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August 24, 2011

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
PO Box 2319, 27th Floor
Toronto, ON
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Helen T Newland

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DIRECT 416-863-4471

Dear Ms. Walli:

**RE: Application by Canadian Distributed
 Antenna Systems Coalition ("CANDAS");
 Board File No.: EB-2011-0120**

We represent CANDAS in connection with its application to the Board regarding access to the power poles of licensed electricity distributors for the purpose of attaching wireless telecommunications equipment ("**Application**").

In accordance with Procedural Order No. 1, CANDAS is filing the Responses to Interrogatories of Vulnerable Energy Consumers Coalition.

CANDAS will file two paper copies of the above-noted evidence as soon as possible.

Yours very truly,

(signed) H.T. Newland

HTN/ko

cc: Mr. George Vinyard
 ExteNet Systems, Inc.
 Mr. Mark Rodger
 Borden Ladner Gervais
 All Intervenors

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an Application by the **Canadian Distributed Antenna Systems Coalition** for certain orders under the *Ontario Energy Board Act, 1998*.

**RESPONSES TO INTERROGATORIES OF
VULNERABLE ENERGY CONSUMERS COALITION
(VECC)**

(on the evidence of the Applicant, CANDAS)

August 24, 2011

Interrogatory #1

Ref: Written Evidence of Tormod Larsen, Application of CANDAS, April 21, 2011

Issue: Physical Configuration of DAS Network

Questions:

- a. The evidence on pp 5-6 provides that a DAS node site is connected by a fibre optic connection between the remote radio unit and the BTS hub. Please describe the physical process of interconnection, the ownership of the cable, and how it reaches the hub.
- b. Please provide all differences between the pole attachments required for the applicant's DAS network and:
 - (i) Attachments required by wireline network providers currently attached
 - (ii) Attachments required by wireless providers (e.g.) TTC currently permitted by THESL (Application of CANDAS,10.21)
- c. Please describe the additional safety concerns, if any, that might be associated with the pole attachments required for the applicant's DAS network and the attachments set out in (b) above. Please reference the letter of THESL of August 13, 2010, in relation to the safety problems cited therein, and whether the concerns apply to the attachments set out in (b)
- d. The evidence of Tormod Larsen indicates that the DAS network can be used by multiple users (p.6). Please quantify this capacity, and specify what are the "other telecommunications services" referenced on this page that the DAS network can be used for.
- e. Can you quantify the economic burdens associated with a switch from the planned DAS network configuration with pole attachments to other options, such as macrocell units, discussed in the evidence of Mr. Larsen?

Responses:

- a. The remote radio units that are located on utility poles are connected to the hub facility ("Hub") (typically located in a building or central office) via fibre optic cables, over distances that can range from 1 km to up to 20 km. The physical connections are essentially the same as any wireline fibre connections, with pig tails from a splice panel(box)/patch panel to the remote radio unit, using standard fibre connectors (i.e.,

SC-APC). At the Hub, the fibre optic cable is brought into the facility to a patch panel and connected to the base station equipment with standard fibre connectors. The DAS fibre network is, accordingly, very similar in every significant way to other fibre networks.

A Canadian carrier involved in developing the DAS network, a third party Canadian carrier or a cable provider who has existing fibre or builds additional fibre to accommodate the needs of the DAS network, may own all or a portion of the fibre network. In the case of the Toronto DAS Network, if completed as planned and as discussed in THESL 11(a), Cogeco would own the fibre optic cabling connecting the wireless equipment on the pole and the Hub.

b.

- (i) As stated in THESL 2(d), CANDAS does not believe there are any differences between wireline and wireless attachments that are of significance for purposes of this proceeding. See responses to Staff 6.1, 13.3 and 13.4.
- (ii) Although CANDAS is aware that wireless equipment has been or is attached to THESL's poles, it has no specific knowledge with respect to these attachments.

- c. See responses to Staff 6.1 (and, in particular, cells 6 and 7), 9.6 and 17; CCC 15(a) and Energy Probe 4(a) to 4(d).
- d. With respect to capacity, see responses to THESL 10(a) (ii) and EDA 17. With respect to "other telecommunications services", it is possible that some of the fibre cable could be made available for backhaul use (for example, from Macro Sites) or for data communications (for example, in Montreal, ExteNet has made dark fibre available for the interconnection of municipal facilities).
- e. This question raises issues that are not relevant to this proceeding.

Interrogatory #2

Ref: Application of CANDAS, April 21, 2011, Evidence of Bob Boron

Issue: Scarcity of Supply

Questions:

- a. What facts does CANDAS rely upon to negate the position expressed in THESL's letter of April 21, 2011 (p.79 of the Application) that in light of the limited space available on poles, that mandated access to poles by wireless networks should not be granted as it is non-essential?
- b. In the event that pole attachment is found by the Board to be a limited resource, how does CANDAS propose that the rights of attachment should be allocated?
- c. In the event that there is found to be a scarcity of supply should the attachment fee reflect a premium as a result of the same?
- d. How does CANDAS propose to deal with other wireless carriers that wish to connect with the CANDAS network? Should the Board provide for terms of interconnection for DAS network providers?

Responses:

- a. In terms of the misleading contention of limited space available on poles, see EDA 6. Furthermore, CANDAS relies on the fact that both the Board and the New Brunswick Board of Commissioners of Public Utilities have determined that power poles are "essential facilities".
- b. See responses to Staff 16, THESL 45 and EDA 21.
- c. This issue is not relevant to this proceeding as neither CANDAS nor any other party has requested that the Board review or vary the regulated pole access rate.
- d. See responses to THESL 28 and CEA 27(b).

Interrogatory #3

Ref: Evidence of Lemay-Yates (L-Y) Associates, Evidence of Tormod Larsen

Issue: Public Interest in Wireless Services

Questions:

- a. Page 10 of the L-Y evidence sets out Sec. 7 of the *Telecommunications Act* that provides in 7 (b) that “provision of reliable and affordable telecommunications services to Canadians ...” is part of a national telecommunications policy. The L-Y evidence on page 7 notes that “many consumers have disconnected their wireline or conventional home phone service and now rely exclusively on their mobile home phones for voice communications.
 - (i) Please discuss the potential benefits from improved access and affordability, particularly to low-income consumers, associated with the availability of wireless services offered by members of the CANDAS coalition.
 - (ii) Please provide a chart that that sets out the current cost of local voice service provided through wireline carriers, traditional incumbent wireless providers, and new entrant wireless providers, such as Public Mobile.
 - (iii) Please also provide any observations with data, where available, concerning matters of price, choice, and effect on market share of wireless services associated with the results of the 2008 Industry Canada spectrum auction.
- b. Mr. Larsen’s evidence at page 7 references “other services” to be provided. Please indicate what services are contemplated being offered by the members of the CANDAS coalition and what impact may these offerings have upon the market for the same.
- c. L-Y evidence (p. 32) concludes that wireless attachments to utility poles are necessary to bring “high capacity mobile broadband networks closer to the end customer and provide high quality coverage in many areas”. If the Board shares this view, please briefly describe and comment on the effectiveness of the CRTC’s Interconnection Steering Committee (CISC) model as a mechanism to resolve future difficulties between utilities and wireless providers.

Responses:

a.

- i. Public Mobile, a member of CANDAS, has been a price leader in the market for Canadian mobile voice communication services. The low prices offered by Public Mobile for its mobile telecommunications service drives prices lower in the market and promotes competition in other forms by increasing rivalry, responsiveness and diverse offerings in the market. As low-income consumers typically are generally expected to be more price sensitive for services or goods, the low prices offered by Public Mobile are of particular benefit to low-income consumers.
- ii. Lemay-Yates Associates Inc. has compiled and compared the lowest advertised monthly subscription rates offered as of August 23, 2011 by key service providers for mobile as well as wireline residential voice telecommunications services in the Toronto area. LYA notes that this comparison is not intended to be exhaustive, as there are many different price plans with a variety of feature sets offered by the various service providers. The Table provided below is focused on the lowest-price, standalone voice service offering, exclusive of VoIP services, from each of the key service providers surveyed, exclusive of any additional discount that may or may not be obtained by subscribing to a bundle of services from a given service provider. Additional costs associated with handsets, either wireline or mobile, are not included in this comparison. The Table reflects prices for service plans payable monthly as well as prepaid service plans. Where applicable, the Table also indicates whether a minimum contract term commitment is required.

The key findings we highlight from this Table are :

- Public Mobile (PM) offers the lowest-price voice telecommunications service, including unlimited local as well as province-wide voice calling, when compared to either fixed wireline or mobile calling plans from other service providers, including incumbent as well as competitive carriers, such as Wind Canada and Mobilicity.
- Prices for fixed wireline phone service offered by Bell, Rogers and other service providers, including Primus Canada and TekSavvy, are higher than the PM price for an unlimited local and province-wide mobile calling plan.

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
Bell	<p>\$27.92/month¹ Current Promotion: \$22.92/mo for first 12 months <i>Inclusions:</i> One free calling feature</p> <p>Up to \$55.00 activation fee extra</p> <p>No minimum contract term required</p>	<p>\$30.00/mo² <i>Inclusions:</i> 150 local anytime minutes, unlimited local calling on nights (starting at 9 PM) and weekends, call waiting, conference calling and any one of the following:</p> <ul style="list-style-type: none"> (i) unlimited Bell-to-Bell calling (to Bell mobile and home phones), (ii) double “anytime” minutes, (iii) unlimited text/picture/video messages, (iv) unlimited local talk-and-text to five numbers, or (v) unlimited nights (starting at 6 PM) and weekends <p>\$35.00 activation fee extra</p> <p>Variable contract length (no term to 3 years)</p>
Bell – Virgin Mobile	N/A	<p>\$15.00/mo³ <i>Inclusions:</i> 50 “anytime” minutes and 50 outgoing text messages, unlimited incoming text messaging, call waiting and three-way calling</p> <p>\$35.00 activation fee extra</p> <p>No minimum contract term required</p>

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
Bell – Solo	N/A	<p>\$15.00/mo⁴ <i>Inclusions:</i> 50 local “anytime” minutes, 50 outgoing Canada-wide text messages, unlimited incoming text messaging, call waiting and three-way calling</p> <p>\$25.00/mo⁵ <i>Inclusions:</i> Unlimited incoming calls and unlimited province-wide outgoing calls, unlimited incoming texts and 50 outgoing texts to Canada and US, call forwarding, call waiting, three-way calling and call display</p> <p>No activation fee</p> <p>No minimum contract term required</p>
Mobilicity	N/A	<p>\$25.00/mo⁶ <i>Inclusions:</i> Unlimited local calling, unlimited Mobilicity-to-Mobilicity calling, text/picture messaging, and call I.D.</p> <p>No minimum contract term required</p>

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
Primus	<p>\$38.80/mo⁷ Current Promotion: \$25.80/mo for first 3 months <i>Inclusions:</i> choice of 2 of 18 available calling features</p> <p>\$30.00 activation fee extra</p> <p>Required to add Primus Long Distance Service plan to local voice services</p> <p>Minimum 12-month contract</p>	<p>\$18.33/mo⁸ <i>Inclusions:</i> 50 local “anytime” minutes, 250 text messages</p> <p>Variable contract length (no term to 3 years)</p>
Public Mobile	N/A	<p>\$15.00/mo⁹ <i>Inclusions:</i> Province-wide calling</p> <p>No minimum contract term required</p>
Rogers	<p>\$26.91/mo¹⁰ Current Promotion: \$16.91/mo for 12 months</p> <p>\$49.00 installation fee extra</p> <p>No minimum contract term required</p>	<p>\$32.35/mo¹¹ <i>Inclusions:</i> 150 minutes, unlimited calling from 9:00 PM, and one of the following:</p> <ul style="list-style-type: none"> (i) unlimited messaging, (ii) unlimited local calling, text/picture/video messages to five numbers on MY5 list, (iii) unlimited local network calling, or (iv) double your minutes option <p>Up to \$35.00 activation fee extra</p> <p>Variable contract length (no term to 3 years)</p>

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
Rogers - Chatr	N/A	<p>\$25.00/mo¹²</p> <p>Inclusions: Unlimited outgoing and incoming calls in Ontario; four bonus calling features; and 50 text messages/mo</p> <p>No minimum contract term required, only pre-paid plans</p>
Rogers - Fido	N/A	<p>\$17.00/mo¹³</p> <p><i>Inclusions:</i> 50 local minutes, free local calling between people on the same account, unlimited incoming text messaging, 50 outgoing text messages to Canadian numbers, call waiting and conference calling</p> <p>\$35.00 activation fee extra</p> <p>Variable contract length (no term or 2 years)</p>
TekSavvy	<p>\$21.48/mo¹⁴</p> <p><i>Inclusions:</i> unlimited local calling</p> <p>\$25.00 installation fee extra</p> <p>No minimum contract term required</p>	N/A

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
TELUS	<p>\$30.00/mo¹⁵ Current Promotion: \$25/month for the first 6 months <i>Inclusions:</i> unlimited local calling, 1 calling feature</p> <p>No minimum contract term required</p>	<p>\$20.00/mo¹⁶ <i>Inclusions:</i> 50 local “anytime” minutes, unlimited nationwide family calling, unlimited local calling on nights and weekends, voicemail, call waiting, conference calling</p> <p>\$35.00 activation fee unless activated online</p> <p>Variable contract length (no term to 3 years)</p>
TELUS - Koodo	N/A	<p>\$15.00/mo¹⁷ <i>Inclusions:</i> 50 “anytime” minutes, Canada-wide calling (no long distance within the included 50 “anytime” minutes), unlimited Canada-wide calling to people on the same account, 50 outgoing Canada-wide text messages, call waiting, conference calling</p> <p>\$35.00 activation fee unless activated online</p> <p>No minimum contract term required</p>

	Wireline – Lowest Web-Published Standalone Monthly Residential Voice Service Rates Before Taxes as at 23 August 2011	Wireless – Lowest Web-Published Standalone Monthly Wireless Service Rates Before Taxes as at 23 August 2011
WIND Mobile	N/A	<p>\$15.00/mo¹⁸ <i>Inclusions:</i> 100 minutes 24/7 province-wide for incoming/outgoing calling, unlimited Canada-wide WIND-to-WIND calling, 50 roll-over text and picture messages, unlimited incoming text and picture messages, call I.D., call forwarding, conference calling and missed call alerts, WINDworld Facebook Zero, News & Weather Updates and Free Ringtones</p> <p>\$25.00/mo¹⁹ <i>Inclusions:</i> Unlimited 24/7 local incoming/outgoing calling, unlimited Canada-wide WIND-to-WIND calling, unlimited outgoing CA/US text and picture message, unlimited incoming text and picture message, call I.D., call forwarding, conference calling and missed call alerts, WINDworld Facebook Zero, News & Weather Updates and Free Ringtones</p> <p>No activation fee</p> <p>No minimum contract term required</p>

NOTES:

¹ Includes a \$2.80 per month Touch Tone Fee and \$0.19 9-1-1 Fee.
http://www.bell.ca/shopping/PrsShpPns_wirelinePackages_Landing.page.

² http://www.bell.ca/shopping/PrsShpWls_UberPlans.page.

³ http://www.virginmobile.ca/en/plans/plans.html#deviceType_talktext.

⁴ Includes a \$.50 non-government "9-1-1 Emergency Access Fee."
<http://www.solomobile.ca/en/plans/details/monthly>.

⁵ <http://www.solomobile.ca/en/plans/Details/unlimited-talk>.

⁶ <http://mobilitycity.ca/plans/>.

⁷ <http://www.primustel.ca/en/residential/homephone/homephonePlus-classicHomePhoneService.htm#>.

⁸ <http://www.primustel.ca/en/residential/cellular/wirelessService-wPlans-talkAndTextPlans.htm>.

⁹ <http://www.publicmobile.ca/pmconsumer/plans>.

¹⁰ <http://www.rogers.com/web/link/hpValuePlanFlow>.

¹¹ http://www.rogers.com/web/Rogers.portal?nfpb=true&pageLabel=WLRS_Plans.

¹² <http://www.chatrwireless.com/web/chatr.portal?nfpb=true&pageLabel=PlanBrowse>.

¹³ Includes a \$2.00/mo Paper Billing Fee unless customer registers for on-line billing.
<http://www.fido.ca/web/page/portal/Fido/MonthlyPlans?forwardTo=monthlyPlans>.

¹⁴ <http://www.teksavvy.com/en/res-homephone.asp>.

¹⁵ <http://telus.com/content/home-phone/>.

¹⁶ http://www.telusmobility.com/en/ON/clear_choice_voice/index.shtml?INTCMP=HomeQLCC4voiceplan.

¹⁷ <https://shop.koodomobile.com//plans/plans/index.html>.

¹⁸ <http://www2.windmobile.ca/en/Pages/voice-plans.aspx>.

¹⁹ <http://www2.windmobile.ca/en/Pages/voice-plans.aspx>.

- iii. In its 2011 Communications Monitoring Report, the Canadian Radio-television and Telecommunications Commission (CRTC) reported the following regarding the impact of the new wireless entrants on the market for wireless services. These statistics reflect the impact of wireless new entrants less than a year after most of them, including Public Mobile, had launched their operations. This information also highlights the significant price advantages and thus benefits offered by new entrants to Canadian mobile subscribers. Financial results

released in 2011 by both Wind Canada and Videotron indicate continued growth in subscriber acquisitions by the new wireless entrants.

- At Figure 5.5.7 on page 160 of the 2011 Communications Monitoring Report, the CRTC reported that the subscriber market share of all wireless new entrants stood at 2 per cent as of the end of 2010;
 - At Figure 5.5.8 on page 160, the revenue market share of all wireless new entrants stood at 1 per cent as of the end of 2010; and
 - At Table 5.5.8 on page 164 of the 2011 Communications Monitoring Report, the CRTC compiled the price difference for 3 different levels of service between incumbent and new entrants mobile carriers. In Toronto, this difference ranged from a 26 per cent price advantage for new entrants for the low volume basket of services to an 8 per cent price advantage for new entrants for the medium usage basket to a 49% price advantage to new entrants for high volume users. The price study was conducted in April 2011.
- b. Ms Lemay notes that page 7 of Tormod Larsen's Written Evidence refers to smartphone services but not to other services. However, at Q7, page 11 of Mr. Larsen's evidence, Mr. Larsen discusses trends yielding increased data usage in the wireless industry. Assuming that VECC's question relates to the latter discussion, Ms Lemay can offer the following.

Ms. Lemay has no personal knowledge of the plans and intentions of the members of the CANDAS consortium regarding the future deployment of services. However, Ms. Lemay notes that her Written Evidence refers to different examples of growth in usage of mobile telecommunications. These include on page 3, in Section 1, the reference to the fact that telecommunications traffic (including voice, data, Internet, audio and video) is migrating from fixed Internet usage to usage over mobile devices. Downloading videos or watching live TV on a smartphone is an example of such migration to mobile telecommunications networks. At page 5 of Ms. Lemay's evidence, it is also stated that "Internet surfing and especially video applications require significantly more network capacity than voice communications and, consequently, require significantly more capacity and coverage from today's mobile broadband networks". LYA further highlights projections from Cisco that mobile data traffic is expected to grow at a CAGR of 92 percent from 2010 to 2015. Ms Lemay has also provided evidence on page 9 of her Written Evidence of the high usage and demand among Toronto consumers of video streaming services such as Netflix and YouTube, on all platforms, including mobile platforms such as smartphones and tablets. These services can be offered by all types of mobile carriers, the larger incumbents as well as smaller new entrants.

- c. The CISC working group model is a forum to resolve purely technical issues related to interconnection, business processes and other such issues between telecommunications service providers. It is important to note that it was not intended to be used to resolve legal or policy issues, such as the right of access to incumbent facilities, or the terms and conditions under which this should occur. The CISC model is based on reaching consensus decisions. Where a consensus is not reached, the matter must be referred to the CRTC.

Ms Lemay notes that the CISC model often produces significant delays, with no resolution of given issues. It is only appropriate where there is a strong incentive on the part of all stakeholders to resolve a given, purely technical issue.