

## ONTARIO ENERGY BOARD

**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 Horizon Utilities Corporation for an order approving just and reasonable rates and other charges for electricity distribution to be effective January 1, 2015 and for each following year through to December 31, 2019.

### **AFFIDAVIT OF GORD MCGUIRE SWORN OCTOBER 6, 2014**

I, **Gord McGuire** of the City of Hamilton, in the Province of Ontario, **MAKE OATH AND SAY:**

1. I am employed by the City of Hamilton (“C of H”) as the Manager of Geomatics and Corridor Management in the Department of Public Works. In that capacity, I am responsible for, among other things, assessing the rates which are charged to the C of H by Horizon Utilities Corporation (“Horizon”) for street light services. I have knowledge of the matters herein deposed.

2. This affidavit is made in response to the affidavit of John Basilio, sworn the 25<sup>th</sup> day of September, 2014.

3. This affidavit is in three parts:

1. In the first I provide background information to the C of H’s concerns with the street light rates of Horizon;
2. In the second I describe the background to, the content of, and the follow up to the meeting of May 27, 2013, referred to in Mr. Basilio’s affidavit;

3. In the third I describe the background to, the content of, and the follow up to the meeting of July 19, 2013, also referred to in Mr. Basilio's affidavit.

## **I The background to the C of H's concerns with Horizon's street light rates**

4. My responsibilities, in this area, are, first, to understand how the costs of street light services are derived and, second, to control or reduce those costs if possible. The overall objective is to try to limit the burden of street light costs on the overall budget of the C of H.

5. The C of H has had, for many years, concerns, not just with the level of the rates charged by Horizon for street light services, but with the way those rates are derived. In basic terms, we did not understand how Horizon derived the street light rates and why they were increasing so significantly. Those concerns included, but were not limited to, the relationship between devices and connections, the ownership of, and responsibility for, maintenance of street lights and the connections thereto, and the application of the Ontario Energy Board's ("Board") cost allocation model to the determination of street light costs and, therefore, rates.

6. The range of the C of H's concerns with the level of street light rates and the way those rates are derived was described in a letter from me to the Board dated January 16, 2013. This letter was filed in the context of the Board's review of its cost allocation policy for unmetered loads in EB-2012-0383. **Exhibit A** to my affidavit is a copy of the January 16, 2013 letter.

## **II The background to, the content of, and the follow-up to the May 27, 2013 meeting**

7. By email dated May 9, 2013, from me to Jim Patterson and Max Cananzi of Horizon, I set out the issues between the C of H and Horizon with respect to street light rates, that I believed needed to be resolved. **Exhibit B** to my affidavit is a copy of that email.

8. The issues included the following:

- (i) the apparent failure of Horizon to distinguish between connections and lights in charging the C of H, including the failure of Horizon to account for daisy chain configurations. Horizon was authorized to charge per connection but was charging per light;

- (ii) the absence of any demarcation point between assets owned by the C of H and by Horizon, with the apparent result that the C of H was paying for the maintenance of Horizon assets while being charged by Horizon for doing so;
- (iii) what are the 1300 Schedule C lights and why is the C of H being charged for them?

9. By email dated May 9, 2013, Mr. Cananzi responded to my email of the same date. **Exhibit C** to my affidavit is a copy of Mr. Cananzi's email to me of May 9, 2013.

10. By email dated May 15, 2013, from me to Mr. Cananzi, I responded to his email of May 9, 2013. **Exhibit D** to my affidavit is a copy of my email to Mr. Cananzi dated May 15, 2013.

11. As will be apparent from my letter to the Board dated January 16, 2013, and from my emails of May 9 and May 15, 2013, to Mr. Cananzi, the C of H had a number of concerns with the way Horizon derived its street light rates, concerns that were not limited to the question of the ratio of connections to devices.

12. As a result of the email exchanges between Mr. Cananzi and me, a meeting was arranged for May 27, 2013 between representatives of the C of H and Horizon. **Exhibit E** to my affidavit is a copy of the Agenda for that meeting. The handwritten notes on the agenda are mine.

13. I was personally present at the meeting on May 27, 2013. At that meeting, the question of the relationship between connections and devices was discussed. In addition, representatives of Horizon mentioned the Board's cost allocation policy. However, those were not the only topics discussed. In fact, the full range of the C of H's concerns with the way Horizon derived its street light rates was discussed. At no point in that meeting, or at any point thereafter, did the C of H agree, directly or by necessary implication, that the determination of the ratio of connections to devices would resolve the C of H's concerns with either the level of street light rates or the way those rates were derived.

14. Following the meeting of May 27, 2013, Kathy Lurette, an employee of Horizon, prepared minutes of the May 27, 2013 meeting. **Exhibit F** to my affidavit is a copy of the minutes of the meeting as prepared by Ms Lurette.

15. I did not agree with the minutes prepared by Ms Lurette. As a result, I prepared an amended version of those minutes, which I sent to Ms Lurette. **Exhibit G** to my affidavit is a copy of the amended minutes prepared by me. The underlined portions are the amendments to the minutes which I proposed.

16. In my amended version, I noted, in item 1, that the C of H had left the meeting with the understanding that its distribution service charge might be cut in half.

17. In both Ms Lurette's version of the minutes and mine, there are references to "Project Charter". That is the name given to a study, undertaken by the C of H, to determine the energy consumption of street lights. The study was based on a study undertaken by the City of Oshawa, which concluded that the energy consumed by 100 watt bulbs was less than assessed. The C of H and Horizon were unable to agree on the results of the C of H's study. The C of H decided to pursue other cost mitigation efforts.

18. Ms Lurette's version of the Minutes refers to a delay, alleged to be 317 days, in the issuance by the C of H of a permit for Horizon to undertake work on Horizon Project 11862. My version of the minutes explains the reason for the alleged delay on that project, and also compares the time Horizon alleges was required generally to issue permits with the time the C of H records disclose was actually taken to issue the permits.

19. In an email dated June 12, 2013, Rick Male, of the Finance Department of the C of H advised, among others, Max Cananzi and John Basilio of Horizon, that the C of H proposed to withhold payments for street light services until the issues between the C of H and Horizon discussed at the May 27, 2013 meeting were resolved. **Exhibit H** to my affidavit is a copy of Mr. Male's email of June 12, 2013.

20. In an email dated July 3, 2013, John Basilio responded to Mr. Male's email of June 12, 2013. **Exhibit I** to my affidavit is a copy of Mr. Basilio's email of July 3, 2013.



21. By email dated July 5, 2013 to John Basilio and Rick Male, I responded to Mr. Basilio's email of July 3, 2013. In that email I provided a link to a letter dated June 28, 2013, from Mr. Janigan of the Public Interest Advocacy Centre to the Board, sent on behalf of the Vulnerable Energy Consumers Coalition and addressing a number of the issues in the Board's review of cost allocation policy for unmetered loads. **Exhibit J** to my affidavit is a copy of my email of July 5, 2013 to John Basilio and Rick Male. **Exhibit K** to my affidavit is a copy of the letter from Mr. Janigan on behalf of the Vulnerable Energy Consumers Coalition dated June 28, 2013.

22. At no point prior to the meeting of July 19, 2013, had any of the issues discussed at the May 27, 2013 meeting been resolved.

### **III The background to, the content of, and the follow-up to the meeting of July 19, 2013**

23. The meeting of July 19, 2013 was intended as a follow-up to the meeting of May 27, 2013, and to the exchanges that followed that meeting. There were three principal issues to be addressed at the meeting. They were:

1. An explanation of the components of the delivery charge portion of the street light rates. The resolution of that issue required an explanation of the components of the delivery charge by Horizon;
2. A determination of the demarcation point between assets owned by the C of H and by Horizon, required for purposes of determining the ownership of, and the responsibility for the costs of, street lights;
3. The commencement of a joint audit review of street light assets.

24. With respect to items 2 and 3 in the preceding paragraph, it was agreed that the C of H and Horizon would jointly retain a firm to undertake an audit of the street lights in the C of H. The primary purpose of that audit was to determine, first, the number of street lights on C of H property and, second, the ownership of the street lights. The hope was that, armed with that information, the C of H and Horizon could resolve their differences as to who was responsible

for the costs of the street lights. The primary purpose of the audit was not to determine the ratio of devices to connections.

25. At no time during the meeting of July 19, 2013, or at any point thereafter, did the C of H agree, directly or by necessary implication, that the results of the audit would be accepted by the C of H as the basis for Horizon's street light rates.

26. **Exhibit L** to my affidavit is a copy of the Agenda for the July 19, 2013 meeting, prepared by me.

27. I was personally present at the meeting of July 19, 2013. At the meeting, it was agreed that the C of H and Horizon would jointly sponsor an audit of the street lights in the C of H. The agreement was that the C of H would pay 60% of the study, and Horizon would pay 40% of the study. Attached as **Exhibit M** to my affidavit is a copy of the minutes of the meeting of July 19, 2013.

28. The joint audit item 3(a) of the Minutes refers to the 1300 lights in Schedule "C". This refers to the approximately 1300 loads on the Horizon street light billing that were unidentified in either Horizon's or the C of H's records. The C of H wanted to determine what the lights were and who owned them.

29. Horizon and the C of H retained Utility Solutions Corporation ("USC") to conduct the audit. USC delivered its report in November of 2013. The report contained material errors. In particular, it erroneously included in its count lights on private property. To correct those defects, the C of H retained, at its sole expense, First Base Solutions ("FBS"). FBS concluded that USC had erroneously included approximately 2,500 lights in its audit. By email dated December 4, 2013, I sent a copy of the FBS report to Shelley Parker of Horizon. **Exhibit N** to my affidavit is a copy of the email dated December 4, 2013. **Exhibit O** to my affidavit is a copy of the draft FBS report.

30. To this date, the C of H and Horizon have not agreed on the correct number of street lights in the C of H. In an email dated August 7, 2014 from Shelly Parker of Horizon to me, Mr. Parker conceded that the results of the audit were incomplete and set out what further

work was required to determine the correct number of street lights. **Exhibit P** to my affidavit is a copy of Mr. Parker's email of August 7, 2014.

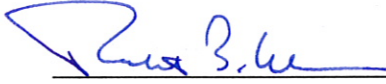
31. To this date, the actual number of street lights in the C of H remains undetermined. In addition, the issue of the demarcation points, and therefore responsibility for costs with respect to those street lights, also remains undetermined. Accordingly, the issues between the C of H and Horizon with respect to the costs of street light services remain unresolved. Contrary to the impression created by Mr. Basilio's affidavit, the meetings of May 27, 2013 and July 19, 2013 have yet to resolve anything.

32. In its letter to the Board dated January 16, 2013, a copy of which is Exhibit A to my affidavit, the C of H set out the issues with respect to street light rates that it believed needed to be resolved. None of those issues have been resolved. In particular, none of the matters referred to in Mr. Basilio's affidavit have in any way resolved the fundamental questions as to the correct way to determine the street light rates for the C of H.

33. It is the C of H's hope that the study now being undertaken by Navigant, at the request of the Board, will help to resolve many, if not all, of the issues with respect to the derivation of street light rates. **Exhibit Q** to my affidavit is a copy of a letter which I sent to the Board on July 7, 2014. In that letter I set out the issues which the C of H hopes will be resolved as part of the continued considerations in EB-2012-0383.

34. I make this affidavit in support of an Amended Motion seeking an order that the rates for the street light class not be set until the report of Navigant Consulting Limited ("Navigant") in EB-2012-0383 has been received and acted upon or, in the alternative, an order requiring that rates for the street light class be interim and reconsidered following receipt of the Navigant report and, if appropriate, re-set following the outcome of the Board's considerations in EB-2012-0383.

SWORN BEFORE ME at the City of  
Hamilton, in the Province of Ontario,  
this 6th day of October, 2014.



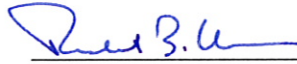
Commissioner For Taking Affidavits  
**Robert B. Warren**

  
**GORD MCGUIRE**

6886825.1



This is Exhibit "A" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.



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A COMMISSIONER FOR TAKING AFFIDAVITS



Hamilton

320 - 77 James Street North  
Hamilton ON Canada L8R 2K3  
www.hamilton.ca

Gord McGuire, O.L.S., O.L.I.P.  
Manager, Geomatics & Corridor Management  
Engineering Services | Public Works Department  
City of Hamilton  
905-546-2424, Ext. 2439 (Telephone)  
905-546-2463 (Fax)

January 16, 2013

Vince Cooney, Policy Advisor  
Rates, Conservation & Policy Evaluation  
Regulatory Policy | Ontario Energy Board  
2300 Yonge Street  
Toronto, ON  
M4P 1E4

Your File No. EB-2012-0383

#### **RE: Review of Cost Allocation Policy for Unmetered Loads**

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Mr. Cooney,

In a five year period, beginning in 2008, energy costs for the flat-rate street lighting customer class escalated significantly. The cost increases were a result of an Ontario Energy Board (OEB) effort (EB-2007-0667) to balance the contribution of fixed connection costs between all customer rate classes (revenue to cost ratio) as it was determined street lighting was under contributing.

The City of Hamilton's street lighting utility costs increased from \$2,700,000 in 2008 to \$4,600,000 in 2011 (combined costs from both Hydro One and Horizon Utilities Corporation). This equates to an increase of 166%. However, energy demand/consumption for the same period only increased by 3.2%.

In 2008, for the HUC service area, Hamilton's Delivery Service Charge increased from \$0.13/connection to \$2.39/connection. This equates to an escalation of 18X at a net cost increase in excess of \$1 million. The Delivery Service Charge is a fixed cost component of the utility bill and therefore left the municipality without any cost mitigation tools. Further concerns surround what the Delivery Service Charge actually represents as it remains undefined.

Additionally, when increases were applied by the LDCs (to the Delivery Service Charge), the municipality was unprepared for the cost impacts as they far exceeded historical energy increases and budget forecasts. In one instance, substantial increases were applied retroactively after a rate class application which considerably impacted a Council approved budget and required augmentation from Municipal reserve accounts.

Street lighting energy budgets, in the context of the recent energy cost escalation, are difficult to manage due to the recent unpredictability and the general lack of understanding or transparency in the rate setting process. Past street lighting rate-class adjustments were brought forward to, and approved by, the OEB in the absence of any rate-payer (Municipal) consultation which eliminated any possibility to fiscally manage and prepare Municipal energy budgets.

The ULWG identifies (in Appendix B ) the following goals:

- clarifying terminology
- clarifying methodology,
- providing guidance on flexibility
- developing augmented instructions to LDC's
- providing recommendations for future rate class factors

These form the scope of the cost allocation policy review.

In reference to the listed objectives and the previously noted impacts, the City of Hamilton is seeking clarification as per the following:

**A. Clarifying the terminology and methodology used to allocate costs for unmetered loads**

- In light of the substantial rate increases in this class, a comprehensive review of weighting factors in relation to the true LDC costs associated with street lighting infrastructure is warranted. The necessity of the construction, maintenance and management of LDC electrical distribution systems, related to the demands of street lighting infrastructure, is inconsequential when compared to other energy consumers. In a high percentage of street lighting installations, electricity is distributed via a distribution system that is not primarily utilized for street lighting, but rather for other energy consumers. **Hamilton seeks a full definition and justification of how Street Lighting impacts the LDC's asset class.**
- The current non-practice of daisy-chaining methodologies for determining the number of connections is not reflective of reality and results in the over-representation of street lighting connections. In Hamilton for example, in HUCs service area, there are an equal number of connections to the number of street lights. There is a one to one relationship between the number of connection and streetlights. This exists despite the fact that the division between street lights connected to HUC distribution and City distribution approaches 50%. **Hamilton seeks review of this process and definition of roles and responsibilities on either side of the demarcation point.**
- The definition of Delivery Service Charge is not clearly articulated and results in inconsistent services supplied by LDCs to municipalities. Roles and responsibilities, particularly involving underground locating and infrastructure maintenance, between LDCs and municipalities are muddled. This fact results in municipalities undertaking activities which are the responsibility of LDCs. **Hamilton seeks clarity on the DSC and what it encompasses.**
- Current methodologies being utilized to estimate the operation time (on-off time – load shape) and demand consumption, for the purposes of energy billing, are not applied consistently from LDC to LDC. Studies have indicated these factors are not representative of actual operation time and demand consumption and typically over represent actual energy usage. **Hamilton seeks the ability to define a local load shape profile and actual demand consumption.**

**B. Providing further guidance to LDCs on flexibility of, and augmenting instructions provided with, the current Cost Allocation Model with respect to unmetered loads**

- Flexibility is needed to allow for the adoption and retrofitting of LED street lighting and adaptive/monitoring control systems.
- Stabilization of rate-class costs is required to assist in energy demand consumption reductions (conservation) undertaken by the municipalities. Unpredictable and

uncontrollable cost increases can be highly detrimental to conservation efforts as they are generally undertaken on an energy payback methodology.

- Tools should be identified in which the municipality and LDCs could utilize to mitigate or better manage cost increases
- Transparent engagement and consultation with the street lighting asset owners prior to rate-class applications is necessary to provide explanation and justification for any and all future cost increases.
- Offsetting lost revenue from reducing load is not a factor that should drive municipal energy budgets, and creates a situation that is not conducive to proactive conservation strategies and policies.

Respectfully submitted

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Gord McGuire, O.L.S., O.L.I.P.  
Manager, Geomatics & Corridor Management  
Engineering Services | Public Works Department  
City of Hamilton

/Lb



This is Exhibit "B" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "David B. Lee", is written above a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS

**From:** McGuire, Gord [mailto:Gord.McGuire@hamilton.ca]  
**Sent:** May 9, 2013 11:00 AM  
**To:** Patterson, Jim; Cananzi, Max  
**Cc:** Davis, Gerry; Moore, Gary; Male, Rick; Murray, Chris  
**Subject:** Issues with Street Light billing / Service charges

Attention Horizon Director of Customer Connections:

The City of Hamilton and Horizon are not in alignment on a number of issues regarding street lighting costs. Our concerns and resolution is laid out below.

The main issues here are as follows:

The City pays HUC @ \$1.1 million annually in connection fees, also known as the Delivery Service Charge (DSC).

These fees have been defined as "one to one" that is we pay a fee at virtually every street light including on poles the City owns. In the HUC service area that is @ 37,000 lights that are charged as per section 1 of the attached sketch.

That fee has increased from \$0.40 to \$2.40 or something like that over that last 5 years. This has caused significant pressure on our budgets, see attached report.

The City however continues to pay our contractor pay for fault repair, infrastructure maintenance and locates on the HUC side of the connection as defined by the sketches, to the tune of \$ 500K annually.

The most recent concern is on Queenston Road. E-mail trail attached.

The attached interpretive sketches from HUC clearly indicate that the street lights in question at this address are in the scenario as outlined in section 1 of the sketch. That is we run the light on the other side of the "c" and pay a DSC. However there is no accompanying document that outlines roles and responsibilities on either side of the "c". This is a huge gap.

In this example there is a pole supporting wires between points defined as a "one to one" and HUC informs the City that the pole and wires are our asset? HUC staff clearly admits this is not a daisy chain connection, and yet asks the City to pay for the pole infrastructure between connection points. So the interpretation is very one sided. We need to engage our contract forces to work on infrastructure that is clearly defined as Horizon's.

This is the same issue that occurred on Wilson Street in Ancaster and on other point specific locations in the recent past.

The next issue is actual usage of energy at each light. Horizon was given the City of Oshawa study that outlined the actual usage versus billed usage was incorrect by @10% in favour of the LDC, this was a thorough comprehensive sampling of the energy consumption at a sample of street lights. This will result in a savings here at Hamilton of @ \$150K or more annually once applied in a similar manner.

We have commenced to proceed with our validation of this report as per the Project charter sent out 2 weeks ago.

I met recently with the Directors of Engineering Services and Financial Services and the General Manager of Public Works to review the issues.

We advise that the City will withhold payment of the service connection fees on the unmetered account 24468-564 until we can arrive a mutually acceptable definition of service obligation on either side of the "c". This is a net \$1.6 Million dollar item (including our contractor fees) to PW and is significant importance.

The automatic payment of the billing will be adjusted shortly to reflect the energy consumption differences also.

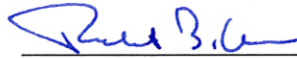
I look forward to negotiating a comprehensive service agreement on this City infrastructure.

Regards  
Gord McGuire B.Sc. O.L.S. O.L.I.P.  
Manager of Geomatics and Corridor Management  
Public Works, City of Hamilton

This is Exhibit "C" referred to in the

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sworn before me this 6th day of October, 2014.

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A COMMISSIONER FOR TAKING AFFIDAVITS

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**From:** Cananzi, Max [mailto:max.cananzi@horizonutilities.com]

**Sent:** May-09-13 12:15 PM

**To:** McGuire, Gord

**Cc:** Davis, Gerry; Moore, Gary; Male, Rick; Murray, Chris; Lerette, Kathy; Basilio, John

**Subject:** RE: Issues with Street Light billing / Service charges

Gord

Thank you for including me in your email. I am rather surprised and disappointed that you have chosen to escalate this so quickly in such a drastic manner by withholding payment. I believe the emails string you have forwarded to me indicate a period of discussions between our organizations that is approximately 2 weeks in length before you decided to take the action of withholding payments.

From what I understand from the emails, that you were kind enough to attach, the original issue being addressed was who owned one particular pole in question.

How the leap is made from who owns one pole to your withholding \$1.6 million in payments is difficult to understand.

You raise several issue in your email some of them not related to each other.

No issue with getting the most senior people on this asap. We will do so.

FYI. Previously, we have worked with the City of Hamilton on the issue you raised with regard to "one to one" connection vs. daisy chain and I was under the impression that this was fully explored and understood by City staff as to the physical aspects of the Hamilton street lighting system. I believe these discussions occurred around 2008/2009..

Also, the increases in rates that you raised were communicated as early as 2007 and over the past several years with sensitivity to the City. I personally attended meetings with City staff to share information on the future direction of rates with regard to where the Ontario Energy Board was headed with respect to street lighting. The methodology of cost allocations have changed and are driving these changes. We must conform to the application and implementation of these policies. We are not initiating these cost pressures that they City is experiencing.

Gord, I find your approach to not be conducive to fostering good working relations between our organizations.

My organization is available and ready to meet to discuss these issues in a positive and professional manner. I urge you to reconsider your decision.

Max Cananzi  
President & CEO  
Horizon Utilities Corporation



Sustainability  
Company of the Year  
Canadian Electricity Association



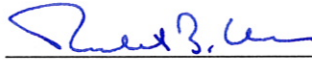
Hamilton-Niagara's  
Top Employers  
2012



This is Exhibit "D" referred to in the

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A COMMISSIONER FOR TAKING AFFIDAVITS

**From:** McGuire, Gord  
**Sent:** May-15-13 11:37 AM  
**To:** 'Cananzi, Max'  
**Cc:** Davis, Gerry; Moore, Gary; Male, Rick; Murray, Chris; 'Lerette, Kathy'; 'Basilio, John'; Zegarac, Mike  
**Subject:** RE: Issues with Street Light billing / Service charges  
**Attachments:** Street Lighting, Jan. 16.pdf

Max:

Thanks for the quick response.

I'm not sure you're aware of the recent history, as the City has been asking for detailed explanations on the roles and responsibilities around the Delivery Service Charge (DSC) for quite a while at the staff level. This item has been raised by the AMO and in the recent OEB unmetered load proceeding, OEB 2012-383. We have also directly asked the OEB for clarity on the charge through the attached letter.

The Pole in question was the last of a series of confusing and contradictory positions surrounding the DSC especially since it elevated so rapidly over the last few years. The sketches that HUC provided re: locates responsibilities are in contradiction to the sketches that define connections.

The fact remains we pay a fee on our own poles, and virtually at every pole in the HUC service area. Yet when there are locates, repairs and relocates HUC sends the issue to the City. So we pay our contractor to perform these works. We're not withholding \$1.6 Million, we are adjusting the fees to reflect the actual service levels until we understand our role and responsibility.

We may have discussed the DSC and the "one to one" charge but in absence of definition it seems that the majority of decisions by Network Records at HUC determines the issues lies with the City. This closely follows the concerns we had about the Affiliate Relations Code (ARC) a few years ago where HUC unilaterally decided to apply specific charges in absence of substantive discussion or agreement. It was clear that the ARC required an agreement yet one was never reached.

Regarding the relations between the organizations I can only state that this measure is meant to do what my mandate requires, highest service for best value. Continuing to go down this avenue without a resolution path is not consistent with that mandate. The City has asked for structured agreements with HUC on numerous occasions however there has been limited uptake from HUC to date.

I'm glad we're looking to meet on this issues and look forward to speedy resolution.

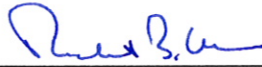
Regards  
Gord McGuire B.Sc. O.L.S. O.L.I.P.  
Manager of Geomatics and Corridor Management

905-546-2424 x 2439  
905-546-2463 fax

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A COMMISSIONER FOR TAKING AFFIDAVITS



Hamilton  
Public Works

# CITY OF HAMILTON / HORIZON UTILITIES

## A♦G♦E♦N♦D♦A

MONDAY, MAY 27, 2013  
City Hall, 8<sup>th</sup> Floor – Rm 830  
4:00 pm to 5:00 pm

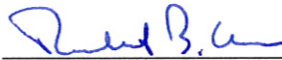
- 1) Delivery Service Charge: What is it we are paying for in this charge?  
Agreement needs to be developed.
  - a) Charges are "one to one" – that is at each pole *⇒ HUC CC's 2013  
hand corner*
  - b) Horizon Utilities Corp (HUC) determines unilaterally where the service starts and ends (Queenston / Wilson Street Ancaster)
  - c) Lights were disconnected in Ancaster for 5 days *RAW LIGHTS OFF  
PRIVATE OWNER'S  
MORNO  
HONVILLO*
- 2) Actual load profiles: The City has identified that the actual load of each street light is less than the amount being charged. Billing adjustment is required.
  - a) There are 1300 unknown loads being charged currently without back up
  - b) Actual load of each light to be determined and billing adjusted
- 3) The "good working relations"
  - a) Limits of Approach issues
  - b) Affiliate Relations Code concerns
  - c) Plant relocation costs impacts
  - d) City capital response timelines
  - e) Permitting timelines (Demand) versus closing timelines
  - f) Contractor Management
  - g) *AND CAMARINO STREET*
  - h)



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Affidavit of Gord McGuire

sworn before me this 6th day of October, 2014.

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A COMMISSIONER FOR TAKING AFFIDAVITS

**City of Hamilton and Horizon Utilities  
May 27, 2013 – City Hall Room 830  
Meeting Action Items**

**In attendance:** Gord McGuire, Garry Moore, Gerry Davis, Rick Male, Mike Zegarac  
Max Cananzi, Kathy Lerette, John Basilio, Indy Butany-DeSouza

1. Delivery Service Charge – Street lighting

- Horizon explained the cost allocation for street lighting
- Streetlight maintenance and demarcation issues discussed

Actions

- Kathy Lerette to provide a Horizon contact person for all street lighting questions and concerns to Garry Moore.
- Gord McGuire to provide to Kathy Lerette copies of Cramm Electric invoices for repairs where the City is unsure if the work was performed on City owned street light assets.
- The City of Hamilton will evaluate the need for a street light study and advise Horizon of the outcome within the next month.

2. Street light Load Profiles

- Project Charter has been issued for measurement and verification of street light loads. City is working with Horizon staff to meet project milestones.
- This working group is also working on corrections to flat rate billing quantities and will discuss the timing of an audit of all streetlight corrections.

3. Good Working Relationship

- Municipal Consents – Horizon has been waiting up to 317 days for the MC for Hughson Street – Sending contractor's home and paying de-mobilization costs due to lack of permits. MC for Summit Park 7 is also pending and needs approval as these customers are now Horizon's and there are loading issues with Hydro One system that need to be addressed through the transference of these customers to Horizon system.
- Horizon and the City agreed to look at format of the MC submissions for future large projects to facilitate quicker approval.

Actions:

- Kathy Lerette will send list of pending MC's (over 80 days) to Gord McGuire for review. Complete. Gord and Kathy have arranged a follow up meeting for June 5<sup>th</sup>.
- Gord McGuire will review MC for Summit Park 7. Complete and MC received
- Outstanding Invoices – Rick Male reports that there are concerns with outstanding invoices totaling ~\$150,000 for King William Street and Road Restoration invoices. King William Street is still under review. Horizon also has an outstanding invoice for damage to duct bank on Caroline and King Street.

Actions:

- Rick Male to send invoice details for outstanding road restoration invoices to Kathy Lerette and John Basilio. List received and Kathy has provided response to Rick Male.
- Max Cananzi will review the King William invoice and discuss resolution of this invoice and Horizon's outstanding invoice with Gerry Davis. Complete and cheque has been issued to City of Hamilton
- Service Level Agreement – The City is frustrated about the lack of progress on a SLA between Horizon and the the City. Horizon is concerned the standard agreements used for Cable and Bell do not suit the needs of Horizon, specifically the issues that have been discussed today. A joint effort is required to create flow charts, work instructions and agreements between the two parties to document the processes. It was agreed that Street lighting is a good place to start, and regular monthly meetings would take place to facilitate this work.

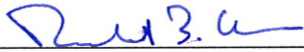
Action

- Garry Moore and Kathy Lerette will create a cross functional team and arrange regular meetings.

This is Exhibit "G" referred to in the

Affidavit of Gord McGuire

sworn before me this 6th day of October, 2014.

  
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A COMMISSIONER FOR TAKING AFFIDAVITS



City of Hamilton and Horizon Utilities  
May 27, 2013 – City Hall Room 830  
Meeting Action Items

In attendance: Gord McGuire, Garry Moore, Gerry Davis, Rick Male, Mike Zegarac  
Max Cananzi, Kathy Lurette, John Basilio, Indy Butany-DeSouza

1. Delivery Service Charge – Street lighting

- Horizon explained the cost allocation for street lighting, includes the fact that the DSC is actually halved? The City asked for follow up on that aspect and how the billing is being applied as our flat rate account reflects a one to one scenario.
- Streetlight maintenance and demarcation issues discussed

Actions

- Kathy Lurette to provide a Horizon contact person for all street lighting questions and concerns to Garry Moore.
- Gord McGuire to provide to Kathy Lurette copies of Cramm Electric invoices for repairs where the City is unsure if the work was performed on City owned street light assets.
- The City of Hamilton will evaluate the need for a street light study and advise Horizon of the outcome within the next month.

2. Street light Load Profiles

- Project Charter has been issued for measurement and verification of street light loads. City is working with Horizon staff to meet project milestones.
- This study was introduced to HUC in Sept 2012. The FINN / Oshawa study used the IPMVP Option A protocol to measure light energy consumption. The study indicates an over billing of 10% and that is being confirmed by the City Contractor.
- The City expressed frustrations at having this study reside at HUC for this period of time as it would have a significant impact on their energy bill (@ \$200K annually). There have been many meetings to try and get this project off the ground.
- This working group is also working on corrections to flat rate billing quantities and will discuss the timing of an audit of all streetlight corrections.

3. Good Working Relationship

- Municipal Consents – Horizon has been waiting up to 317 days for the MC for Hughson Street – Sending contractor's home and paying de-mobilization costs due to lack of permits. MC for Summit Park 7 is also pending and needs approval as these customers are now Horizon's and there are loading issues with Hydro One system that need to be addressed through the transference of these customers to Horizon system.
- Horizon and the City agreed to look at format of the MC submissions for future large projects to facilitate quicker approval.

Full review of the list issued by Horizon on the open permitting is listed below:

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Item 1 – Job 11862 waiting 317 days for permitting. This job is Hughson 11 – Phase 2. On the maps issued by Horizon to the City this job is clearly labeled 2014 Capital. The only 2013 jobs are Hughson 5 and 11-Phase 1. HUC appears to be advancing it's capital program and we will work with them to get permits.

However City staff have not yet reviewed Hughson 11-Phase 2 as it is out of scope for 2013 work. Placing a date counter on this file is not required as we have yet to actually receive the final plans or do any site visits. City staff remains focused on the 2 large 2013 files that are open currently.

Of the 6 other files noted at over 80 days, the City provided actual permit dates and turnaround times that were significantly different from HUC's database. Under Status Waiting application the actual days from the City data base are listed.

<u>Horizon #</u>	<u>Description</u>	<u>Horizon Days</u>	<u>Status Application waiting</u>	<u>Permit #</u>	<u>Permit Date</u>	<u>Comment</u>
11862	Hughson St. Ferguson	317	2014 application	we have #11189,11206 not 11862		Paul is search
12273	Glendale Ave S	141	15 days	MC2013-192	March 12th	Justin -Comple
12331	Hamilton 2014 Wp	113	currently working on it	not assigned yet	nil	Horizon staff n
12346	Cannon, MacNab etc	101	70 days	MC 2013-280-Partial	May 14th	Hughson 11 &
12152	9.11 Sherman Ave S	88	1 day	EP09040	Jan 31st	Justin- Emerg
12323	2333 Barton St E	86	10 days	MC2013-168	Mar-15	Charles-Capita
12343	Dundum Ave S	80	7 days	Part of MC2011-239-EP09313A	April 29th	Dean /Develop

Of note is that fact that the largest timelines appear to be related to large projects, of which some of the files have been partially permitted to allow continued work. This City has been quite clear on requiring open jobs to be completed prior to moving to new works.

File MC-2011-379 (HUC file 10742) was issued in late 2011/ early 2102 for pole replacements. The City continues to receive complaints on this file and has been communicating with HUC to resolve these field issues. These complaints drive response requirements and therefore divert resources that may have been able to attend future works. HUC project 12331 is this year's version of MC-2011-379.

• The City brought forward the issues it had experienced on its own recent capital works. Both West 5<sup>th</sup> and Broughton Park experienced delivery issues due to HUC related matters. HUC has been working to address these issues but it was noted that delays to our capital affect the utility coordination staff as they get brought into the City related files to provide expert advice and options to ensure delivery.

Actions:

- Kathy Lerette will send list of pending MC's (over 80 days) to Gord McGuire for review. Complete. Gord and Kathy have arranged a follow up meeting for June 5<sup>th</sup>.
- Gord McGuire will review MC for Summit Park 7. Complete and MC received
- Horizon to provide spread sheets on large files that note locations of poles waiting transfers, hard surface (walk, driveway, asphalt) damage that requires City restoration and completion rates of current jobs.

Summit Park Concerns:

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Large SAA applications along major City transportation corridors that do not engage the City engineering divisions at any point of the process result in this kind of confusion at the end of the process. OEB decisions that grant access to lands are not done in context of City requirements.

The City has asked HONI / HUC / Bell for a joint servicing strategy on these lands using best utility practice to ensure City costs in the future are minimized and joint build opportunities are fully explored. To date there has been no uptake on this request and the City permits applications piece meal without fully comprehending the strategy.

- The City notes that every electrical installation is a long term cost liability as we are required to pay some portion of the relocation

➤ Outstanding Invoices – Rick Male reports that there are concerns with outstanding invoices totaling ~\$150,000 for King William Street and Road Restoration invoices. King William Street is still under review. Horizon also has an outstanding invoice for damage to duct bank on Caroline and King Street.

Invoices are paid however the Caroline duct repair leaves an energized utility still encasing our watermain. The City provided records that indicate the watermain preexisted the HUC duct structure and the issue now is the situation has not been resolved. From a Health and Safety perspective we have a watermain touching an electrical duct. Our crews could not replace the pipe due to the encasement of our watermain. We could only put a repair clamp on this pipe.

➤ The City has informed HUC of this issue and asked what measures need to be taken to ensure the failure of either of these structures will not jeopardize worker safety.

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#### Actions:

- Rick Male to send invoice details for outstanding road restoration invoices to Kathy Lerette and John Basilio. List received and Kathy has provided response to Rick Male.
- Max Cananzi will review the King William invoice and discuss resolution of this invoice and Horizon's outstanding invoice with Gerry Davis. Complete and cheque has been issued to City of Hamilton
- Service Level Agreement – The City is frustrated about the lack of progress on a SLA between Horizon and the the City. Horizon is concerned the standard agreements used for Cable and Bell do not suit the needs of Horizon, specifically the issues that have been discussed today. A joint effort is required to create flow charts, work instructions and agreements between the two parties to document the processes. It was agreed that Street lighting is a good place to start, and regular monthly meetings would take place to facilitate this work.

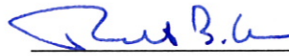
#### Action

- Garry Moore and Kathy Lerette will create a cross functional team and arrange regular meetings.

This is Exhibit "H" referred to in the

Affidavit of Gord McGuire

sworn before me this 6th day of October, 2014.



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A COMMISSIONER FOR TAKING AFFIDAVITS



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**From:** Male, Rick [mailto:Rick.Male@hamilton.ca]

**Sent:** June 12, 2013 11:42 AM

**To:** Lerette, Kathy; McGuire, Gord; Moore, Gary; Davis, Gerry; Zegarac, Mike; Cananzi, Max; Basilio, John; Butany-DeSouza, Indy

**Subject:** RE: City of Hamilton and Horizon Utilities May 27 Meeting

One of the items discussed at the meeting was the City withholding full or partial payments for street lighting. I know Max was adamant that this was neither fair nor acceptable. I too would prefer not to have to withhold any payments for street lighting, however, I did get the impression that although Horizon and Public Works committed to discuss the issues around what the City is billed for as well as amounts and methodologies, it may take some time to work through the issues and come to an agreement (there is at least one study to be undertaken as I recall).

Recognizing that Public Works has been trying to get these issues resolved for quite some time without success, I propose both parties agree that the results of the discussions will be applied retroactively to at least January 1, 2013 and Public Works feels that a good case can be made to go back further given the history of trying to resolve the issues. If both parties can agree to an effective date for any changes coming out of the discussions, I will ensure there are no withholding of payments for street lighting and will continue to pay street lighting as part of the automated invoiced from Horizon.

Your thoughts please.

This is Exhibit "I" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "D. B. C.", is written above a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS

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**From:** Basilio, John [mailto:john.basilio@horizonutilities.com]

**Sent:** July-03-13 12:36 PM

**To:** Male, Rick

**Cc:** Max Cananzi; Lerette, Kathy; Butany-DeSouza, Indy; Campbell, Eileen; Parker, Shelley; McGuire, Gord; Moore, Gary; Davis, Gerry; Zegarac, Mike

**Subject:** RE: City of Hamilton and Horizon Utilities May 27 Meeting

Rick,

I believe there are two separate street light billing issues to resolve: i) Connection Charge; and ii) Energy Charge.

### Connection Charge

The street-lighting rates and underlying basis for applying these to connections are approved by the Ontario Energy Board ("OEB" or the "Board"). Horizon Utilities has statutory/ regulatory authority to charge for street lighting connections on this basis.

I would not agree to any retroactive adjustment with respect to future changes in current approved rates or related billing methodologies; which can only be addressed prospectively from the effective date of a future Ontario Energy Board rate order. As we discussed at our meeting, the next opportunity for Horizon Utilities to advance a change to its basis for street lighting charges is in its 2015 Cost of Service application; which is expected to result in new rates effective January 1, 2015.

There was agreement at the meeting to have further discussion on the future basis for charging for street lighting, and building off of recent proceedings of the Ontario Energy Board. We have been working together for some time in this regard. I believe we communicated that any studies or additional work in this regard would need to be completed no later than August; in order for Horizon Utilities to give this proper consideration in its upcoming rate filing.

I also thought we were going to move forward with an inventory count of street lighting connections; determined in a manner consistent with the approved basis used by Horizon Utilities for applying its rates and determining its street lighting charges. As you know, this could have implications either way with respect to total City of Hamilton street lighting charges. I would agree that Horizon Utilities should be applying its street lighting rate to the actual number of street light connections determined based on the current approved billing methodology. If we find validated errors in this number, whether prospectively or retrospectively (within reason), we would generally adjust our billings on a similar basis.

### Energy Charge

At our meeting on May 27<sup>th</sup>, we discussed a City of Hamilton Project Charter for the measurement and verification of street light loads. We will be working together to meet the project milestones and ensure that the scope adequately addresses the evidentiary requirements for Horizon Utilities billing purposes.

A recent Cost Allocation report of Elenchus was referenced at our meeting (*Review of Cost Allocation Policy for Unmetered Loads – EB-2012-0383. A Report Prepared by Elenchus Research Associates Inc. for the Ontario Energy Board. May 17, 2013*). Section 7.1 of that report provides Elenchus' recommendation with respect to the customer's responsibility for data. Specifically, Elenchus recommends that: *"the Board direct distributors to update Unmetered Load profiles reflecting energy efficiency improvements when they can be supported by evidence presented by Unmetered Load customers. It is the responsibility of the Unmetered Load customer to provide the information to the distributor. The updated consumption estimates should be used by distributors for billing Unmetered Loads as soon as they are validated."*

At this time, Horizon Utilities does not have validated updated consumption estimates; which is an objective of the Project Charter. The Elenchus recommendation implies prospective treatment with respect to billing Unmetered Loads based on updated consumption estimates. The nature of any revision would be a change in estimate rather than an error. Horizon Utilities does not believe there is any basis (regulatory or otherwise) for applying updated consumption information retroactively to past billings.

In summary, the effective date of any changes to the basis for Horizon Utilities billings for street lighting would be as follows:

1. Connection Charge – the effective date of a new OEB rate order (expected January 1, 2015);
2. Energy Charge – the effective date of the report or outcome of the Project Charter referenced above provided that the related information is acceptable billing basis to Horizon Utilities.

Horizon Utilities simply cannot agree to your proposal for retroactive restatement to January 1, 2013. In our opinion, there is no regulatory or acceptable basis otherwise for doing so.

I believe the above street light billing issues have only surfaced in the first quarter of 2013. Since that time, we have been working collaboratively to address these issues. It was our understanding that previous discussions with Geoff Lupton (2010) regarding street light billing were satisfactorily addressed at that time.

Please be advised that Shelley Parker, Director Customer Service, will be the direct contact for all street light billing issues going forward. Shelley is copied on this e-mail and her direct line is (905) 521-4909.

We look forward to working with you and your team towards resolving these matters as quickly as possible to address potential prospective billing adjustments along the timelines identified above.

Sincerely,

*John G. Basilio, CA*

Senior Vice-President and

Chief Financial Officer

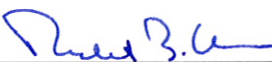
Horizon Utilities Corporation

Tel: (905) 317-4783

Fax: (905) 522-0119

e-mail: [john.basilio@horizonutilities.com](mailto:john.basilio@horizonutilities.com)

This is Exhibit "J" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.



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A COMMISSIONER FOR TAKING AFFIDAVITS



## McGuire, Gord

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**From:** McGuire, Gord  
**Sent:** July-05-13 8:10 AM  
**To:** 'Basilio, John'; Male, Rick  
**Cc:** Max Cananzi; Lerette, Kathy; Butany-DeSouza, Indy; Campbell, Eileen; Parker, Shelley; Moore, Gary; Davis, Gerry; Zegarac, Mike  
**Subject:** RE: City of Hamilton and Horizon Utilities May 27 Meeting  
**Attachments:** June 4 Minutes.pdf

John:

Re: Item 1 – this [link](#) independently addresses the recent review of the unmetered rate class (OEB 2012-0383) and notes the difficulty and confusion over issues on either side of the connection, cost allocation principles and models. The summary on page 3 re: Section 7.3 is of value as it helps define how to define costs as a function of conditions of service.

We're within the acceptable band of the R/C ratio, however we are asking for clarity on the definition of the Costs as in para 2 of this document. We're working towards understanding our costs under the model as it's clear to us the Cost Allocation Model fails to address the realities of a street light network. The model has many issues and that is evidenced by the fact that Horizon applied a 50% reduction to the costs that came out of the modelling exercise.

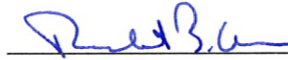
We agree you can and should charge us for connections. However we don't have a clear grasp on what is contained in the charges. Comments from the OEB during the last Horizon Rate class application (EB-2010-131) under the Cost Allocation section (pg. 40) echoed that reality. Specifically on pg 41 the OEB board staff write to state that they "...cautioned against further movement towards unity. Board staff noted the inexactness and volatility of the cost allocation results"

Re: Item 2 - The City notified Horizon in June 2012 (minutes attached) of our interest in the need to validate the energy usage of our street lights. We followed this closely by the issuance of the Oshawa study September 2012. Horizon Staff were invited to meet and commence this study in October 2012 however nothing transpired on the LDC side. This has been driven solely by the City to this point yet this issue and study have been with Horizon since Q3 of 2012. Do you consider this to be sufficient notice as your network records group could have easily validated the equipment and wattages as you were the owner operator until @ 2005.

Continuing to not address this issue causes the City to absorb costs.

The report you mention, the Elenchus Report, on page 33 directly mentions that there should be no need to redo studies if the scenarios are the same.

This is Exhibit "K" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.



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A COMMISSIONER FOR TAKING AFFIDAVITS



**PUBLIC INTEREST ADVOCACY CENTRE**

**LE CENTRE POUR LA DEFENSE DE L'INTERET PUBLIC**

ONE Nicholas Street, Suite 1204, Ottawa, Ontario, Canada K1N 7B7

Tel: (613) 562-4002 ext 26 Fax: (613) 562-0007 e-mail: [mjanigan@piac.ca](mailto:mjanigan@piac.ca) <http://www.piac.ca>

June 28, 2013

VIA EMAIL

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O. Box 2319  
26<sup>th</sup> Floor  
2300 Yonge Street  
Toronto, ON  
M4P 1E4

Dear Ms. Walli:

**Re: Review of Cost Allocation Policy for Unmetered Loads  
Board File No. EB-2012-0383  
Vulnerable Energy Consumers Coalition (VECC) Comments**

As Counsel to the Vulnerable Energy Consumers Coalition (VECC), I am writing, to ask for leave to file these comments late because of internal problems in transmission of, or receipt of the final draft that were not detected until this date. We apologize for this problem.

As Counsel to the Vulnerable Energy Consumers Coalition (VECC), I am writing, per the Board's letter of May 17, 2013 to provide VECC's comments regarding the Report prepared by Elenchus Research Associates on the above issue.

Sections 2 through 4 of the Report provide general background on the role and purpose of cost allocation, establish a common terminology and describe how unmetered loads (particularly Street Lights) are connected to a distributor's distribution network. As the Board is aware, VECC has been actively involved in electricity distributor rate proceedings over the past several years. As a result, it is familiar with distributors' use of the Board's cost allocation model and has dealt with individual application issues related to treatment unmetered load classes. In VECC's experience, many of these issues have arisen as a result of confusion over terminology and/or precisely how the cost allocation model is intended to treat unmetered load classes. As result, VECC believes that these sections of the Report are particularly useful and should help contribute to a consistent application of the Board's policies/practices regarding cost allocation for unmetered load classes.

Section 6 identifies a number of specific issues with respect to cost allocation for unmetered loads and presents Elenchus' recommendations. These recommendations are subsequently summarized in Section 7. The following comments have been organized based on the summary presented in Section 7.

#### *Section 7.1: Data – Customers' Responsibility*

The Section includes two recommendations. The first calls for a "channel of communication" to be established between municipalities and distributors for purposes of updating data related to energy usage by unmetered loads. In VECC's view the distributor should take primary responsibility for initially establishing this "channel" and might be more appropriately placed in Section 7.1. Furthermore, VECC notes that the need for such a channel is not limited to municipalities but applies to all customers with unmetered loads. However, it is then clearly the responsibility of the customer (as suggested by this Section's title) to inform the distributor of any changes that will affect the energy usage of its unmetered devices or, for that matter, the number of unmetered devices.

The second recommendation is that the Board direct distributors to update their unmetered load profiles for billing purposes as soon as they are validated. VECC agrees with the recommendation but notes that it has also (and more appropriately) been included in Section 7.2 dealing with "Distributors' Responsibilities".

#### *Section 7.2: Communication – Distributors' Responsibilities*

The recommendations call for the distributors to work with their municipalities to determine and explain the distribution system configuration used to connect Street Lights and other unmetered loads and to use the actual configuration in their cost allocation methodology. VECC agrees with both recommendations and notes that such "work" could involve more than just the municipalities but any unmetered load customer where a distinction needs to be made as between the number of devices and the number of connections. VECC also notes that second part of the recommendation does not really involve communication as much as it involves the distributor's use of the cost allocation model. Finally, VECC notes that this requirement does not represent a change from past Board policy as the Board's September 2006 Report – Cost Allocation Review (RP-2005-0317) – included in the following directions:

*In the case of street lights, one "connection" frequently links a number of fixtures to the distribution system and simply using the number of devices may overstate the number of physical connections to the distributor's system. Therefore, where better information is available, distributors must apply a connection factor to the number of streetlight fixtures for the purpose of determining the customer allocation factor. (pages 67-68)*

The Report notes that good utility practice would be that distributors "involve their customers" when preparing rebasing applications. In VECC's view the need for such practices are also highlighted by the Board's recently released Renewed Regulatory



Framework which explicitly calls for a clearer link between distributors' activities and customer preferences (RRFW Report, page 2).

#### *Section 7.3: Conditions of Service – Distributors' Responsibility*

VECC agrees that distributors should clearly document (in their Conditions of Service) the relative roles, responsibilities and expectations of customers vis-à-vis the distributor when it comes to who provides and maintains what facilities. In the case of unmetered load customers there will be additional responsibilities on both the customer and the distributor to ensure that the appropriate parameters are used for billing purposes and these should be set out as well as recommended by Elenchus.

What is not addressed in Report is the need for the distributor to ensure that its cost allocation model assigns assets and costs to customer classes in a manner that is consistent with the roles/responsibilities as set out in the distributor's Conditions of Service. For example, if a customer class is required to provide, own and maintain the service connection assets then there should be no allocation of such assets or their related costs to that customer class and, similarly, the reverse should also apply.

#### *Section 7.4: Cost Allocation Model and Results – Board's Responsibilities*

VECC agrees that changes in the demand allocators and the use of the Minimum System Method in the cost allocation model would be fundamental issues that go beyond scope of a policy review focused on the treatment of unmetered load customers and would require broader study and stakeholder input during the review and recommendation stages.

VECC also agrees that the Board's current revenue to cost policy ranges continue to be appropriate. Indeed, given the direction contained in the Board's 2006 Cost Allocation Review Report the use of utility-specific system configurations for Street Lighting cannot be viewed as an "improvement" over the status quo but rather a requirement of status quo and, as such, cannot be viewed as an improvement that would support a narrowing of the Board's revenue to cost ratio target ranges.

#### *Section 7.5: Terminology and Definitions – Board Staff's Responsibility*

VECC agrees that it would be useful if examples were provided as to how weighting factors could be developed for Services and Billing & Collecting.

VECC also agrees that there is need for a clear understanding of the terminology used with respect to unmetered loads in terms of devices vs. connections vs. customers. In VECC's view misunderstandings/misuse with respect to terminology and distributors using the Board's default values for devices vs. connections (as opposed to developing their own) have been the two primary sources of the past problems experienced with cost allocation as it applies to unmetered load customers.

Finally VECC notes that recommendations as summarized in Section 7 do not include the point raised on page 39 regarding the need for consistency between the terminology as used in the cost allocation and that used in rate design and the tariff sheets. While VECC



agrees that changes in rate design for unmetered load classes were beyond the scope of the current exercise, it is important that the terminology used in cost allocation and rate design be the same.

Thank you for the opportunity to comment.

Yours truly,

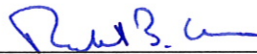
A handwritten signature in black ink, appearing to be 'Michael Janigan', written in a cursive style.

Michael Janigan  
Counsel for VECC

This is Exhibit "L" referred to in the

Affidavit of Gord McGuire

sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "R. B. C.", is written above a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS

**Agenda - July 19, 2013**  
**City of Hamilton and Horizon Utilities**  
**Hamilton City Centre – 77 James Street N - Room 320B**  
**1:30 – 3:30 pm**

Invitees:

Gary Moore  
Gord McGuire

Kathy Lerette  
Jim Butler

Shelley Parker  
Glen Winn

Cathy Livingstone

Meeting Topic:        Street lighting

Items for discussion:

1. Carry forward actions / items from July 3<sup>rd</sup> meeting

a. Horizon Utilities to clarify questions with regards to the list of charges included in the Delivery charge. In progress – information required from Regulatory Services. Timing expected – July 30.

b. Proposed definition of limits of demarcation point for discussion.

a-c. Test of Demarcation is the the point at which the City can safely maintain and take action on its streetlight network, and the point beyond which Horizon is required to maintain and operate the network. Ideally this is a device or piece of equipment which can provide a means of disconnect or isolation.

b-d. Gord McGuire will provide information when it becomes available regarding the possible LED conversion program. Horizon needs to understand timing and load reduction amounts so that we can feed this into our load forecast.

e-e. Indy Butany-DeSouza (Regulatory Services) to advise of the revenue to cost ratio calculated in the next Cost Allocation model in Q1 2014.

d-f. Future creation of a Condition of Services or Service Agreement between Horizon and the City for street lighting – See attached Affiliate Relation Code section 2.2.1.

2. Loading studies for unmetered lighting


- Mike Field provided analysis of results to date for 70W and 100 W HPS on July 9. Horizon Utilities' evaluation of the results is in progress

3. Joint audit of street light assets

- a. Scope of work proposal: drafted by Horizon Utilities and provided to the City of Hamilton on July 16 with first responsive comments provided by City of Hamilton on July 17 ,

- b. Demarcation points: draft of sketches provided by Horizon Utilities on July 17
- c. "Schedule C": Consideration to addition of "Schedule C" assets into audit scope
- d. Methodology for resolution / management of exceptions identified by consultant during audit
- e. Methodology for audit cost allocation

This is Exhibit "M" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "R. B. A.", is written over a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS



**Minutes - July 19, 2013**  
**City of Hamilton and Horizon Utilities**  
**Hamilton City Centre – 77 James Street N - Room 320B**  
**1:30 – 3:30 pm**

**Invitees:**

Gary Moore  
Gord McGuire

Kathy Lerette  
Glen Winn

Shelley Parker

Dave Haddock

**Meeting Topic:** Street lighting

**Minutes for Discussion:**

The meeting started with the review of:

1. Loading studies for unmetered lighting

- Action City*
- David Haddock attended on behalf of Horizon to address the metering issues that Horizon has expressed as a concern regarding the actual load information.
  - Mike Field provided analysis of results to date for 70W and 100 W HPS on July 22<sup>nd</sup> in an Excel format. Horizon Utilities' evaluation of the results is in progress
  - The City and Horizon will jointly meter some of the upcoming street light samples and that this is to be coordinated through Mike Field or Peter Locs.
  - Both the City and Horizon want resolution on this issue in the short term, and the City advises the sampling of the 250W class will be completed by the end of the week of July 26<sup>th</sup>.
  - The Cities numbers align with the Oshawa / Finn report which show @ and 8-10% overbilling on all light classes.
  - It was noted that the 130 W number for the 100 W class as an example was based on nameplate data only and not an actual study.
- 70 ✓  
100 ✓  
250 ✓  
↓*

2. Carry forward actions / items from July 3<sup>rd</sup> meeting

- Ready*
- a. Horizon Utilities to clarify questions with regards to the list of charges included in the Delivery charge. In progress – information required from Regulatory Services. Timing expected – July 30.
  - b. Proposed definition of limits of demarcation point for discussion. The City provided a sketch that will be amended and reissued the week of July 22<sup>nd</sup> with some minor enhancements – Action: City.
  - c. Test of Demarcation definition: The City proposed that it is defined as "the point at which the City can safely maintain and take action on its streetlight network, and the point beyond which Horizon is required to maintain and operate the network". Ideally this is a device or piece of equipment which can provide a means of disconnect or isolation. This was discussed and fundamentally agreed upon, however, based upon the definitions in the sketch and the future study.
- [Sketch of a vertical line with an arrow pointing up at the top and a horizontal line at the bottom, representing a demarcation point.]*

- d. Gord McGuire will provide information when it becomes available regarding the possible LED conversion program. Horizon needs to understand timing and load reduction amounts so that we can feed this into our load forecast. – Action: City. Expected date Q3 2013.
- e. Indy Butany-DeSouza (Regulatory Services) to advise of the revenue to cost ratio calculated in the next Cost Allocation model in Q1 2014. Action Horizon.



- f. Future creation of a Condition of Services or Service Agreement between Horizon and the City for street lighting – See attached Affiliate Relation Code section 2.2.1.


### 3. Joint audit of street light assets

- a. Scope of work proposal: drafted by Horizon Utilities and provided to the City of Hamilton on July 16 with first responsive comments provided by City of Hamilton on July 17. Discussed and approved for immediate release by Horizon. Cost sharing arrangement was agreed to be 60/40 for the City. Horizon to provide and upset limit on the contract value. Action: Horizon.
- b. Demarcation points: draft of sketches provided by Horizon Utilities on July 17. See item 2b
- c. "Schedule C": Consideration to addition of "Schedule C" assets into audit scope. There are 1300 non-identified lights and the City wishes to have the rationalized during the study if possible, however, the level of effort should not exceed the standard collection methods and slow down the main aspects of the study.
- d. Methodology for resolution / management of exceptions identified by consultant during audit. Discussed as above.
- e. Methodology for audit cost allocation. As above

### Remaining Items for Discussion:

- 1. Provision of load shape study from Brampton. Action: City
- 2. Provision of Ottawa service level agreement – available on OEB website

This is Exhibit "N" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "D. B. W.", is written over a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS

## McGuire, Gord

---

**From:** McGuire, Gord  
**Sent:** December-04-13 4:20 PM  
**To:** 'Parker, Shelley'  
**Subject:** RE: Action Required: concensus on preliminary number of connections  
**Attachments:** P18195\_Report\_Draft-1.pdf; Bad Light Example

Shelley:

Please find attached the draft work plan from FBS that outlines the SL mapping data clean up. Can you please review the draft proposal and comment.

Using your data below we both arrive at a similar start point of @ 38,500 SL collected by USC.

However as previously noted there are numerous park and private lights in this data set.

We note there are significant amounts of Park Lights, Private lights, Parking lot, MTO, Condos and non SL assets in the data set. This data set is available if you and Bruce accept the invitation to the Arc GIS on line web site. I have included a screen shot in the Valley Park areas to has park, private and condo lighting included.

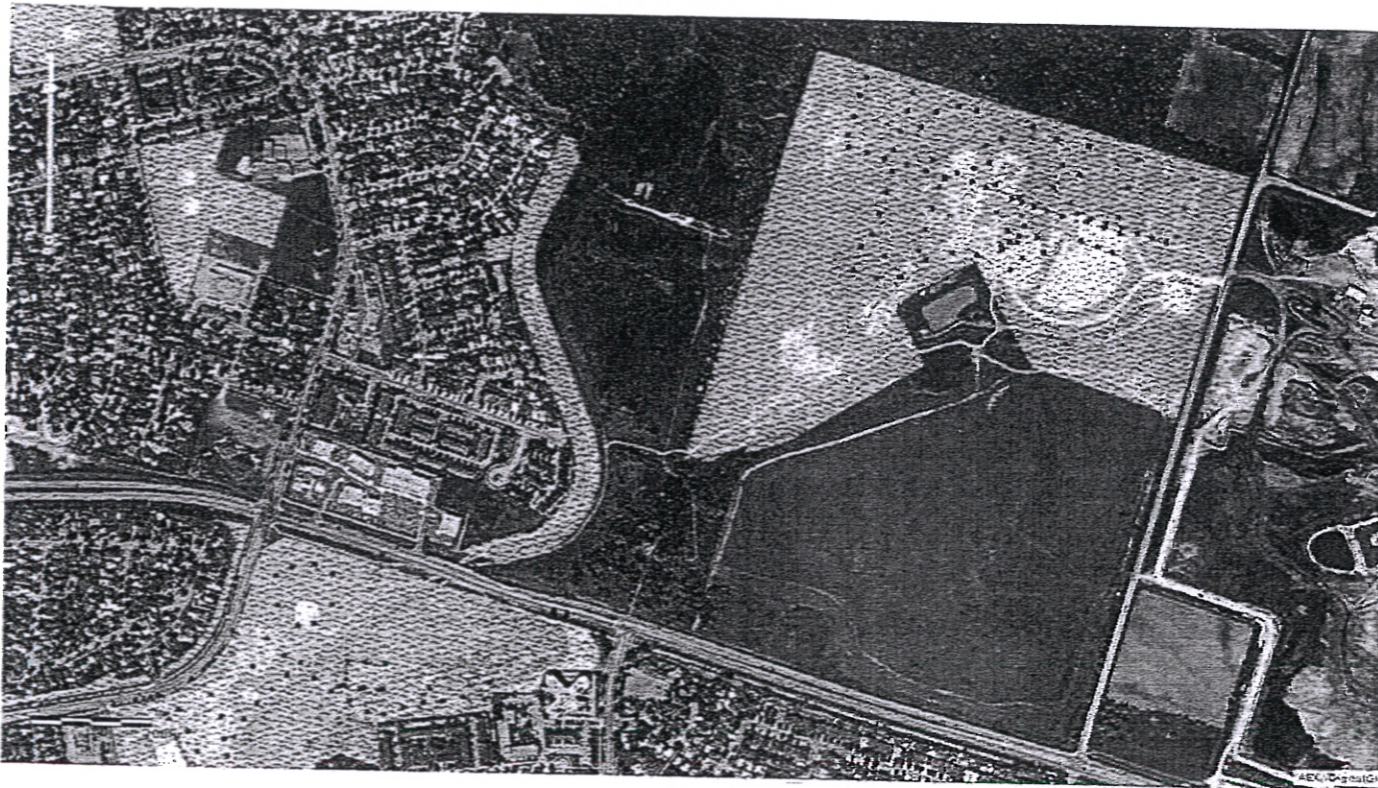
Peter Locs has identified one on Hwy 5 and I have attached the e-mail. We have reviewed Waterdown, Dundas, Westdale so far and as we work through the data we are flagging non SL assets.

Our preliminary finding show the data is 3-5 % high. We are happy to deliver these records to you for your confirmation.

We're also addressing the lights that were collected that are actually metered (Gore Park), etc., and will summarize these findings.

The audit is of great value in rationalizing this data set, the City proposes to complete the task with FBS (at our cost) and continue to engage Horizon in our findings.





Can you address the original questions asked by Peter Locs re: account 24468-564 and the rate changes, the 2013 DSC and the total no. of lights on the current bill. I see that was forwarded to you by Rob Rohr.

Please contact me with any questions.

Regards

Gord McGuire B.Sc. O.L.S. O.L.I.P.  
Manager of Geomatics and Corridor Management

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A COMMISSIONER FOR TAKING AFFIDAVITS

# LAND INFORMATION SPECIALISTS

Geomatics

Aerial Photography

Surveying

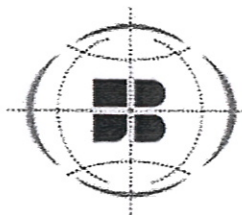
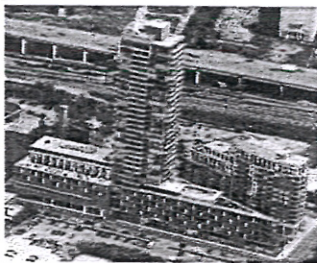
Aerial Mapping

Geospatial Web Services

## Report for The City of Hamilton Streetlight Network

(DRAFT-1)

December 3, 2013. FBS Reference: P-18195



**FIRST BASE SOLUTIONS**  
GEOSPATIAL EXPERTS

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<b>2.</b>	<b>SOURCE DATA ANALYSIS RESULTS AND PROPOSED TASKS .....</b>	<b>6</b>



First Base Solutions has undertaken a preliminary analysis of various source data sets containing pole information within the City of Hamilton. This analysis and source data clean up is necessary prior to further analysis to determine pole ownership, luminaire wattage, demarcation points and downstream connectivity.

## 1. SOURCE DATA SETS

We utilized the following pole datasets in order to complete our analysis.

### 1.1 CITY OF HAMILTON

First Base Solutions compiled and delivered to the City a pole database and streetlight database. The compiled data was derived from our 2012 15cm digital aerial photography.

**1237HAMI0010\_STREET\_LIGHTS\_Final.shp:** First Base Solutions linked all Streetlights and Poles with matching HANSEN ID's. We then moved the Streetlights to the matching Pole and placed it a distance of 1.8m from the Pole on the Road side of the Pole. The delivered database contained the following attribute fields:

ADDR_QUAL	POLEX	RELMP_AREA
CITY_CODE	POLEY	OLD_X
TIMER_TYPE	LIGHT_KEY	OLD_Y
WATTAGE	BRCKET_KEY	NEW_X
OWNER	ADDRSS_KEY	NEW_Y
HEIGHT	ID1	DISTANCE
USAGE_	LIGHT_TYPE	FBS_REMARK
INSTL_DATE		

43988 records:

16782 records have OWNER = "CITY"

27206 records have OWNER <> "CITY"

39355 records have FBS\_REMARK = "Street Light Offset 1.8m From Pole"

**1237HAMI0007\_Poles\_Final.shp:** In the Fall of 2012, First Base Solutions completed a full check and update of the existing GIS Pole shapefile last updated in 2010. Included in this update was the compilation of Rural Poles that had never been previously compiled. Once the GIS Pole file was updated to 2012 conditions, First Base Solutions automatically joined all the records from the Hansen\_COMPLGHT dataset to the GIS Pole file where the attributes "SERNO" and "POLENO" matched. For records that did not contain a match, all GIS Poles that were within 1m of an existing Hansen\_COMPLGHT record were linked due to their spatial proximity. For the remaining GIS Poles and Hanson\_COMPLGHT records that could not be linked through matching attributes or spatially, a manual investigation was completed to determine whether a valid link existed. In the end, all GIS



Poles that could be linked were provided in shapefile format. All Poles that could not be linked to a Hanson\_COMPLGHT record either due to the fact the Hason\_COMPLGHT had no XY attribute or a valid link could not be established, were provided in separate deliverables.

In the Spring of 2013, First Base Solutions completed an update to the 2012 file and captured decorative poles in the downtown core within areas identified by the City, removed suffixes when E, W, N, S appeared on Poles with multi street lights, and transferred records to Pole locations identified by City in obscured areas.

The delivered database contained the following attribute fields:

Pole_ID	Inst_Date	Descript
Ownership	Ret_Flag	Distance
Pole_Type	Att_Flag	Source
Height	CSA_STD	Z
Material	Comments	

106303 records:

889 records have Descript = "TBD2012"

Existing pole records = 106303 – 889 = 105414

15792 records have Ownership = "CITY"

15805 records have Pole\_Type = "Street Lighting"

## 1.2 HORIZON UTILITIES

A CableCad map file was provided to First Base Solutions from Horizon Utilities current to August 9, 2013. First Base Solutions converted this to an ESRI shp file format.

PoleNo	OriCityCod	AlsJuFull	GoTrJuFull	EstLifeYea
LocationId	Usage	AttJuFull	GoTrJuPart	YearRefurb
Owner	PoleManufa	AttJuPart	HOneJuFull	ResidualCo
HeightInFt	EasementNo	BtcoJuFull	HOneJuPart	Comments
Type	PrivPropAg	BtcoJuPart	MounJuFull	Comments1
Class	WorkOrderN	BtcoLCPeNo	MounJuPart	Comments2
LocationDa	ProjectNo	CogeJuFull	NRBNJuFull	Rotation
StreetName	DrawingNo	CogeJuPart	SmntJuFull	CCadLevel
StreetType	DateInstal	CiHsJuFull	SmntJuPart	CCadGfr
StreetDir	EstInsDate	CiHsJuPart	MiscJu	HamComment
StreetSide	DatePurcha	CiTrJuFull	New1Ju	MC_ID
Offset	HHIJuFull	CiTrJuPart	New2Ju	Record_Dat
CrossSt	HHIJuPart	AtriJuFull	BannerJu	
CityCode	SchJuFull	AtriJuPart	ResidualDa	

57741 records:

12893 records = OWNER is the City of Hamilton  
 44848 records = OWNER is not the City

### 1.3 USC

Utility Solutions completed a field inventory of all streetlights within Horizon Utilities' service territory. Their report indicated the base data source consisted of both Horizon Utilities and the City of Hamilton data. The delivered database contained the following attribute fields. The attributes noted in red were added by USC:

AREA_No	USC_POLE_O	USC_LAMP_W
Xcoord	USC_WIRE_O	COH_ATTACH
Ycoord	BRANCH	HUC_PRIMAR
POLE_No	START	HUC_SHARED
USC_POLE_N	BRANCHID_S	COMMENTS
USC_OH_UG	LAMP_WATTA	

39108 records in shapefile:

1371 records = null or unknown ownership  
 62 records = Private ownership  
 19079 records = Horizon owned  
 2317 records = owned by Bell  
 48 records = owned by Hydro One Networks Inc.  
 16231 records = City of Hamilton ownership

## 2. SOURCE DATA ANALYSIS RESULTS AND PROPOSED TASKS

We completed an analysis of the USC data itself and compared the USC data to both Horizon and City of Hamilton datasets. The results of the analysis indicated a number of anomalies within the USC data and when compared to either the Horizon or the City of Hamilton data. Further clarification or clean-up is required before determining ownership, wattage, etc. The term CLIENT is consistent with the term used by USC to identify the databases originally supplied to USC.

We can complete further review and clean-up based on the Tasks identified below and provide the City with an exception report of data that requires further decisions to be made by the City or verification.

This process may also clean up some of the issues and exceptions we previously reported when completing the Hamilton pole and streetlight databases.

#### CLIENT DUPLICATE RECORDS:

360 Records

There are 360 records within the USC database indicated as "DUPLICATE" in the COMMENTS field. In some cases the record is a complete duplicate; in other cases some of the attributes are different, such as wattage. In one instance (POLE\_No = 31692) there are as many as 16 duplicate records with the same coordinates. Our search of the City of Hamilton and Horizon Utility databases did not identify any duplicates.

Task: Records that are complete duplicates can be removed by First Base Solutions. Where an attribute is different within duplicate records further research is required. (e.g. POLE\_No = 19990 & 26103)

#### **MATCH SINGLE LIGHT POLE:**

32359 Records

There are 32359 records in the USC data in the original pole number field POLE\_NO, that correspond to the Cities POLE\_ID. Of these poles the USC pole number in the field USC\_POLE\_N either matches or is indicated as MISSING/HIDDEN.

The pole numbers in the USC data are unique (not duplicated). The matched City pole record is unique and has a matching streetlight record.

First Base Solutions generated a distance\_check containing lines joining all the matched USC and City poles. Distance apart is shown in the Length field with the greatest distance at 20154 meters.

Task: A spatial searching tolerance can be provided by the City to determine which poles can be assumed to match. Manual verification of poles greater than the tolerance apart is required. For example, 2099 records are greater than 2m apart. Over 100 USC pole records are found 1 pole off with City of Hamilton pole records at one area. (e.g. POLE\_No = 56513)

#### **MATCH MULTI-LIGHT POLE:**

327 Records have multiple record matches

There are 327 records in the USC data in the original pole number field POLE\_NO, that correspond to the Cities POLE\_ID. The City pole db is further connected to the streetlight db by pole number so multiple pole records exist at each pole. Where multiple streetlight records exist, USC has included these in their matching POLE\_NO.

The pole numbers in the USC data are duplicated at each matched City pole record. The matched City pole record is unique but has multiple matching streetlight record connected to each pole.



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First Base Solutions generated a distance\_check containing lines joining all the matched USC and City poles. Distance apart is shown in the Length field with only 2 records above 2m apart.

Task: A spatial searching tolerance can be provided by the City to determine which poles can be assumed to match and the owner information can be extracted and inserted into the City of Hamilton Pole db. Manual verification of poles greater than the tolerance apart is required.

39 Records match a single record

There are 39 pole records in the USC db that match a single City of Hamilton pole record, however, we know there are actually multiple streetlights at these locations.

First Base Solutions generated a distance\_check containing lines joining all the matched USC and City poles. Distance apart is shown in the Length field with only 1 record above 2m.

Task: A spatial searching tolerance can be provided by the City to determine which poles can be assumed to match and the owner information can be extracted and inserted into the City of Hamilton Pole db. Manual verification of the single pole greater than 2 m apart poles greater than the tolerance apart is required. The streetlight location, wire owner and branch are correct for the pole, however the streetlight wattage information needs to be verified.

#### **DIFFERENT CLIENT POLE NUMBER AND USC POLE NUMBER:**

1078 Records

There are 1078 records within the USC database that have a different pole number found in field compared to the pole number shown in the original attribute field, POLE\_No.

Task: Assume the field verified pole number is correct or undertake a manual verification.

#### **DUPLICATE CLIENT POLE NUMBERS:**

26 Records

These records have duplicate pole numbers according to the CLIENT database but have different X,Y locations. The USC pole number is not duplicated or missing.

---

Task: Potentially assume the USC pole number is correct. In some instances it appears that the Horizon Pole location doesn't match the City pole location.

57 Records

These records contain duplicate pole numbers according to the CLIENT database at the same X,Y location. In most cases USC indicated the pole number was MISSING.

Task: Duplicate records with same attributes can be removed by First Base Solutions. There are 4 records of POLE\_No = 20021 with different HUC\_PRIMAR & HUC\_SHARED values to be verified by the City.

**DUPLICATE USC FIELD POLE NUMBERS:**

77 Records

There are 77 USC pole numbers actually located in the field that are duplicated but have different X,Y locations and some records have not been matched to the same CLIENT pole.

Task: Verification by the City.

475 Records

These records contain duplicate pole numbers according to the USC database at same X,Y locations. In many instances the CLIENT pole number is also duplicated but there was no indication in the COMMENTS field that this was a duplicate pole.

Task: Duplicate records with the same attributes can be removed by First Base Solutions. There are over 10 pole locations with different attributes. Manual verification is required.

**POLE NOT ACCESSIBLE IN THE FIELD:**

247 Records

Comment in USC database indicates pole was NOT ACCESSIBLE and USC has provided no information.

Task: First Base Solutions can review these poles on the 2012 ortho to determine if a pole existed and should be accessible. Further verification is required by the City.

**POLE NOT FOUND IN CITY OF HAMILTON DATABASE:**

3321 Records

There are 3321 poles included in the USC db that are not in the City db.



Task: First Base Solutions can undertake a manual spatial review and update the City db where the streetlight record matches the USC record.

**POLE NOT FOUND IN FIELD:**

488 Records

Poles indicated as POLE NOT FOUND in COMMENTS field.

Task: First Base Solutions can review the 2012 ortho but further verification is required.

**POLE WITH NO LIGHT:**

254 Records

The COMMENTS attribute field in the USC database indicated NSL. USC did not verify the CLIENT pole number.

Task: The City Streetlight Record can be deleted if the City agrees the field verification process is correct.

**BLANK USC POLE NUMBER:**

3 Records

There was no indication in the COMMENTS field that these were not streetlights however there was no USC pole number.

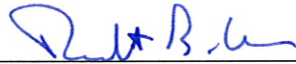
Task: The City of Hamilton pole number can be determined as correct.

**NEW POLE FOUND IN FIELD:**

555 Records

These records are found in the csv file delivered by USC, "MASTER\_FILE\_23NOV13\_final delivery.csv", but contain no X,Y coordinate values for pole records.

This is Exhibit "P" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

A handwritten signature in blue ink, appearing to read "D. B. L.", is written above a horizontal line.

A COMMISSIONER FOR TAKING AFFIDAVITS

## McGuire, Gord

---

**From:** Parker, Shelley <shelley.parker@horizonutilities.com>  
**Sent:** August-07-14 7:00 PM  
**To:** McGuire, Gord; Thachuk, Bruce; Lerette, Kathy  
**Cc:** Locs, Peter; Field, Mike; Lauricella, Charlie; Moore, Gary  
**Subject:** RE: Streetlight Data Base  
**Attachments:** RE: Street Light Data Base updates - from meeting June 11th; Milestone Timelines-HorizonProposal.xlsx; Milestone Timelines-HorizonProposal-7Aug2014.xlsx; March 27 2014 Minutes.doc; ATT1390474.txt

Hello Gord;

Horizon Utilities is equally invested and committed to the resolution of the Connections Audit. The Connections Audit was undertaken at considerable expense to both parties with the principle intended outcome to be the verification of installed street lighting assets. It is vital that the audit be completed with the same rigor of process as with which it was undertaken, otherwise we risk not achieving our original goal and wasting resources.

Bruce has previously provided project plans for your review, most recently on June 16<sup>th</sup> (attached as Milestone Timelines – HorizonProposal). This plan, which includes proposed the cut-over timeframe, has been circulated to the City a number of times previously.

A lot of great work has been achieved to date on the Connections Audit. We have mutual agreement on 95% of the 39,267 street lights that were originally identified and by the end of this week Horizon Utilities will have completed all of the field work on the known Horizon exceptions. Specifically, the field work was completed on the duplicate lights and the new poles where Horizon Utilities was the probable owner. The recommendation(s) regarding each asset will be forwarded to the City for final verification.

Horizon Utilities is anticipating the same ability to verify City-identified recommendations. That is, to complete our validation, we need to have a full dataset of the 39,267 audit records, in a tabular format (i.e. Excel) where the City or Horizon recommendation for asset resolution can be identified, and the verification / acceptance be documented by the other party. Bruce has asked for the full record set to be made available, however, we are currently missing the approximately 2,600 assets that the City has identified as "metered". To complete the audit, we need the opportunity to validate this assumption.

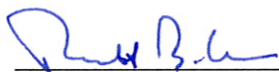
Based on the joint progress to date, Bruce has once again taken the liberty of updating a project plan (attached as Milestone Timelines-HorizonProposal-7August2014). This plan would have us addressing exceptions and unfreezing the database by the end of the year. Full project closure, including the completion of the demarcation points would occur by the end of Q2 2015. We would be happy to discuss the project plan and timing at our meeting next week.

The continued freezing of the database is very problematic to Horizon Utilities as well. The application of the backlog of light changes and retro-billing adjustments will be a significant effort and we are looking forward to a common dataset with improved joint processes.

Sincerely,  
Shelley

Shelley Parker  
Director, Customer Service  
Horizon Utilities Corporation  
55 John Street North, Hamilton, Ontario L8N 3E4  
Tel: 905-521-4909  
Toll-free: 1-866-458-1236  
Cell: 905-961-2943  
Email: [shelley.parker@horizonutilities.com](mailto:shelley.parker@horizonutilities.com)  
[www.horizonutilities.com](http://www.horizonutilities.com)

This is Exhibit "Q" referred to in the  
Affidavit of Gord McGuire  
sworn before me this 6th day of October, 2014.

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Hamilton

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Kirsten Walli, Board Secretary  
Ontario Energy Board  
P.O. Box 2319  
2300 Yonge Street, Suite 2700  
Toronto, ON M4P 1E4

**RE: Board File No. EB-2012-0383**

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Kirsten,

The board issued a request for comments through its letter dated March 20, 2014 surrounding the changes to the distribution system code (DSC), and the City of Hamilton thanks the Board for this opportunity to have input into this file.

The City of Hamilton has approximately 44,000 street lights in two LDC areas. The history of street lighting in Hamilton is that for a significant period of time, the systems were run and maintained by the LDC on behalf of the City of Hamilton. As you're aware of the changes in ownership requirements that took place over the last 10 years, the system is now run by the City of Hamilton. The equipment installed is a large variety of manufacturers and ages. The maintenance and installation records are not always complete and understanding all of the parameters associated with the system can be challenging.

The majority of systems were installed when energy costs were less of a concern and the lighting system was for a public service benefit.

Hamilton engaged in the original study for ED-2012-0383 and sent a letter outlining some of the elements we wished were clarified through the process. That letter was dated January 16, 2013.

Overriding our comments below are the following concerns; the Street Light rate class in Hamilton has experienced increases in Service Delivery costs over the last 5 years in excess of \$1 million dollars annually from the 2008 base, representing increase in the magnitude of 400% or greater.

The board asked for comments with respect to four items on Attachment 'A', and we outline our comments as follows:

**1. Rights and Obligations**

- Hamilton seeks clear definition of the following terms:
  - o Connection
  - o Equipment
  - o Demarcation Point

These definitions will help drive rights and obligations as it pertains to the distribution network and field related activity.

There has been significant discussion about the use of "daisy chained" connections, cost allocation processes and weighting factors in regards to this rate class. It appears to Hamilton that the use of the "connection" as a driver in the CA model is not well understood.

Hamilton's preference is that the rights and obligations drive a true cost of service review and that the reliance on modelling out cost allocations is directly related to the requirements of the DSC.



## **2. Process to Update Unmetered Load Data**

The validation of un-metered street lighting data is critical to both LCDs and load customers as it ensures electricity billing determinants are reflective of actual usage. Historically, the methodology for validating usage data has been un-defined or non-existent as lower energy costs did not necessarily warrant detailed review. Recent excessive energy cost escalation for flat-rate street lighting has resulted in increased attention from load customers in an effort to rationalize and mitigate further cost increases. The rapid development and on-going adoption of next generation street lighting technology, such as LED luminaires and adaptive controls, has also placed further pressure to define or revise outdated data validation practices.

It is of paramount importance that the process for the validation of flat-rate street lighting data is formally identified, reasonable and flexible. The validation process needs to comprehensively address the billing determinants which are electricity load consumption, duration (on-time) of use and quantity of devices.

### **Electricity Consumption**

#### Existing (historical) Street Lighting Loads:

Existing street lighting equipment mainly consists of high intensity discharge [HID] street lighting such as high pressure sodium [HPS] and metal halide [MH]. HID street lighting has been utilized in excess of 40 years and the in-service age of equipment ranges from 40 years to current.

A variety of types of in-service HID equipment, from a specification perspective, exist which results in differing load consumption from street light to street light. In addition to this, load consumption is impacted by age which adds further complexity to determining mean load consumption values.

The mass majority of existing HID equipment was installed by LDCs on behalf of municipalities. Equipment specifications, date of installations and maintenance history is typically unavailable or non-existent. Coupled with age related operating characteristics, load consumption values used by LDCs for existing equipment is assumed and not validated. Study undertaken by the City of Hamilton and other municipalities in Ontario suggests that current billing load consumption values are inaccurate and resulting in possible over-billing.

Validation of existing street lighting loads is difficult as many variables impact energy consumption. In order to identify with certainty actual in-service energy consumption, in-field measurements of a statistically significant quantity of street lights is necessary. Measurement project can be very onerous as they are time-consuming and expensive.

In consideration that LDCs were responsible for the installation of the majority of HID equipment, they should be required to assist municipalities to conduct and fund measurement studies. Further, where similar studies have already been completed (by other LDC or municipalities for example), these studies should be accepted to avoid unnecessarily repeating similar study.

#### New and Next Generation Street Lighting Loads:

When compared to existing in-service street lighting equipment, the validation of new and next generation equipment load consumption values should be considered as being much simpler. Unlike in-service equipment, new and next generation equipment specifications are known and can be verified prior to installation.

Next generation street lighting equipment specifications, performance, adoption and standardization has progressed at a rapid pace. Industry testing is far more intensive and thorough when compared to HID. The accuracy of energy consumption load values is easily identified and validated through the manufacturing testing data. LED, for example, is tested and certified to various standards such as:

IESNA LM-80-08 – Measuring Lumen Maintenance of LED Light Sources

IESNA LM-79-08 – Electrical and Photometric Measurements of Solid-State Lighting Products

Further to the above, equipment must be tested and certified to satisfy the requirements of the Canadian Electrical Code and Ontario Electrical Safety Authority. Equipment which fails these tests or lacks certification is prohibited to be sold in Ontario. Testing and certification of these products is inclusive of consumption load verification.

Consumption load data supplied from equipment manufacturers should be accepted by LDCs and load customers to be utilized for billing determinants without the necessity for further testing and verification. Consumption load data is typically published by manufacturers on product specification data sheets. Additional testing/testing requirements undertaken by either LDCs/load or customers would be far less comprehensive than testing already required and undertaken by the industry and therefore should be deemed as unnecessary.

Due to the nature of next generation equipment, particularly LED, undertaking or duplicating equipment testing would be onerous, time-consuming and expensive. Any requirement to conduct additional testing could potentially prohibit the adoption of next generation equipment which would cause difficulty in meeting Federal, Provincial and Municipal energy conservation targets and objectives.

### **Duration of Use**

#### Traditional (historical) Street Lighting On-Off Controls:

The duration of which street lights are operating is determined by control equipment such as photocells. For the purposes of billing, flat-rate street light operating time is typically based upon pre-determined on-off load shapes rather than in-field measurement. These load shapes have historically been selected by LDCs and, in most instances, follow published sunrise/sunset times which is not validated.

Due to the operating characteristics of photocells many factors determine actual on-off times as on-off threshold specifications, weather and equipment age impact operating time. Study undertaken by the City of Hamilton and other municipalities in Ontario suggests that current sunset/sunrise load shapes are inaccurate and resulting in possible over-billing.

The use of static on-off load shapes for billing is problematic as the on-off times are difficult to validate and make it prohibitive for load customers to utilize different control equipment which operate differently than the on-off load shape (such as passive and active adaptive controls, inclusive of dimming capability).

Rather than using static on-off values, actual on-off times should be recorded on a daily basis. This could be achieved by selecting a number of geographically separate street light locations and measuring (through utility metering equipment) the average on-off operating times which then could be applied holistically as a billing determinant. This methodology would remove the necessity for any more complicated validation studies and ensure that actual day-to-day duration of use is accurate.

To ensure that duration of use billing determinant values are reflective of actual duration of use, the utilization of static pre-determined load-shapes should no-longer be prohibited and be replaced with the on-going measurement of select in-service equipment.

#### Next Generation Street Lighting On-Off Controls:

Next generation street lighting on-off controls provide further evidence which demonstrates that the utilization of static pre-determined load-shapes should not be considered. Advancements in street lighting control systems enable, when installed, load customers to actively and/or passively control on-off times as well as light output (dimming).

The current billing practice of using static pre-determined load-shapes does not provide LDCs or load customers with flexibility to take advantage of the control options. Load-shapes need to be easily adaptable to reflect actual duration of use.



Networked adaptive control systems report back on duration of use values to a high degree of accuracy. While not Measurement Canada Certified, the accuracy of the data typically meets or exceeds the Measurement Canada specifications. Where these types of systems are being utilized, output reporting for on-off duration should be accepted by LDCs for billing determinants.

Identical to street lighting luminaire equipment, the development of control equipment has progressed at a rapid pace. Control equipment must be tested and certified to satisfy many various industry standards and ultimately required to adhere to the Canadian Electrical Code and Ontario Electrical Safety Authority. As such, manufacturers conduct and complete many tests which validate the accuracy of the function of control equipment.

Due to the nature of next generation on-off control equipment undertaking or duplicating equipment testing would be onerous, time-consuming and expensive. Any requirement to conduct additional testing could potentially prohibit the adoption of next generation equipment which would cause difficulty in meeting Federal, Provincial and Municipal energy conservation targets and objectives.

Formally capturing methodologies for validating and accepting data as it relates to billing determinants is crucial as it ensures that electricity costs are accurate and the LDCs and load customers have confidence them. Determining methodologies should not be unilaterally set by the LDCs as it should be the mutual responsibility of the LDC and their associated load customers. Further to this, when possible, holistic rules should be set by the OEB to ensure that the rules are applied consistently across the Province from LDC to LDC. Allowing for wide variations in validation rules is very problematic as it reduces the ability of LDCs and load customers from sharing data and/or conducting validation studies. Lastly, overly onerous validation rules may be detrimental or prohibitive to load customer efforts for cost mitigation and energy conservation.

### **3. Process to Update Unmetered Load Billing**

The process by which an un-metered street lighting account load summary is maintained differs drastically from metered accounts. Metered accounts reflect real and live time of use with no account maintenance requirements beyond ensuring accurate meter reads. Flat rate accounts will continue to bill as originally set up unless continuously updated and reviewed.

It is essential for both LDC's and customers that the process to update flat rate accounts be defined such that minimal effort is required by the LDC to maintain the account load profile allowing the customer to manage their loads with full confidence that the bill accurately reflects the present conditions especially as it pertains to investments in load reduction. The process for updating the flat rate bills needs to address Maintained Load Profile, Load Reporting, and Effective Implementation of Load Changes.

#### **Maintained Load Profile**

Where the customer maintains a system profile and has accurate load data available the customer should send a monthly output of the total load to the LDC for the purposes of billing, highlighting where any load changes have occurred. The LDC should accept the load output as long as the loads contained within have been through the validation process.

Where the customer is not maintaining a system profile the customer should send load updates to the LDC whenever a change in load has occurred. The load update form should identify the asset, the previous/existing load, and the new load. The LDC should update the billing for the next billing cycle upon receiving the update.

#### **Load Reporting**

Where a customer has adopted an adaptive control system, or new street lighting technology such as LED, accurate load reporting may be available. Where load reporting is available the customer should present the information to the LDC on a monthly basis as supplementary information to the total load profile. The LDC should use the information to implement any adjustments to the total billed consumption for the billing period to which the information pertains.

In the case of a static adaptive load, such as a street light set to an operating parameter of less time on, or less light output, the mean demand should be determined and added to the load profile as a static load. i.e. a 50W LED street light device set to operate at 50% light output should be added to the load profile as a 25W street light. The customer should update the LDC of changing the operating parameters of any such static adaptive device. The LDC should update the billing for the next billing cycle upon receiving the update.

#### **Effective Implementation of Load Changes**

The LDC should implement any load change accurate to the date indicated by the customer that the load was changed by calculating the consumption accordingly and applying a retroactive charge or refund.

#### **4. Process the Distributor Will Use to Communicate and Engage Customers**

Hamilton notes that the rate filing processes have taken place between the LDC and the OEB in the past with very little communication to this rate class. Currently it appears that the only method of understanding rate impacts and IRM impacts is through maintaining vigilance on the OEB website.

This rate class has only 1 or 2 client groups for most LDC's and is significant with respect to load and billing. The communication process should be revised to include full disclosure of upcoming cost impacts and applications prior to submission to the board.

Hamilton suggests the process may need to be determined locally to accommodate specific factors between street lighting and the LDC; however cost impacts should be well understood prior to submissions to the board.

Factors that don't appear to be considered during the development of a CA model are as below:

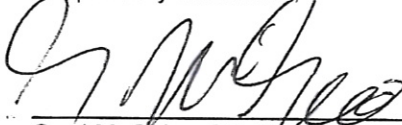
Critically of supply to the Street Light systems. There is a mandated response timeline of 5 days under the Municipal Act for the repair of street lights once the provider is aware of the outage. How this is weighted into an LDC's model is undetermined as this rate class does not need to support 24 hour trouble trucks and repair crews.

Locates, repairs, call tracking and system maintenance are all done by the City. These factors need to be weighted into the models as often the call for repairs does not go to the LDC, rather to the street light provider.

Asset depreciation, Outside Supervision, Outside Services, Miscellaneous Distribution Expenses, Office Supplies and Customer Premises account in the USoA have increased over \$550,000 in a 5 year period without a defined study or data supporting the increase in charges.

As a part of the engagement process a full understanding of each charge in the model is recommended and supporting data to confirm the charges.

Respectfully Submitted



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