had several conversations with our federal counterparts. In fact, I recently joined a federal-provincial-territorial ICT committee - it's part of the Digital Canada committee - and the piece around informing and having those conversations with CRTC to help them understand what the problems are. I think one of the pieces when you're sitting in Ottawa that I guess you don't appreciate is what the impact of being in a rural setting might have. When they look at pure aggregated statistics, it all looks quite fine to them and they're quite pleased with levels of performance in Nova Scotia or across Canada. Our counter to that is, you know it's great to have 83 per cent or 87 per cent coverage in Canada, but what about that 13 per cent and how do we really advance that? So yes, the short answer is we're absolutely engaged.

I'm in the process, in fact, of going to Ottawa to have some conversations. As you mentioned, there is a new government in Ottawa. Some of these programs were quite interested to understand how they're going to look going forward and what they're going to mean. In addition, we've been working with one of the federal MPs, Bernadette Jordan from the South Shore - we've been in contact and had some conversations with her and she's quite keen to move this and advance this forward on behalf of her constituents as well.

I think there's certainly a groundswell going forward and ensuring that the CRTC and our federal colleagues understand that the impacts of this have been crucial to us, and we continue to advance that. So when I was sitting on this recent committee one of the pieces we put forward was, help us understand what you're doing and whether this is a problem in your other jurisdictions; if you've resolved it, what have you done? We will continue to actively work with the federal folks on this one to influence what they're doing.

MR. CHAIRMAN: Mr. Dunn.

MR. DUNN: You mentioned earlier that the department is concerned, and I guess we're all concerned, about the disparities from one area of the province to the other with regard to the access and quality of high-speed Internet.

My question is, would you agree that areas that receive poor service in this province would be at a greater risk of out-migration, missing out on investments, and perhaps poor real estate values?

MS. M.J. MACDONALD: Certainly we are hearing that in the feedback that we're also receiving, and I understand that many of you have also heard that in your own offices and so forth. We are aware and I think it certainly feeds some of the conversations, for

instance, that we've had around access and the need to make it a better service for Nova Scotia.

So yes, we are absolutely aware. Anecdotally, we don't have a way to measure what that impact is, but we would agree there is likely some impact, based on what we've heard so far.

MR. CHAIRMAN: Mr. Belliveau.

MR. BELLIVEAU: I certainly appreciate the opportunity to have this discussion, Ms. MacDonald. Some of the earlier speakers talked about our demand for rural broadband and the service is increasing. I don't think there's any argument from anyone that the demand is increasing on a daily basis - the uses of that. What I'm trying to get to, and there's good discussion here, but I want to know through your opinion, what is the timeline to achieve the success stories in Brier Island and northern Nova Scotia, as we sit here today? What is the timeline for southwestern Nova Scotia and the other areas that have this gap, that hasn't got this connection? That's my question. Can you lay that out - and I know you've only been here for a few days but can you answer that question; if not, can you get us the answer on the timelines when this can be achieved?

MS. M.J. MACDONALD: Thank you for that question, it's an excellent and very reasonable question and one that we're also assessing, quite frankly. You know I said in my opening remarks that I do believe we need to be realistic, I don't think there is going to be a short-term solution, I don't foresee it as being solved in the next few months.

One of the pieces, as we work through with our technical experts, is an understanding of what that timeline looks like, quite frankly. We need to get a better handle on it. I don't have a specific answer for you yet today, we're working toward understanding that. Part of the challenges, if you will, that feed some of that piece is that federal piece, so understanding what federal funding might be available; what the Internet service providers themselves, the private sector, is willing to do; and how we partner with the municipalities and what they're able to do - there are a few pieces. What I will say is I think we're creating a good foundation to collaborate and to be able to answer that.

I know when I attended the session in Greenfield, there was an interesting presenter who had come from Ontario, where they had done quite a bit of work at the community level in this area. His cautionary tale was, it's not easy, it can be done and it's not going to be overnight, it's not quick. So I don't have a firm timeline to give you, unfortunately.

MR. BELLIVEAU: Just a quick interjection there, you made reference again to the federal approach, and I understand that, but this is a point that needs to be clarified. It is my understanding that Seaside has successfully sponsored or participated in the federal contribution, and that's one of the reasons they are at the level they are. But Eastlink has failed to participate in that program, so therein lies the problem and this is what I'm trying

to get to. If you have a timeline and these people are not willing to commit, you've got a serious problem there.

MS. M.J. MACDONALD: The fact that Eastlink has chosen not to participate, as you say, is very unfortunate. It has certainly created a challenge in Nova Scotia in terms of the uniformity and consistency of the service. I think some of the solutions that we look forward to, and as I mentioned earlier, the best possible situation for consumers is more choice and so how can we give them more choice? What is a feasible business model for a smaller service provider that sees an opportunity to make a profit in this space and working with federal programs as they roll out to avail themselves to make that a cost-effective and feasible approach?

It is unfortunate that Eastlink has chosen the business direction that they have. We don't have a way or mechanism to compel them to do otherwise and we really do see success in promoting and collaborating on those types of partnerships with the small service providers, potentially, and securing some of that federal funding to make it a stronger business case and giving consumers better choice, quite frankly.

MR. CHAIRMAN: Mr. Lohr.

MR. LOHR: Mr. Chairman, I know we've been talking about this high-speed Internet all afternoon, but we haven't actually defined what high-speed Internet is. I have a constituent who was in my office just two days ago who was on wireless and getting less than 1 megabit a second and he was able to move 15 kilometres from the rim of the North Mountain to New Minas and he said he will receive 1 gig, so more than 1,000 times faster speed. I'm just wondering and maybe I should address this to Ms. Arsenault as it's more technical, but what would you define high-speed Internet as?

MR. CHAIRMAN: Ms. MacDonald.

MS. M.J. MACDONALD: Okay, so that is a great question and you're right, I think I am going to invite my colleague to speak to that. Thank you for that, I'll hand that off.

MS. ARSENAULT: The answer to that really is there are different definitions depending on where you are. The work that the federal government is doing here in Canada is to look at defining that as being a minimum of 5 megabits per second to be considered to be high-speed. Depending on the other jurisdictions, there are places in the U.S. that are looking at going to 25 megabits. There are other places in the world that they're looking at going to 25 megabits as well.

So as far as here, there is currently no specific definition in Nova Scotia to define to say this is what it is and this is what it isn't. It comes down more to what the technology is. So what was offered in Nova Scotia as a broadband-based technology and the speeds tied to the specific contract were 1.5 at the time.

What you're seeing roll out in other regions is higher than that. The work that Seaside is doing is to bring their jurisdiction up to 5 megabits. As I said, federally they're looking at that potentially being what would be considered the definition within Canada of being high-speed broadband access.

MR. LOHR: I have heard in the U.S. the minimums for high-speed are much higher. So in reality, even at 5, we're talking about what is probably an outdated level. I mean, the demand for more information and more video streaming and all that just keeps putting this up.

Wouldn't it be true then, from what you've said, that even 5 megabits per second is, in the global standard, not really high-speed Internet? It wouldn't even be achieving U.S. minimums for high-speed.

MS. ARSENAULT: It wouldn't be what their current definition is. The work that we're looking at doing here is tying it less to that number specifically and more to what the needs are of the population of the province. So what we're asking the consultant to look at is - what are the types of services that we need to be doing online and what speed levels would that require? So if you're doing distance education, if you're a business that's trying to do your accounting work remotely, whatever that may be, what type of speeds is that going to dictate?

So as a government we're rolling more and more services out online - what is that going to mean for our constituents and what service level do we actually need to have in the province for our residents and our businesses to be able to meet their everyday needs online?

MR. CHAIRMAN: Ms. Arab.

MS. ARAB: I have two very quick questions that I think are going to be yes or no. You might have to do a little bit more than that, but they stem from Mr. Belliveau's questions. I am by no means an expert on this issue at all. I do not know it intimately in the way that he does so I just need a little bit of clarification. When we're talking about southwest Nova Scotia and we're talking about Eastlink, does Eastlink own the infrastructure that is currently set up in that part of the province?

MS. M.J. MACDONALD: They own some of it - most of it. They're renting - and again I'm going to invite Monique to talk about this - some of the towers are, in fact, provincially owned.

MS. ARSENAULT: That's the short answer. The specifics to how many towers and what the distribution is, we could certainly get, but I don't have that on hand. They do rent some of the provincial towers as well.

MR. CHAIRMAN: If you could provide that information to the committee that would be great. Ms. Arab.

MS. ARAB: I would really appreciate having that information because then, in a follow-up - what role does the Department of Business or does the government have in telling a company that owns infrastructure that they have to do - is it possible to tell them that they have to either, and I'm going to paraphrase you, either do the work or get out of the way when they're the ones who own the way? What wiggle room do we have there?

MS. M.J. MACDONALD: Again, they do own most of that infrastructure so what they choose to do with their own company assets - I would agree with you that if you're not willing to invest and move forward from a business model perspective, it is kind of curious as to why you might hold on to that asset. I can't really comment on their business perspective, but I would agree that it is curious.

In terms of the ones that we rent, there may be some provision. We'd have to explore that to understand what that possibly might mean, but what it would likely mean - just thinking off the top of my head - having someone else come in to be able to then deliver that, which is really the model that we're working towards anyway, which is better choice, more choice, more affordability, and partnering with smaller size businesses that want to and can be profitable in this particular size market.

MS. ARAB: Really quickly, just to clarify, what I'm hearing from you is this is already an identified issue from the department and you're currently working to find ways to work around that issue?

MS. M.J. MACDONALD: If I understand you properly, when you say this issue, which is the . . .

MS. ARAB: The ownership.

MS. M.J. MACDONALD: The ownership piece. We're aware that they do own the infrastructure and our strategy really has been understanding each of the various community needs, where there are gaps - so understanding where those gaps are and how they can be filled in. That's really the work that we have been engaged in, if I'm understanding your question properly.

MR. CHAIRMAN: Ms. Peterson-Rafuse.

MS. PETERSON-RAFUSE: I have two questions, they're quite different. The first one is with respect to - I know part of the mandate with the Department of Business is to ensure that other government departments are working in sync together on issues and policies and so forth. I'm wondering, what has been done to date through the Department of Business in discussions with the Department of Education and Early Childhood Development?

I bring this question up because I'm very concerned in some of the rural areas of the province that students aren't able to access the Internet, or there's very slow Internet, but they're being given the same demands in their workload that another student who lives down the street, or who lives 10 minutes down the street, who is able to access Internet. I'm not sure there's a real, true understanding within the school system of that inconsistency and disadvantage.

Has the department had discussions with the Department of Education and Early Childhood Development to just even be brainstorming and talking about how do we go ahead with our education system when we face such a challenge?

MS. M.J. MACDONALD: We agree, and certainly having been to Greenfield and Monique has been to other communities, the minister has been out and the Premier has been out - we're keenly aware of the situation you describe and agree.

I haven't yet engaged with Education . . .

MS. PETERSON-RAFUSE: Well you've been there two days now, how come you didn't pick up the phone? (Laughter)

MS. M.J. MACDONALD: Just to be clear so I don't overstate or overplay that particular card, I joined the department in July, as a matter of fact, so I'm stepping up into some of these other duties.

I appreciate and agree with your piece, so when we talk about the working group we have put together in August when we started this work, one of the elements we've identified which you've just pointed out is the need to engage further with Education and Early Childhood Development. I haven't yet done that. I absolutely agree with you that we do need to do that.

Through the course of this project, we've been talking about how we augment that working group, to your point, to really understand what the needs are in the community. As Monique was saying, it's health, it's business, and it's really tailoring those solutions to the needs in the community - and education is a huge one, no question.

MS. PETERSON-RAFUSE: Once again, in that process if you could encourage those departments to come back to the MLAs. It shouldn't matter what political stripe we are, we want the same outcomes, so to have that information and knowledge would be useful.

My second question is with respect to what Ms. Arab brought up. What it looks like to me, now that you've explained sort of the infrastructure of Eastlink - and I hate to say this but it sounds like the Nova Scotia Power story where they own the infrastructure, they own the grid, and the difficulty over bringing in renewable resources because of the fact

that they're not going to rent that grid any cheaper than what they're offering the service, or they may refuse to do that.

So I guess my question is - I mean we have a huge company in Bell Aliant that has a lot of power but if they wanted to take over those services, I'm assuming there would have to be something different because Eastlink is not going to let their competitor come in and rent their infrastructure or be part of that, and they may even refuse the small businesses that you're talking about that might be able to fix some pockets of the area. So is there a strategy or a plan going forward? It seems to me that if we're bringing in competition, they're going to have to use another system than what already exists.

MS. M.J. MACDONALD: I think it's an interesting piece, and again that's a federal piece, the sharing of that infrastructure. There are regulations on that and there are discussions underway around availability and so forth. Current regulations do allow and do compel, if you will, some sharing of certain infrastructure.

MS. PETERSON-RAFUSE: Can that be forced through law, through regulations, through the CRTC?

MS. M.J. MACDONALD: I actually don't know, so to what degree, I think that would be something that we would have to examine.

MS. PETERSON-RAFUSE: So when we meet with our federal counterparts - I'm meeting with Bernadette and I know she's really very supportive and very keen, and that might be something I should put on my list to bring up.

MS. M.J. MACDONALD: Yes.

MS. PETERSON-RAFUSE: If you find out more about that, can you let me know?

MS. M.J. MACDONALD: Just to your point, currently the regulations stipulate that they must allow access.

MS. PETERSON-RAFUSE: That's good.

MS. M.J. MACDONALD: There is a tariff structure set up. How that actually plays out in reality, I'm not sure, but in that current regulation that provision is there.

MS. PETERSON-RAFUSE: We might be able to do it if we all work together.

MS. M.J. MACDONALD: I would say so.

MR. CHAIRMAN: Mr. Horne.

MR. HORNE: Just an add-on to Ms. Peterson-Rafuse's first question on successes - there have been successes in Internet. One of them was just in *The Chronicle-Herald* talking about over 2,000 people hooking up to the Internet to discuss Mi'kmaq history and their studies in Cape Breton. That sounds pretty good when you can have over 2,000 people hooked up to the computer, listening to what's being discussed at a university where there are 200 students. I think there have been some wonderful hookups and lovely ways of showing that the system works.

Unfortunately, we're down to less than 1 per cent that requires a lot of effort and expense to try to hook up, and using a tool kit that may involve many things. It's not an easy thing - just a comment on that, if you would.

MS. M.J. MACDONALD: It's a very good point and to the point of Mr. Belliveau and others who have mentioned the frustration, quite frankly, with a business that has chosen not to enhance their infrastructure versus a service provider that has. So I don't think, in fairness, that was ever envisioned, and unfortunately it wasn't provided for in a contract. So talk about a wonderful lesson to learn - a very hard lesson to learn.

So as we move forward, what mechanisms do we need to create to have that sustainability? I agree there is a level of frustration, which is extremely understandable. It doesn't seem fair - it's not - so how do we get ourselves out of that? That's a piece that we're trying to, and are, figuring out.

There are some wonderful success stories, which can be built on and I think applied to, to solving some of those gaps that we have identified. Cape Breton is a great example, absolutely.

MR. CHAIRMAN: Mr. Lohr.

MR. LOHR: Recently I read, and I should have probably clipped it and took it, but it was somebody in the U.S. - I don't know if it was from Harvard, but I think it was Harvard - who said, I believe, that high-speed Internet would be more transformative to our culture than telephone or telegraph. Just thinking about that in our previous conversation about the idea that rural - what are the needs of rural customers? When you think about a person in the city who is able to hook up, or even in downtown New Minas, at 1 gig and these faster hookup speeds, which are coming - I would suggest the idea that someone on the North Mountain, or in a little more isolated area, needing less than that same hookup speed is not realistic.

In reality, the culture is changing with high-speed Internet that we have and everybody wants to be part of the flow of culture. To suggest that somehow we can have one area that can accept a lower connectivity speed because they're just a little bit more expensive to hook up, I don't think is a realistic idea. I think in reality everybody is going

to want to be hooked up at the fastest possible speed at any given moment. We, as a culture, are going to have to figure that out.

One of the things that I think the lack of high-speed Internet - and we talk about the 1,000 customers who aren't hooked up, I think it's a much larger number than that, and that's not even taking into account the multiple thousands who are frustrated because they don't have high enough speed Internet to do their online banking or download a movie on Netflix because their Internet is so slow. So they have Internet, but they're not watching Netflix, they're not doing online banking - there are all of those people in our province, so it's not just that 1,000 of multiple thousands who don't have a hookup, it's also all those people who are suffering, and their families and their kids. It's just so profound for our culture.

I think that it is to fail to get everybody hooked up at the maximum high-speed Internet which I would contend would ultimately be fibre op, as it's the one that is scalable, it can be continued for some time to come, as I understand - I'm not an expert either, but it will be continued to be able to increase speeds with fibre op - it's really an attack on rural Nova Scotia. The viability of living in rural Nova Scotia, and I see this in my own community, is being affected by the lack of good, viable high-speed Internet. I just wonder if you would comment on that, do you agree with me?

MS. M.J. MACDONALD: Well, I think the approach that was taken in 2007, which was really, as we mentioned, it was visionary; 1.5 at that point in time was high speed. Even now 1.5 allows you to do quite a few things. I think the interest of the Department of Business which is around what economic impact this is having and you allude to other aspects, and others have spoken about education and the importance of education for our future workforce, as an example, which is crucial.

The feasibility of connecting everybody by fibre - and this is one of the pieces that we're exploring, quite frankly - it's extremely expensive. I think that when we look at some of the options and what those cost models are and what the future scalability pieces are, those are absolutely the questions that need to be considered.

I don't have an answer for you today, obviously, but bringing back to government and certainly hearing from each of you and all of the other MLAs in terms of what you would recommend in terms of that and what would we be willing or able to pay here in Nova Scotia, or what are we able to avail ourselves of in terms of federal funding, potentially, what are the cost models in terms of the necessary level of service to conduct business or education versus what's nice to have for Netflix and how we differentiate what those pieces are and how much we're willing and able to afford to pay to go forward.

I agree we've been exploring those pieces and as we move through this project, my expectation is that it will give us a sense of what that's going to look like. Need and affordability are two of the big drivers in terms of models to go forward, and whether or

not the gold standard is here and now or what it looks like moving forward, it's really difficult to say at this point in time.

MR. LOHR: My point is, to the gold standard, sort of the hookup speeds of the culture of the city and of Toronto and of the world - that is the standard. It's not a gold standard, that's just a standard. That's what's required to participate in the culture, in reality. I do think that it does put a very strong challenge on rural Nova Scotia and it does attack the viability of living in rural Nova Scotia. I literally do know constituents who bought a home in an area where they didn't realize there wasn't high-speed Internet and had to actually move to another province to be able to conduct the business they wanted in one case. Maybe they could have moved somewhere else in the county, too, but they literally did move to another province.

I just think that this is profoundly important to rural Nova Scotia that rural high-speed Internet be the same as high-speed Internet available in downtown Halifax. That would be my comment.

MS. M.J. MACDONALD: Thank you for that. I guess it really does go back to feasibility and affordability and the models around that. We do know fibre op is extremely expensive and when you look at what you're using it for - so our business interest, if you will, is around facilitating business interests.

One of the key pieces of the work we are engaged in is around understanding what the need is but as well as some forecasting around where we're going to be into the future. So to your point, we don't want to be having this conversation every two years, I don't think, or every five years. At the time, 10 years ago this seemed like a really - it was a really high standard, as a matter of fact.

I think continuing to investigate those pieces in terms of understanding what the need is and getting a fix on that, marrying that up then with the community model and density profiles - for some of the communities that have gone forward and have the choice, as you mentioned around fibre op, there is a cost model. So when you look at the city or urban cost models around the different levels of speeds, if you will, and so forth, the consumers are paying \$150 or more for some of the packages - so what is the willingness to pay and what's the right level of service?

All this is to say that we are exploring that to understand that better. I agree that there is certainly a direction that people are moving in, but we also know from our research that for many of the rural areas, as an example, that's not the standard.

MR. CHAIRMAN: Mr. Belliveau, with about five minutes left.

MR. BELLIVEAU: Again, I want to get back to Seaside versus Eastlink. To me they are similar contracts. Not to get deep into them, but I understand that when somebody says 100 per cent coverage, what 100 per cent means. I appreciate Seaside achieving that.

My understanding is Seaside has federal dollars to achieve that final percentage - it was obtained.

It appears to me that Eastlink - this is my observation now - that they've done all they're going to do. If either they don't supply the service or they don't get out of the way, we're going to have this lack of 5 per cent, especially in southwestern Nova Scotia. My question to you is, has Eastlink adopted this attitude that this is all we're going to do or are they trying to achieve this 100 per cent? I think that's a very valid question. I want to know what their attitude is and how they're going to achieve that.

MS. M.J. MACDONALD: I actually have not had any meetings with Eastlink so I'm not aware of what their attitude may be or where they see the business going. I can say that however legally it was set forth in the contracts of the day, they met the provisions of service insofar as the technical aspects and specifications that were required.

The 100 per cent that was put out there may have been ambitious and there was language in the contract, as we understand it, that had said where very remote, very cost-prohibitive, then there was some discussion around what that meant in terms of being able to actually connect them. Those contracts have expired and they were considered and are considered complete.

In terms of where this goes next, I think as I mentioned, what we're focused on is then understanding there is a gap - I think we're all in violent agreement on that - and then what can be done about it and what those models look like.

MR. CHAIRMAN: Thank you very much, Ms. MacDonald. You have a few minutes left for some closing comments, if you would like.

MS. M.J. MACDONALD: Thank you, Mr. Chairman. On behalf of my colleague, Monique, I would like to say how grateful we are to have this opportunity to speak with you today. Now that we've had this discussion, I hope you can appreciate that while addressing this issue is a priority for government, it is not an easy fix. It won't happen overnight.

I sincerely believe we are making progress and the solutions we need will be found in partnerships with people, the private sector, and other levels of government. I also understand that for those who are not connected or who have slow and unreliable service, the answers cannot come quickly enough. So developing a solid understanding of this complex problem is our first step and that will inform the best way forward.

Thank you for listening today and for having enough concern to discuss this issue here at the standing committee. We will keep you informed of our progress and we will be counting on your support, as we discussed, as we advance our efforts in your communities, and look forward to working closely with you in this regard.

MR. CHAIRMAN: Ms. Arab had a comment.

MS. ARAB: I'm not going to be invited back to this committee, I don't think. (Laughter) I just want to thank you, and I want to reiterate how encouraging it is to hear that your department is so diligently working with the federal government and with the private sector to try to get us to where we need to be. That's it, thank you.

MR. CHAIRMAN: I call a recess to let the witnesses leave, and then I'll reconvene the meeting at 2:55 p.m. - so four minutes.

[2:51 p.m. The committee recessed.]

[2:55 p.m. The committee reconvened.]

MR. CHAIRMAN: Order, please. I'd like to call this meeting back to order. I don't think that as of today there's any more committee business to address. The big thing is, for February 9, 2016, from 1:00 p.m. to 3:00 p.m. we will have CFN Consultants (Atlantic) Inc., regarding ocean technology in Nova Scotia.

If there is nothing else further, I'd like to adjourn this meeting.

[The committee adjourned at 2:56 p.m.]