



SPEAKING NOTES FOR EOWC/EORN MEMBERS

GIG TO THE HOMES/BUSINESS PROJECT

June 1, 2020

The Proposed Project

- EORN and the EOWC are proposing a new fixed broadband project that will be capable of delivering speeds of 1 Gbps (gigabit per second) for up to 95% of the homes and businesses across the EOWC region.
- There are more than 500,000 homes (includes seasonal dwellings) and businesses in the EORN region.
- 1 Gbps of speed will satisfy our connectivity needs both now and in the long term.
- The most likely technology that will be used is some form of wired solution (like a fibre or cable) to the home or business.

Cost

- The estimated cost of building the project is \$1.2 billion *- \$1.6 billion**
- Proposed cost sharing:
 - \$200 - \$300 million from Federal Government
 - \$200 - \$300 million from Ontario Government
 - \$400 - \$500 million from Canada Infrastructure Bank (loans)
 - \$400 - \$500 million from Internet Service Providers

*Key variable in range of cost estimates is access to hydro poles and pole replacement costs.

**EORN's project management costs to be determined

Suggested Comments

- COVID-19 has exposed the **serious lack of internet access and capacity** for rural residents and businesses across eastern Ontario
- Students are not able to properly connect to schools, colleges and universities putting them at disadvantage.
- Doctors are having trouble undertaking telemedicine.
- Businesses can't reach customers, and customers can't reach businesses.
- Local governments having difficulty connecting with residents and providing virtual services.
- The time to fix this divide is now and it needs to be done in a way that will serve today's needs and long into the future.
- Investing in this project means every sector of our economy and society will get a substantial benefit...healthcare, education, business, government. Without it rural areas will continue to suffer.

EORN is ready

- EORN has done the detailed engineering and research necessary to undertake the project.
- EORN is ready to work with the federal and provincial governments to move the project forward quickly.
- The EORN approach has proven that it can deliver big projects quickly and efficiently.
- EORN has been entrusted to deliver nearly \$400 million broadband and mobile projects already.
- EORN knows how to work with the private sector and protect public sector investments.
- There are 110 municipalities across the EORN / eastern Ontario region outside of the City of Ottawa.



EOWC Briefing

More broadband for eastern Ontario

Getting to 50/10 Mbps and Further



Agenda

- Cell Project Update
- Getting to 50/10 Mbps
- Going further to a Gig



Cell Gap Project Status



- New EORN staff hired March 30 2020
- RFP issued April 20, 2020 and closes August 14, 2020
- Transfer Payment Agreement (TPA) signed May 6 2020
- Negotiate contracts with private sector November 2020 to February 2021
- Start construction 2021
- Build out of project over five years – 2025 completion
- Ongoing contract monitoring to 2030



Technologies



Mobile Broadband:

- EORN Cell project will work to address the voice call and mobile broadband gaps in Eastern Ontario
- Types of devices and applications supported include:
 - cell phones, tablets, cell calls, mobile apps, browsing; social media, etc.

Fixed Broadband:

- Home or Business internet connections
- Types of technology, devices and applications supported:
 - Fiber; DSL; Fixed Wireless; Satellite
 - Business applications (inventory, payroll, accounting), school research & online learning government services, provides home wi-fi for mobile devices; Netflix & streaming



Recognition of the Need



- Minister Monsef reiterated Monday that “we’ve had a plan and now because of COVID it’s even more urgent that we proceed quickly. I want to assure Canadians that we get it, that we’re on it, and we will work with every willing partner to achieve our shared goals.” 05/11/2020 9:28 PM EDT The Wire
- “I think we really have reached a point of consensus in Canada” on the need to boost rollouts, Liberal MP Will Amos said at the May 7 meeting. “So I think we really are at a moment where there is a violent agreement that it is necessary, and I think the question is really more of a how do we get there.” 05/11/2020 9:28 PM EDT The Wire
- Member of Parliament and Shadow Minister for Industry and Economic Development, Michelle Rempel, has launched ‘Connect Canada,’ a call to action for rural internet access. May 6, 2020 5:57 PM. MobileSyrup.com
- An NDP plan for the federal government to add money raised from past and upcoming spectrum auctions to existing broadband funding could achieve universal connectivity well before the government’s 2030 target if executed correctly, four telecommunications service providers told the House industry committee. 05/14/2020 9:35 PM EDT The Wire



The Reality of Getting to 50/10 Mbps



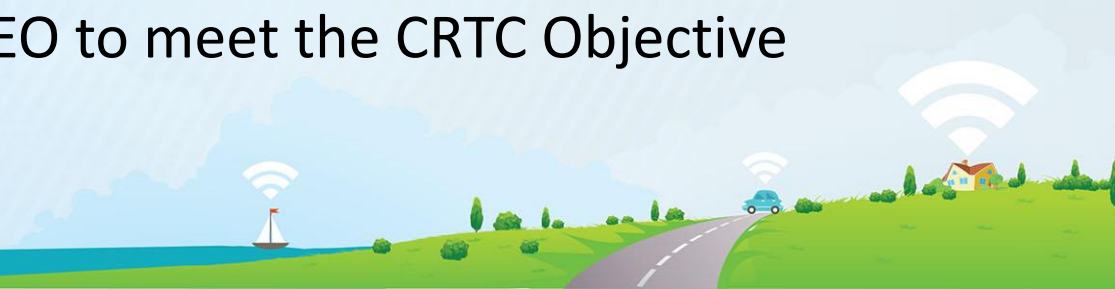
CRTC National Standard

- 90% of all Canadians have access to 50/10 Mbps by December 2021

EORN 2019 analysis shows

- 46% of EOWC rural homes and business have access to 50/10 Mbps
- 63% of homes and business have access to 50/10 Mbps if the EOMC municipalities are included

Long way to go in EO to meet the CRTC Objective



Cost Analysis



Cost Analysis 1

- Estimated cost to bring 50/10 Mbps service to 95% of the demand area across the region using a mixture of 75% wireline and 20% fixed wireless

Cost Analysis 2

- Estimated cost to bring 1Gbps service to 95% of the demand area across the region using a wireline

Based on an engineering model, not detailed designs from telecommunication service providers (TSPs)



Cost Estimates



- 50/10 Mbps to 95% of the EOWC demand area
 - \$500 million to \$750 million
- 1Gbps to 95% of the EOWC demand area
 - \$1.2 billion to \$1.6 billion

Key variable in range of cost estimates is access to hydro poles and pole replacement costs



Investment Requirements



Is government investment needed?

- Yes, without investment 50:10 Mbps or higher is not possible
- EORN's market failure analysis supports a PPP approach
 - government, industry, Canada Infrastructure Bank



EORN Option 1 - \$100 million Investment



Regional broadband project to provide 50 Mbps to 95% of residents and businesses

- \$100 - \$150 million federal funding
- \$100 - \$150 million provincial funding
- \$100 - \$200 million loan from CIB* into SPV**
- \$200 - \$300 million raised from TSP's competitive RFP process
- \$500 - \$700 million estimated total cost. Range of cost estimates is access to hydro poles and pole replacement costs

*Canada Infrastructure Bank (CIB)

**Special Purpose Vehicle (SPV)



EORN Option 1A – Without the CIB



Regional broadband project to provide 50 Mbps to 95% of residents and businesses

- \$170 - \$235 million federal funding
- \$170 - \$235 million provincial funding
- \$170 - \$235 million raised from TSP's competitive RFP process
- \$500 - \$700 million estimated total cost. Range of cost estimates is access to hydro poles and pole replacement costs.

(Federal / provincial contributions will rise if CIB does not participate)



EORN Option 2 - \$200 million Investment



Regional broadband project to provide 1Gbps to 95% of residents and businesses

- \$200 - \$300 million federal funding
- \$200 - \$300 million provincial funding
- \$400 - \$500 million loan from CIB* into SPV**
- \$400 - \$500 million raised from TSP's competitive RFP process

- \$1.2 billion – \$1.6 billion estimated total cost. Range of cost estimates is access to hydro poles and pole replacement costs.

*Canada Infrastructure Bank (CIB)

**Special Purpose Vehicle (SPV)





EORN Option 2A – Without the CIB

Regional broadband project to provide 1Gbps to 95% of residents and businesses

- \$400 - \$535 million federal funding
- \$400 - \$535 million provincial funding
- \$400 - \$535 million raised from TSP's competitive RFP process
- \$1.2 billion – \$1.6 billion estimated total cost. Range of cost estimates is access to hydro poles and pole replacement costs.

(Federal / provincial contributions will rise if CIB does not participate)



Market Failure – Financial Analysis



Conceptual design to close gap between supply and demand. Highly theoretical and used only to calculate rough orders of magnitude for market failure analysis

- CAPEX: Capital costs
- OPEX: Operating costs
- Revenue: (based on ARPU)
- NPV: Net Present Value
- Formulae: $(CAPEX + OPEX) - Revenue =$ If Negative NPV then subsidy likely required

“A significant market failure is the failure to produce some goods and services, despite being needed or wanted. Markets can only form under certain conditions, and when these conditions are absent markets may struggle to exist.”



Together We Can Make a Difference



Next Steps

- EORN could have a RFP in place for EOWC region by August 2020
- Could potentially leverage infrastructure proposed for EORN Cell Gap Project
- EORN model can be replicated across Canada





Questions?

