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Rogers Communications, Inc. (RCI.B.CA)

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MANAGEMENT DISCUSSION SECTION

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Good morning and welcome to our 24th Annual Scotiabank TMT Conference. I'm Jeff Fan. I'm the Telecom and Media Analyst at Scotia. We're delighted this morning to be joined by Rogers' Chief Technology Officer, Jorge Fernandes. Welcome, Jorge.

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

Good morning. Thank you, Jeff. Great to be here.

QUESTION AND ANSWER SECTION

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Yeah. Great to have you. You made a little small announcement a couple of weeks ago with respect to the Shaw acquisition. There was obviously a lot of network implications [indiscernible] (00:36) transaction. So I thought I'd give you a chance to talk about how the deal benefits Rogers from a network perspective. I know the deal still has to be approved [indiscernible] (00:49) the regulators. But we can talk strictly on technology and happy to hear your thoughts on why – what those benefits are?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Right. Well, Jeff, it's a great question obviously, and a very obvious one. I would start by saying first of all that one of the biggest benefits is scale I mean scale in fact is the keyword. It will help us to close the connectivity gap that frankly exists in Canada. As we've discussed many times before, Canada is unique in many ways. And the population density and the way that populations come together in Canada make it incredibly costly to deploy networks in the country in an efficient way. And so I think that's the first and most important aspect is, this allows us to start bring – bringing deployments at scale to Canada.

Then, Shaw has a very interesting existing cable, fiber and Wi-Fi footprints in the West of the country. This in fact is very complementary to Rogers. You often look at a number of these acquisitions and there's usually an or, do we use this technology or do we use that technology. And mostly that creates a lot of distraction for us, this is more of an and. It's adding to the capabilities that we have today not or. So, this means that a lot of the efficiencies that we'll be able to drive, we'll be able to drive by adding to our existing capability and not having to make very extensive and distracting choices on whether we switch this or switch that off. So I think that's incredibly important one.

And ultimately this is going to bring greater capability to underserved Canadians. It's going to create more jobs. We've talked about around 3,000 net new jobs this is going to create. And when you look at some of the numbers that we're thinking about CAD 2.5 billion in 5G deployment, so in Western Canada over the next five years we've committed CAD 1 billion to the Rogers Indigenous Connectivity Fund. Again, when you think that there is around 600,000 underserved homes in the Western provinces and the fact that the government has put aside CAD 1.75 billion in the Universal Broadband Fund, CAD 1 billion is – it will take us quite a long way. And then we're estimating another CAD 3 billion or so investment in technology.

So, overall when you think that – especially network deployments around 60% is going into local investments, things like civil works, ancillary, digging up roads, infrastructure, these are all charges that are going into local communities. This is not money that's going to the high-tech providers like Ericssons or Ciscos. I mean this is going to local communities. So I think this is going to be beneficial to the regions as a whole.

I think the other important aspect for us is the CAD 1 billion synergies that we are estimating. Again, as I said the majority of these synergies are and not or synergies and they'll be driven both in terms of CapEx reductions in terms of our current plans and also OpEx reductions in the first three years alone. So this means that we can take that CapEx that we currently have planned for investing in the West and start deploying this capability in underserved areas. So it accelerates our investment profile in the West of the country.

And frankly, when we think about 5G this is going to accelerate the deployment of 5G across the country. I think this is going to be good for Canada in terms of placing us in a very competitive position globally. And also it's going to be – it's going to enable more competition in the country. As I said this is a scale business and so you need to drive scale to drive – to be able to drive down costs and be able to drive down prices. And so I think ultimately this will result in stronger competition in Canada as well.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Joe and Tony many months ago talked about the build versus buy when it came to network deployment, fiber, cable, 5G. How does this address – how does this Shaw acquisition address the buy versus build trade-off that you had to meet on the network side?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

I've talked about the build and the approach that we've been taking in build is a gradual one. So we've taken – it takes time. This is a time game and so essentially there's an acceleration factor here with this acquisition that can accelerate us by anything up to 10 years. Deploying fiber is; one, very, very costly; and two, takes a long time. Planning permits, digging up roads, it's not just a question of the CapEx, it's the time factor that comes into play as well.

And so the buy gives us that – it's not just the acceleration but frankly it allows us to start benefiting in terms of costs of connecting enterprise customers a lot quicker, enabling our 5G network with fiber a lot quicker. Today, we rely on a combination of fiber and microwave. Microwave is very efficient as – or rather more very effective, it gives us – and I think E-band today gives us 10 gigabit per second. We have of course spectrum fees associated with those deployments. These are all efficiencies that we can start taking right away by connecting our wireless sites and enterprise customers with the existing fiber footprint that Shaw brings.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

You mentioned time, the time to market that's good segue into how Rogers has deployed 5G. Rogers was first in the initial launch back in 2020 – early 2020. You were first in deploying standalone core. How was Rogers able to, I guess, lead on that 5G initial launch in Canada and then specifically what benefits do you think that brought to the company being first?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Jeff, I think the first one is, look, Rogers has always been – has a history of leading in technology deployments, going all the way back to the 1985. And this is important not only in terms of people seeing Rogers as an innovator, as the first to market, but it also allows us to take that first wave of the technology to learn and really to be seen by our customers as someone that's always going to be ahead.

When we look at historic deployments of previous generations of technology we have sufficient data to show us that those that that embrace the new technology and deploy it do see a sustained growth as that technology matures. So that for us has been incredibly important. Another factor of course was the uplift program. And I've talked previously around the programs on both the wireless and the cable networks that we started three years ago. And this program has paid off because essentially we started modernizing our networks and getting it ready for 5G. So this allowed us to get ahead of the curve.

Another important investment that we made, the CAD 1.7 billion that we invested in the 600 megahertz acquisition. This allowed us to deploy 5G today to over 45% of Canadians in more than 170 cities and towns.

So this – I think we have a set of building blocks here that have been incredibly important for us. And this in turn now has built I think quite a lot of credibility in Rogers as a trusted partner. For instance we've recently partnered with the government of Ontario with the EORN program, the Eastern Ontario Regional Network, where we'll be deploying 5G over the next – well, not just 5G but essentially 4G and 5G over the next five years investing around CAD 300 million to 113 municipalities and indigenous communities in Eastern Ontario.

If you think about the partnerships that we've had with global carriers, the 5G Future Forum. So we were one of the founding members. This has been incredibly important for us as we start setting the agenda for 5G for MEC and I can talk a bit more about that.

We've partnered with Canadian leading academic institutions. Today, we have around 20 projects underway with these institutions not just important for research but also important in terms of allowing us to start thinking around new services. We have some real life cases that we've deployed and projects ranging from earthquake detection, smart city solutions, digital mining and so on.

And I would say last but not least, the launch of our unlimited plans were incredibly important for 5G as well. We essentially enabled Canadians to start using data without fear of overage fees. And today we have over 2.5 million customers already on our unlimited plans.

This has shown us that there's a 20% increase in data usage. And the other interesting point is, well, now as we start shifting our base more into 5G, we're also seeing that 5G customers are utilizing around 40% more data than 4G customers. So, I would say that there's a sort of an evolution that you can see. We're very happy with the way that that our 5G deployments are going.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Can you touch a little bit on the standalone core for 5G. Perhaps for listeners or viewers that maybe a little bit of the explanation as to what it brings.

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Yeah.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

And then how it's been utilized and how it will be utilized perhaps in the 5G world?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Sure. The first generation of 5G essentially relied and still relies on the 4G core network. And this means that whilst the downlink is using 5G bearer, the uplink and the controls are still using 4G which means that you're not able to benefit from a number of the promised 5G currencies that the 5G standalone core brings. So essentially the 5G standalone core is a self-contained architecture, a 5G that encompasses not only the radio access

network but also the core network. So it's a new architecture. It's a flat all-IP architecture that will enable a number of these new currencies that we've talked about in the past, the ultra-low latency and the network slicing that I can talk about.

We were the first in fact yes in December and I think we're still the only one that's announced the 5G standalone core. We're beginning to see some of these interesting currencies that we've talked about already. Some of the testing that we've done has seen a reduction of around 40% in latency. And so we're looking at our average latency reducing down to about 11 milliseconds, and this is before we've started fine-tuning the network. And again, remember that for real-time edge applications we are looking at sub-10 millisecond latencies.

The other important thing for us is that we're going to be able to start launching network slicing. So what is network slicing? Network slicing will enable us to create new services and essentially divide the network in multiple virtual network instances or networks with distinct characteristics. So you can think about creating virtual networks for specific use cases, such as a virtual network for first responders that require a low latency and guaranteed bandwidth for instance. This year we will be able to start deploying these network slices manually and over time we'll be enabling automation to be able to provide the customer and expose the network capability to customers so that the customers themselves can deploy and build their own virtual networks using our capability.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets
Q

Yeah. That sounds really interesting, because now we'll open up the network as a service...

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.
A

Exactly.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets
Q

...as opposed to just bits and bytes. Maybe just to stay on that for a second because developers are going to be really important, the application developers that's actually developing the networks. So where are we right now as an industry of encouraging application developers to come into the 5G world and develop applications specifically taking advantage some of the currencies that you discussed?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.
A

I would say we're starting really with 4G at this moment. And, as with everything that we've done we've always taken a sort of a crawl, walk, run approach. And this is really building on our recent commercial launch of private LTE networks. In fact on March 25, we were the first national carrier to launch managed solution Wireless Private Networks. And this is where we start getting into the partnership and the importance of partnerships for solution development. We've partnered with Expeto and Cradlepoint. And this is really the entry points for network slicing and for enabling application developers to start using these capabilities. As I've said, we've partnered with a number of institutions for example on the smart cities and transportation opportunities. We've partnered with for example Roambee for real time monitoring of shipments, assets, indoor. We've partnered with bciti for smart platform applications allowing municipalities to provide their citizens with capabilities on their smartphones. We've partnered with Fleet Complete for example for a commercial fleet management and asset tracking. And so we're using these companies that are bringing these applications to start building real use cases.

As I've also said, we've partnered with universities, we have Communitech where we're beginning to develop some of these first 5G use cases. Another example with UBC, Blue City [indiscernible] (17:18) and the City of Kelowna, we've built using 5G sensors. We've built transportation use cases, traffic management and we're using the student community to build applications using the data that is produced by these environments. And so really what we're doing is bringing together a community of academia, the university researchers, companies, not just the hyperscalers but also start-ups, and then an existing application providers that already bring the base application that then will create the platform for others to come in and start using those environments to develop new use cases.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Right. That makes sense. You mentioned Jorge about MEC which stands for Mobile Edge Computing. What's the Canadian opportunity, because we're starting to hear a little bit more from the US operators on what the market size is recently from Verizon? What's the Canadian opportunity look like? And how do you – do you need partnerships like you mentioned like on the application side or can you develop this on your own. Can you talk a little bit about that opportunity for us?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Yes. Well, the partnership is incredibly important. The first is – we essentially see the partnerships across three main areas. The first one is the hyperscalers. And we do need to work alongside the hyperscalers because they bring an incredible amount of capability, know-how in exposing very powerful cloud environments to communities. Whether it's – in hyperscaler there is much more focus on purpose built, ready go-to-markets solutions or maybe a different hyperscaler that might have a different philosophy which is building the platform and opening it up for app developers. And so we do see the importance of partnering with multiple hyperscalers that have different philosophies and working alongside these guys. We did the recent one with Microsoft and Attabotics out west to create the private network solution for supply chain operations. So, this is an example of a ready-built application that we partnered with to bring to one of our customers.

The second is the importance of the global operators. Again, I talked about the 5G Future Forum and we – we were the co-founders alongside América Móvil, KT, Telstra, Verizon and Vodafone. And the importance here is to align on creating business models. So, how do we monetize essentially this technology is incredibly important. And having a global scale approach to defining these business models I think is going to be incredibly important.

Service providers such as ourselves lost monetization opportunities going all the way back to 3G. And really this is the first time that I believe we have the opportunity to take a greater part of the value chain that is created by connectivity and by IoT. So, this global partnership of the 5G Future Forum is important for this. But it's also important to define the technical approaches. How do we develop standards of interoperability to provide edge compute capabilities at a global scale for multinational customers? And to your point, how do we expose the network as a platform? So exposing the network APIs, working on MEC, physical and logical security specifications. So, these are some of the activities that we're working on with the global operators.

The third important aspect is, again, the partnerships that we've done with the researchers. As I've said, these research opportunities have been important not just in terms of creating these test beds for academic purposes, but we are seeing real world applications being built by the student communities, and a number of these that we are bringing to market – the Kelowna example I think is an excellent one.

I think the second point on the opportunities is the sort of – I think the first one to bring public MEC is one aspect. So public MEC using our hyperscaler partnerships where we have the ability to use existing applications or developer communities to expose our networks as a platform with public MEC and the second opportunity there is using private MEC. And so for instance I've talked about our private networking launch where we have a self-contained private network with self-contained edge capability with applications that we might co-develop with our customers in a private MEC instance. So these are really the two areas of edge compute.

And also the third benefit and I think this is a benefit for Rogers, we're the only national 5G network provider in Canada. We have the ability to provide a single point of integration across the whole of the country providing low-latency – guaranteed low-latency solutions to partners and customers across the whole country. And again, having this single 5G core that will rely on these partnerships that I've talked about and being able to provide essential solution to a customer, multinational or otherwise, at the national level. So I think these are kind of – I'll leave it there in terms of how I see MEC as an opportunity in Canada.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Yeah. That's a great overview. I want to dig into the debate with respect to hybrid fiber-coax network versus fiber. And also maybe bringing fixed wireless as well and give your thoughts there. Maybe to start, how has the cable network, the hybrid fiber-coax network managed through the pandemic over the past year? And how do you think it's performing relative to your competitors?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Well, Jeff, great question. I think, one, it's handled the situation incredibly well. I mean we – overnight we saw millions of Canadians shifting to working from home which we saw a shifting in peak traffic from traditionally in the evenings where people would be at home watching TV, kids gaming to a more sustained usage of data throughout the whole day, kids learning, working from home. And also the interesting shift from more of a download to more of an upload or at least a more balanced download/upload traffic, as of course people doing more of what we're doing right now. So this has been a very interesting change in how the networks are used.

And here again – I've talked about the uplift program that we've had in wireless and cable. I'm incredibly happy with the investments that we've made in the last few years in essentially helping us and getting us ready for this situation. We've seen our network is driving 56% more traffic than it was before the pandemic. And by the fall of 2020 we had attainability levels. Attainability levels are essentially all the customers getting what they're paying for in terms of the speed. So a customer that's buying a speed of 500 megabits per second is the customer getting that speed. And we were reaching the highest attainability levels ever at around 99% across our entire network.

And so what we've done is, we've used advance analytics to predict traffic usage and we've been able to invest and deal with upgrades and network splitting before the network becomes congested. And so we now have congestion levels at incredibly low levels as I said 99% attainability across our network.

We've also used some of the DOCSIS capabilities to increase the uplink traffic and so we're upgrading our network to speeds above 300 megabits per second. And so we're seeing that the DOCSIS road map is evolving well and we continue to invest in that space which means that we're competing. We are competing incredibly well. I mean where we overlap with our competitors fiber to the home. We're providing a competitive consistent reliable experience to our customers and where we overlap with our competitors DSL service, we're providing a much more superior service.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

Where does fiber fit into the road map for the hybrid fiber-coax?. I know new housing development always been fiber first.

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Yeah.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

But I'm really focused on maybe the brownfield where the fiber fits in. Where does that start to make sense?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Well, you're absolutely right. Today anything that is a greenfield expansion of network or deployments into condos and so on is fiber to the home. So we're no longer expanding into greenfield using HFC. Just makes sense to use fiber. We're also looking at building capability where our customers need. So, I've talked about the fiber deployments and the modernization of the uplift program. We continue to take fiber deeper and deeper even in the HFC plant. And we have been re-architecting the network using fiber to the node, but going even deeper and further closer and closer to the customer at home with fiber. And so, over time what we're seeing is that in certain neighborhoods we are already deploying fiber to the home and we have done this across a number of neighborhoods in high density areas where today the customer – a new customer for instance instead of having even in cable plant has the possibility to use fiber to the home. So, we're doing that as well as we continue the uplift program.

In regions such as Atlantic for instance as well, I mean where we have an older cable plant and there we are deploying fiber to the home. So, already we're replacing the cable plant with fiber to the home deployments. And that's going incredibly well.

And I would say last but not least of course we have our unified fiber program, unified fiber because this is fiber that we are deploying for all capability whether it's connecting our wireless sites, whether it's connecting 5G, whether it's connecting our enterprise customers, we're continuing this deployment around the country. And of course with the Shaw acquisition, this becomes incredibly important out west as we – as I said we'll be able to accelerate the unified fiber program and the investments that we had initially allocated for unified fiber out west. We'll be able to start redirecting those by deploying technologies in underserved areas.

I think we've lost you there.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

[audio gap] (29:33-30:02) wireless networks fit in for Rogers in terms of where be deployed and what's the opportunity there?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

That's an incredibly important question because we often talk about the need for massive investments in introducing technology in the underserved areas. Fixed wireless technology is a very important tool in deploying broadband to these communities. And this is another one of those technologies that we have in our tool box and that we will continue using not only in areas where we are already relying on fixed wireless access. For example in 2020, we deployed fixed wireless access to over 100 communities in Southwestern Ontario. We partnered with the Government of BC as well to connect 52 communities out west. And so this is one of those technologies that not just in current deployment but as we think ahead to a post-Shaw acquisition, we'll continue to rely on fixed wireless access as a very effective technology to deploy broadband to large communities.

We've also recently announced that 5G fixed wireless access community in Holland Marsh where we'll be connecting up wineries and farms and again leveraging 5G and 10 gigabit per second E-band microwave for backhaul. So essentially, you can think about a combination of whether it's HFC, whether it's fiber or whether it's fixed wireless access, these are all very effective broadband technologies that we use across our deployments. And depending on what makes sense for that specific location, for that specific community we rely on any one of these technologies to deploy our broadband.

Jeff Fan
Analyst, Scotiabank Global Banking and Markets

Q

That makes sense. Perhaps the final question, earlier this month, we hosted a panel as part of our Scotia ESG effort where Rogers along with your communication services peers participated in. How this 5G tie into the ESG targets that Rogers has especially when it comes to carbon emission, energy use, et cetera?

Jorge Capelas Fernandes
Chief Technology & Information Officer, Rogers Communications, Inc.

A

Right. I mean – as you know, we take ESG incredibly – with incredible focus at Rogers. In fact, the company has established an ESG Committee at the board level where the board is following a number of these initiatives. 5G is an important one in terms of energy efficient – or rather energy efficiency. And the way we're thinking about 5G with regards to energy consumption and reducing our carbon footprint, the first point I think is 5G delivers more bandwidth per unit of energy, so what's per megabit per second, if you will. And this becomes more and more important as more of our customer base moves across into 5G. So as more devices become available and as the penetration increases, this is going to reduce the overall energy cost per consumption. Obviously this goes hand-in-hand with our modernization programs. And over time we start switching off some of the older technologies which will further drive energy efficiencies.

I think the other important point is, obviously we have to work very closely with our technology partners. Ericsson of course is a very important one. They built the radio equipment. And we've been working with them in terms of finding energy efficient technologies when the network is idle. So, this is both in terms of energy saving software, using AI/ML capability to determine when more or less power is required to the radios depending on the time of day or depending on traffic utilization, looking at building more efficient antennas and radios. But it's not just on the radio side. We're looking across the whole technology. I mean, a network is not just a RAN, it's the RAN, it's the IP infrastructure, it's the backhaul, the cooling, we've been deploying free air cooling to our sites to reduce energy consumption. So, across all of these technologies, we're constantly modernizing them so that we're deploying a more efficient capability – more efficient technologies into our network.

Another interesting area that we're currently working on as we think more and more about remote rural and urban sites is working with partners to build hybrid energy solution providers where we can rely on thermal, solar, wind power in combination with generators to provide and deliver energy to a site in the most efficient way, again, using software to determine what is the best condition and what energy source to use.

So it's not just a one solution, it's a combination of solutions that we're looking at. And this is going to be an ongoing effort as we move ahead and as reducing the carbon emissions becomes more and more part of the way that we think about technology. It's something that we're paying incredibly close attention to. And it'll be an ongoing thing for us.

Jeff Fan

Analyst, Scotiabank Global Banking and Markets

That's great. Jorge, thank you for your time and the great responses. And unfortunately that's all the time we have. And best of luck over the coming year especially with the integration.

Jorge Capelas Fernandes

Chief Technology & Information Officer, Rogers Communications, Inc.

Thank you, Jeff. It's a great – I mean, great to be here as always. Appreciate that.

Jeff Fan

Analyst, Scotiabank Global Banking and Markets

Thanks, Jorge.

Jorge Capelas Fernandes

Chief Technology & Information Officer, Rogers Communications, Inc.

Take care.