

Lanark County High-speed Internet Project

General Information

April 14, 2010

Introduction

This list of frequently asked questions has been developed based on the current plans for the Lanark County High-speed Internet Project. Given that the County is still in contract negotiations with the vendor, details such as areas of coverage and timelines are not precisely known. However, the details provided here reflect the current plans for the project.

If after reviewing this information you have more questions about this project, you can send an email to highspeed@county.lanark.on.ca or call the County of Lanark Administration Building at 1-888-9LANARK (1-888-952-6275) and ask for Sam Law. Either Sam or someone else from the Communications Team will be able to address your questions.

Our preference is email as there will always be someone from the Communications Team monitoring the highspeed@county.lanark.on.ca mailbox but obviously since our target audience may not have access to the internet, we're also just a phone call away

Please note that this information is provided to help inform citizens of the project details and will be updated as the project progresses. The Corporation of the County of Lanark has exercised reasonable diligence to ensure the accuracy of this information but does not make any guarantees and shall not be held liable for any damages as a result of errors in this communication.

Project Background Information

The Government of Ontario has recognized that lack of high-speed internet availability in rural areas is a problem. In 2007 they launched a funding program called Rural Connections to help municipalities provide their citizens with access to high-speed internet.

Key rules of the funding program are that:

- Funds can only go towards geographical areas where less than 76% of the population are able to obtain compliant high-speed internet service (these areas were called Under-served). Compliant high-speed internet means DSL, Cable, Fibre or High-speed Wireless (satellite is not considered compliant). Areas that satisfied this requirement were deemed eligible.

In 2007, Lanark County applied for \$700,000 in funding (implying that the County would need to secure an additional \$1.4 million) to ensure that 95% of the population of Lanark County (within the eligible areas) would have at least one option to access high-speed internet (i.e. Ripnet, Storm, Bell DSL would be 3 options). The province approved one third of the amount requested (\$233,000). As a result, Lanark County still moved forward with the project and issued a Request for Proposal asking Internet Service Providers to provide a solution that would cover 95% of the population of Lanark County (within the eligible areas). As a result of evaluating several proposals, Storm Internet was awarded a contract to cover 95% of the residences and

businesses for a price of \$233,000. In addition to providing \$233,000 worth of network and infrastructure, Storm Internet contributed an additional \$466,000 and therefore allowed the County to proceed with the project without increasing taxes. This was known as the Lanark County Broadband Project (Phase 1).

Unfortunately, during the Phase 1 project, the County was not able to acquire access to 3 provincially owned towers that were planned to be used in Phase 1 and consequently, areas of Tay Valley, Lanark Highlands and Drummond/North Elmsley were among the least covered areas in the first phase. Even given these challenges, Storm Internet has been able to service a majority of the subscribers that had requested wireless high-speed internet be installed during Phase 1.

In 2009, the Province issued another round of funding (under the same key rules as in 2007). To address the remaining areas, not adequately covered by Phase 1, a budget was prepared that indicated a project cost of \$1.9 million. The County applied for additional funding and has been approved for one third or \$632,000 of the budgeted project cost which is now Phase 2 of the project. Since the Phase 1 project is complete, this General Information Document primarily focuses on Phase 2.

The County is currently in negotiations with Storm Internet to cover more areas of Lanark County (Phase 2). The goal of the County is to have Storm contribute \$1.3 million dollars towards the project and to use the \$632,000 from the province to complete the \$1.9 million dollar project (therefore avoiding tax increases directly related to the project).

Frequently asked questions by citizens of Lanark County

1. Why is this a good project?
2. How much of my tax dollars are going to the project?
3. What am I getting out of this project and when will I get it?
4. Are there any reasons that I may not be able to obtain service as part of this project?
5. Why is the County using the provincial portion of my tax dollars to provide Internet Service when I already have Internet? And why is the County involved as I don't see the internet as a critical service like roads?
6. Why has the County selected Storm Internet?
7. Why is this project only providing wireless high-speed as an option when the installation charges for wireless are so expensive?
8. Why is Wireless High-speed so expensive?
9. What is taking so long for the Phase 2 project to get started?
10. I subscribed to Storm in 2008 and am stilling waiting, why should I believe that I will get service this time around?
11. Why can't you guarantee that I will get service?
12. Why does Storm comes once and tell me I can't get service, then come and again to tell me the same thing and then later, I start seeing some of my neighbours getting service?
13. What do these Bell Turbo Sticks and Rogers Rocket sticks have to do with this project?
14. Do I have to sign a fixed term contract and be locked in (i.e. 3 years)?
15. What can citizens do in the mean-time?
16. If I am interested in Storm high-speed internet, what is the process?
17. What relationship, if any, exists between the County and Storm?

1. Why is this a good Project?

A. In short, it is a good project because with the Province of Ontario funding program and contributing partners such as Storm Internet, we are able to address a demand from Lanark County citizens (approximately 8000 residents are unable to acquire high-speed Internet) without having to increase the taxes you pay to your Local Municipality.

Here's some other good reasons for a Project that provides High-speed Internet access to as many Lanark County Citizens as possible:

Quality of Life:

- Helps Lanark County continue to be a place where citizens can have the advantages of living in a rural communities while having access to the "conveniences" of urban areas. Banking on-line, getting photos and videos from friends and family, on-line shopping, access to information, social networking (ex. Facebook) are just a small fraction of the things the those with high-speed can enjoy.

Job Creation:

- High-speed Internet provides a mechanism for job creation within the county which will help attract young professionals. Small and medium sized businesses can take advantage of the e-commerce and the global market that comes with it.
- Companies headquartered outside of Lanark County are able to establish offices and provide tele-work (work from home) options within the county. With large urban neighbors such as Ottawa (who shares borders with the County) and Kingston, Lanark County is a prime location for those that want to "get out of the big city" and primarily tele-work. Many citizens are currently commuting a portion of the time and then tele-work for the balance of their work week.

Education

- Many school projects require that students research information on the internet. Those without high-speed are at a disadvantage.
- The ability to obtain an education on-line will help Lanark County address its own "brain drain" problem. It is often the case that young high school graduates leave the county to attend post-secondary schools but fail to return after they have established a network in the "big city". Providing an option to obtain an education on-line via high speed instead of taking residence elsewhere can only help minimize the "brain drain".

Other:

- Our county has the potential to thrive from its aging population as well. Through high-speed access, education and awareness, volunteers can become better matched with organizations through their web-sites.
- For those that may be less physically mobile this provides an alternative means of contributing and interacting.
- Lanark County currently has 2410 seasonal residences (cottages). One of the slogans for the Town of Perth states "One hundred lakes within 50 miles". The natural beauty of Lanark will continue to provide incentive for people to build or purchase seasonal residences here. Adding high-speed Internet access will help make things even more attractive thereby contributing to the economy of the region.

- The County, six rural municipalities and three urban municipal governments within Lanark all deliver e-services through their web sites. The citizens connected to broadband will be able to avail themselves of the ever increasing electronic service delivery (which would include Federal and Provincial e-government as well).

2. How much of my tax dollars are going to the project?

A. It is a \$1.9 Million project. The Province of Ontario of Ontario will provide approximately \$600,000 (which is the maximum they will provide for a project this size) and Storm Internet is providing \$1.3 million. Therefore, you do not pay for this project through your municipal taxes. However, County staff time and some administration costs are involved.

3. What am I getting out of this project and when will I get it?

A. Not everyone will benefit from this project. The County is bound by the rules of the Provincial Funding Agreement in terms of where the money can be spent. The Province essentially wants to provide service to rural areas of Ontario that have no options to obtain high-speed internet. Furthermore, the service areas must be sustainable to ensure that vendors are able to support the service over time. Based on these rules, you are eligible to benefit from this project if you meet ALL the following all criteria:

- You live in an area where less than 76% of the population have the ability to purchase compliant internet services that provide 1.5 Mbps or better download speeds such as DSL, Cable Internet, Fibre. Note that Dial-up, Satellite and Cellular technologies such as Bell Turbo-stick and Rogers Rocket Stick are not considered compliant.
- In your area, there are enough customers to allow for a sustainable service (i.e. the ISP can be profitable enough support the infrastructure that needs to be built to support your area).
- If there are topographical challenges, Storm is able to identify an area in your neighborhood where they are permitted to install a tower (height ranges from 50 feet and up). Depending on the height of your existing structure, it may look like any of the images found in Appendix A.

It is expected this project will be able to cover 95% of the eligible residential dwellings in Lanark County. To be realistic, we do expect that 5% of the eligible population may still not get service due to severe topographical challenges.

Assuming you are eligible, you can expect that by March 2011 you will be able to purchase high-speed internet from Storm (depending on which areas begin construction 1st, you may be able to obtain service as early as June 2010. The details of the service provided by Storm are as follows:

- High-speed Wireless Service (i.e. not through your phone line and is based on radio equipment installed on the exterior of your home, communicating with other radio equipment in the area).

- Your total monthly costs for Storm's standard residential package is \$40/month (+\$10 for rental of radio) plus applicable taxes.
- It is important to compare apples to apples when it comes to internet services so when assessing the cost, it's important to note that the service you receive is as follows:
 - Up to 1.5 - 3Mbps Download Speed (actual speed depends on the area you live in)
 - Up to 1.5 - 3Mbps Upload Speed (actual speed depends on the area you live in)
 - 50GB Monthly Throughput
 - \$1/GB Overage Fees
 - 200 MB Website Space
 - 15 POP3 Email Accounts
 - Email Anti-Spam
 - Dial-up Account as backup.
 - Technical Support

A site survey will determine the height and location of where the radio needs to be installed. Installation costs will depend on which of the method below Storm must use to achieve the required height and location:

Radio Mount

- A radio mounted to a short arm with a base that can be mounted on your existing structure. An existing structure includes but is not limited to, your home, garage or existing T.V. tower. See Diagrams 2 and 3 of Appendix A.
- \$200

Tripod and Mast

- Typically required if you need to extend the height of the radio up to 15 feet above your existing structure. If the mounting point on the existing structure is strong enough, this method can be used to extend the radio up to 20 feet above your existing structure (allowing you to avoid using a tower). See Diagram 4 of Appendix A.
- \$300

Gold Nugget Tower:

- Used where existing structures do not provide enough height using Radio Mount or Tripod methods.
- Typically cannot be used where radio height requirements exceed 60 feet.
- \$200 + \$125 per each 10 feet of tower added (ex. A brand new 40ft tower costs \$700).
- Notes:
 - There must be an existing structure that the tower can be mounted against
 - If more than 20 feet of tower extends past the highest mount point of your existing structure, then guy wires will be needed (at no extra cost).
- See Diagram 1 of Appendix A.

DMX Tower:

- Typically used for radio heights from 60 to 80 feet where all other methods fail to achieve required height.

- Self Standing, Cement Foundation
- High Grade Metal to support extreme heights (See Diagram 5 of Appendix A.)
- \$3500

Tree Installation

- Provided at customer request. Usually a last resort (See Diagram 6 of Appendix A.).
- \$350

Additional Costs:

- If radio is located a long distance away from where service is required (usually on a structure separate): + \$150 for extra cabling.
- Custom installations which may require:
 - Customer to perform some work on the property
 - Digging and installing conduits which may require other subcontractors to do the work.

4. Are there any reasons that I may not be able to obtain service as part of this project?

A. Not everyone will benefit from this project. The County is bound by the rules of the Provincial Funding Agreement in terms of where the money can be spent. The Province essentially wants to provide service to rural areas of Ontario that have no options to obtain high-speed internet. Furthermore, the service areas must be sustainable to ensure that vendors are able to support the service over time. Based on these rules, you are eligible to benefit from this project if all criteria below apply:

- You live in an area where less than 76% of the population have the ability to purchase compliant internet services that provide 1.5 Mbps or better download speeds such as DSL, Cable Internet, Fibre. Dial-up, Satellite and Cellular technologies such as Bell Turbo-stick and Rogers Rocket Stick are not considered compliant.
- In your area, there are enough customers to allow for a sustainable service (i.e. the ISP can be profitable enough support the infrastructure that needs to be built to support your area).
- If there are topographical challenges, Storm is able to identify an area in your neighborhood where they are permitted to install a tower (height ranges from 50 feet and up). Depending on the height of your existing structure, it may look like any of the images found in Appendix A.

It is expected this project will be able to cover 95% of the eligible residential dwellings in Lanark County. To be realistic, we do expect that 5% of the eligible population may still not get service (i.e. we cannot guarantee 100% coverage). Typically, the 5% due to severe topographical challenges.

In summary, you may not receive service if:

- You do not meet the eligibility criteria

- You are a part of the 5% of the eligible population that may not be serviced (usually due to topographical challenges).
- You do not agree to the installation costs or the methods (ex. Tower) available for your dwelling.

5. Why is the County using the provincial portion of my tax dollars to provide Internet Service when I already have Internet? And why is the County involved as I don't see the internet as a critical service like roads?

A. The availability of broadband services to all citizens has been a priority of federal, provincial and municipal governments in order to sustain community and economic development for all citizens. Rural broadband service is seen to be an important cost shared infrastructure as was electricity and roads. There are currently about 8000 Lanark County Citizens unable to obtain high-speed internet.

6. Why has the County selected Storm Internet?

A. Under the terms and conditions of the Rural Connections Program, the County issued a Request For Proposals to build the infrastructure and deliver sustainable services for a minimum of 5 years. Three internet service companies responded and submitted proposals. The bids were evaluated for compliance with the County's requirements and Storm Internet Services was selected. The fact the Storm is also contributing \$1.3 million dollars of their own money towards the project is also a key factor.

7. Why is this project only providing wireless high-speed as an option when the installation charges for wireless are so expensive?

A. The technology that is the least expensive as it relates to installation charges is only available in areas that have a high population density where residences are close together and in proximity to telephone and cable exchange buildings. In rural areas where the population density is low, wireless internet provides the most cost effective technology. In response to a Request for Proposal that was issued in 2007, none of the vendors proposed a technology other than wireless high-speed.

8. Why is Wireless High-speed so expensive?

A. As stated in question 7, wireless high-speed is the most cost effective technology for rural low population density service provision. It requires the erection of costly towers to bring service out to the under serviced areas. As well the residential radio and antenna equipment is more costly than the hardware required for urban delivery of high-speed. Just like any other business, if there were more customers competition would increase and prices would go down. Rural areas unfortunately do not have the population densities of urban areas.

9. What is taking so long for the Phase 2 project to get started?

A. Our application for Phase 2 funding was submitted in February 2009. We received approval from the Province in June 2009. Since receiving notification of the approved funding, the County has been working on the following necessary elements of the project:

- Drafting the terms and conditions of the contract with OMAFRA the provinces funding ministry
- Setup the metrics and methodology that would allow us to measure coverage across the eligible areas.
- Defining the areas that require coverage.
- Exercised our procurement process for vendor selection.
- Locating tower sites that will be suitable for extending coverage in Phase 2
- Negotiations with Storm Internet regarding the terms and conditions.

In short, the County has not received any money from the Province yet. It is a type of project which engages more than 3 key stakeholders, 2 contracts, with many rules and deliverables, making it a challenging process. Consequently, a lot of work has to be done to ensure the contracts meet our requirements. Further to this, to keep costs down, construction of major towers will be planned for the Spring of 2010, as excavating costs in frozen ground are significantly more.

10. I subscribed to Storm in 2008 and am stilling waiting, why should I believe that I will get service this time around?

A. We appreciate your patience and can only assure you that in spite of the difficulty of providing broadband services to the portions of the County that are challenged with dense foliage and hilly terrain, members of the Broadband team are addressing all options to see that service reaches as many residents as is technically possible.

11. Why can't you guarantee that I will get service?

A. At this point in time, we cannot make any guarantees because the contract is still under negotiations and it is important that we are able to come to an agreement that makes optimum use of the funding and represents the interests of our tax payers.

Even assuming that we successfully complete contract negotiations, identifying dwellings that will receive service with 100% certainty is not possible due the difficulty in forecasting radio propagation before any towers have been constructed. We will attempt to explain this in more detail below.

Wireless Networks rely on towers with radios that transmit signals to radios installed onto dwellings (ex. Houses or businesses). The ability of a signal from one tower to reach a dwelling is dependent on distance between the tower and the dwelling and whether or not there are trees, hills or other topographical features in the way.

For example, a dwelling with a radio mounted 60 feet high trying to connect to a 60 foot tower with 5kms of 70 foot tall trees in the way will not likely be successful. However, if the distance is reduced, to say 1km, chances of connecting are more likely since the signal does not have to go through as much foliage. Or, if you raised the height of the tower to 80 feet and also the height of the radio mounted at the dwelling to 80 feet, you will not have any trees in the way you will

more likely connect. So if you know the distance and obstruction density factors to each dwelling, you will be able to determine connectivity.

At this point in time, we currently have plans for where the towers will be but the locations will not be secured until later in the project. Therefore, the tower locations may change by some small margin. We will not know how far the radio propagations will cover due to foliage and topography until the towers are actually up and running. Finally, we will not know if your dwelling will be serviced until a site survey can be conducted which will determine the precisely the foliage and topography challenges in your area.

There is currently software being used to forecast tower propagations by entering various topography and tower locations but they are not 100%. However, they are being used to project how many towers we need and approximately where they need to be. Based on this information, we can indicate in general what areas will receive service (with some margin of error).

To summarize, the availability of service is very site specific and some residences may only need a small square antenna mounted on the house, others may need a short tripod on the roof and others a tower to elevate the antenna above the trees. It is difficult to determine exactly which residences will receive service until the towers have been built.

12. Why does Storm comes once and tell me I can't get service, then come and again to tell me the same thing and then later, I start seeing some of my neighbours getting service?

A. The wireless network coverage changes every time a new tower is installed. At one point in time a site survey may indicate that the signal is not reaching your property, subsequently a micro-node may be installed in your area to service your neighbours. Storm may send technicians back to your property to see if the new tower does in fact provide you with service. The outcome of the site survey may prove that you are still out of range. The important thing is they keep trying.

Also see question 10 for more background on how wireless technology works

13. What do these Bell Turbo Sticks and Rogers Rocket sticks have to do with this project?

A. They are merely other options for consumers to obtain high-speed internet. Purchasing one of these options does not connect you to the Storm network.

The only relevance to this project is that as it pertains to the eligibility criteria discussed in question 2, even if you are able to use these services, you would still be someone that does not have access to high-speed internet and would meet one of the eligibility criteria for this project.

14. Do I have to sign a fixed term contract and be locked in (i.e. 3 years) ?

A. Storm does not require you to sign a fixed term contract, as do some other wireless providers. Service is provided on a month by month basis.

15. What can citizens do in the mean-time?

A. The agreement with the Province requires the County to have a contract with the vendor or Internet service provider, and the County is currently in negotiations to do so. To assist with the negotiations a business case must also be built and the County is seeking better knowledge of the potential customer base. Businesses or residents that can only obtain dial-up, satellite, Rogers Rocket Stick or Bell Turbo stick internet services should contact Storm Internet via their “dial-up friendly” web form at <http://www.storm.ca/lanark/signup.html> (this is the preferred method) or by calling 1-866-257-8676.

On January 29th 2010, the County also e-mailed all known potential customers to provide a confirmation of who is currently on the list. If you did not receive this e-mail and believe you should be on the list, we recommend you apply using the web-site or phone number described above. You should ask for the ticket number and keep it as a reference in order to identify yourself as a subscriber. You will need a ticket number for every property you wish to have serviced. Citizens that have not subscribed will limit their chances of obtaining service if it desired at a later date.

Note: by submitting a request to Storm Internet as described above, you are not committing to purchasing or obtaining service. You will have the final decision to purchase a service based on the price quotes provided after your site survey.

16. If I am interested in Storm high-speed internet, what is the process?

A. Contact Storm Internet via their “dial-up friendly” web form at <http://www.storm.ca/lanark/signup.html> (this is the preferred method) or by calling 1-866-257-8676. When you contact Storm, indicate you are interested in subscribing to their wireless service. Make sure you receive, from Storm, a ticket/request ID#. This ID# will be used whenever you contact Storm. An ID# also confirms that your place of residence is logged with Storm and awaiting further action.

Storm will then contact you to schedule a date when a site survey can be performed. In some cases, Storm may arrive at your door simply because they are in the neighborhood. If it is not a convenient time for a site survey, feel free to tell them to call you to schedule a time.

If the site survey confirms that Storm wireless service can be successfully received at your location, then a quote will be created specifying costs for installation and wireless service. You are not obligated purchase Internet services from Storm until you have given approval to move forward with the installation at the cost they have quoted you.

Just like any other service, it is important that you get the information you need to make an informed decision. Understanding what service packages they have, the cost of installation, the monthly costs and at what point you are financially obligated are things we encourage you do.

17. What relationship, if any, exists between the County and Storm?

A. The County provides funds, received from the provincial government, which are to be applied specifically towards providing high speed service for those residents who currently have no service options available.

The County 1) does not dictate Storm’s service package options and 2) has no involvement in Storm’s internal processes.

Appendix A - Typical Installation Diagrams



Diagram 1 Gold Nugget



Diagram 2 Side Mounted Antenna



Diagram 3 Roof Mounted Antenna



Diagram 4 Roof Tripod Mounted Antenna



Diagram 5 DMX Antenna



Diagram 6 Tree Mounted Antenna