



Addendum #3

to

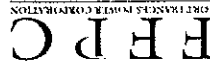
London Hydro's

Request for Proposal

for

Advanced Metering

Infrastructure (AMI) – Phase I Smartmeter Deployment



Issued: November 6, 2007

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Attachments:

- Appendix D.9, Supplementary Non-Disclosure Agreement
- Summary Tabulation of Required Types of Revenue Meters
- Appendix D.10, Tabulation of Revenue Meter Notices of Approval
- Appendix D.11, Agreement Form (Optional) to Extend Proposal to Other LDC's

1. INTRODUCTION

1.1 Background

As the lead local distribution company (LDC) in a Smartmetering consortium consisting of twenty-one (21) LDC's, on August 15th, 2007 London Hydro issued a Request For Proposal (RFP) and an Information Supplement for Advanced Metering Infrastructure (AMI) to enable bidders to submit a two part proposal comprising of a technical and project management proposal and a cost proposal. Full titles of the RFP documents are given in Section 1.6, Reference Documents, below.

Within the RFP document, Section 4.3, Bidders Conference, Section 4.4, Requests for Clarification or Additional Information, and Section 7.5.4, Addenda: Errors and Omissions, provide a formal mechanism for London Hydro (on behalf of the Smartmeter consortium) to issue revisions, additions and clarifications to the RFP.

These addenda are prepared in accordance with London Hydro's guideline document entitled: *Guidelines for Responding to Bidder's Inquiries and Issuing Addenda*.

1.2 Purpose and Intent

This addendum forms an integral part of the contract documents and shall be included therein. Bidders shall read the complete Addendum and take into account items affecting their proposal. No consideration will be allowed for increases (extras) to the Contract Price due to failure of the Bidder to familiarize himself with this addendum.

Each bidder shall be responsible for ascertaining, prior to submitting a Proposal, that it has received all issued Addenda.

1.3 Interpretation

This Addendum forms part of and shall be read together with the RFP documents.

All terms used in this Addendum which are defined in the RFP documents shall have the meaning assigned therein unless the context otherwise requires.

In the event of any inconsistency between the terms of this Addendum and the RFP documents, the terms of this Addendum shall prevail. Where the conflict is with the terms of an additional Addendum or amendment entered into after the date hereof, the terms of the later Addendum or amendment shall prevail.

1.4 Acknowledgement of the Addendum

Bidders shall formally acknowledge receipt of this addendum in their proposal submission. A suggested approach is inclusion of the following phrase in their covering letter (as described in Section 7.2.1, Cover Letter, of the RFP):

Receipt of Addendum Numbers _____, _____, _____ is hereby acknowledged.

- [1] London Hydro Request for Proposal for Advanced Metering Infrastructure (AMI) – Phase I Smartmeter Deployment; dated August 14, 2007
- [2] Information Supplement to London Hydro Request for Proposal for Advanced Metering Infrastructure (AMI) – Phase I Smartmeter Deployment; dated August 14, 2007.
- [3] London Hydro internal document entitled: *Guidelines for Responding to Bidder's Inquiries and Issuing Addenda*; Revision R0.
- [4] London Hydro internal document entitled: *Guidelines for Conducting the Bidders' Conference*; Revision R1.

The following documents are referred to within this Addendum:

1.6 Reference Documents

- For amendments, deleted text is shown with strike-outs and yellow highlight.
- For amendments, changed or new text is shown with green highlight.
- Every amendment to the RFP will be uniquely identified by the designator "#RFP-n", where "n" is the amendment number starting at "1" and continuing, if there were two amendments in this addendum designated #RFP-1 and #RFP-2, any amendments contained in the next addendum would start at #RFP-3.
- Every amendment to the Information Supplement will be uniquely identified by the designator "#IS-n", where "n" is the amendment number starting at "1" and continuing, if there were three amendments in this addendum designated #IS-1, #IS-2 and #IS-3, any amendments contained in the next addendum would start at #IS-4.

The conventions described following are used for published addenda to the RFP and Information Supplement:

1.5 Conventions

Addendum #3 to London Hydro's Request for Proposal for Advanced Metering Infrastructure (AMI) – Phase I Smartmeter Deployment

2. RFP CORRECTIONS AND REVISIONS

The RFP amendments given below, issued subsequent to the original RFP document, override the referenced clauses within the original RFP document.

2.1 Amendment #RFP-15

RFP Reference: Section 2.3, *Informal Regional Smart-Meter Purchasing Consortium*; final bullet; page 5 – addition of Burlington Hydro to consortium.

- Original Text: Thunder Bay Hydro(44,600 residential customers) It is envisioned that the listed consortium LDC's would have access ...

- Revised Text: Thunder Bay Hydro(44,600 residential customers) **Burlington Hydro (54,000 residential customers)** It is envisioned that the listed consortium LDC's would have access ...

2.2 Amendment #RFP-16

RFP Reference: Appendix E.1, *London Hydro's Standard Contract Terms & Conditions*; clause entitled: *Release of Information*; page 142. The *standard clauses* refer to "tenders" (also known as "Invitations for Bids") as opposed to RFP's. One phrase is therefore being eliminated to prevent confusion and misunderstandings that might otherwise arise.

- Original Text: Respondents to this Request for Tender are advised that information obtained from respondents would be communicated to the public and the respondents in the following manner and form:
A public opening of the tenders will take place at the time and location indicated in the attached tender cover letter. All respondents and the general public may attend this public opening of the respondents' submissions. At such opening, information communicated will be limited to the names of the participating respondents and the bid amounts. No other information will be provided to the public at that time. Evaluation and awarding of the contract will not take place at the public opening.

- Revised Text: Respondents to this Request for Tender are advised that information obtained from respondents would be communicated to the public and the respondents in the following manner and form:
A public opening of the tenders will take place at the time and location indicated in the attached tender cover letter. All respondents and the general public may attend this public opening of the respondents' submissions. At such opening, information communicated will be limited to the names of the participating respondents and the bid amounts. No other information will be provided to the public at that time. Evaluation and awarding of the contract will not take place at the public opening.

communicated will be limited to the names of the participating respondents and the bid amounts. No other information will be provided to the public at that time. Evaluation and awarding of the contract will not take place at the public opening.

2.3 Amendment #RFP-17

• RFP Reference: Appendix D.7, *Bidder's Corporate Information*; page 137 – inclusion of an optional non-disclosure agreement and a reference thereto.

• Original Text: Financial Soundness – Provide the following information:
• An annual report for the current and previous two years;
• Audited financial statements for the current and previous two years (financial statements that apply to divisions are adequate for conglomerates); and
Note: If independently audited financial statements do not exist for the bidder's firm, the bidder shall state the reason and instead submit sufficient information to enable the evaluation panel to determine the financial stability of the bidder.
• A copy of the most recent credit rating agency (e.g. S&P, B&D, etc.) report.
Note: London Hydro recognizes the sensitive nature of such financial information and will take all reasonable measures to ensure that its disclosure is limited to the bid evaluation team.

Failure to provide all the above mentioned information may result in the bid being rejected. Bids that are unclear or leave room for interpretation will be considered non-responsive and will not be evaluated.

• Revised Text: Financial Soundness – Provide the following information:
• An annual report for the current and previous two years;
• Audited financial statements for the current and previous two years (financial statements that apply to divisions are adequate for conglomerates); and
Note: If independently audited financial statements do not exist for the bidder's firm, the bidder shall state the reason and instead submit sufficient information to enable the evaluation panel to determine the financial stability of the bidder.
• A copy of the most recent credit rating agency (e.g. S&P, B&D, etc.) report.

Note: London Hydro recognizes the sensitive nature of such financial information and will take all reasonable measures to ensure that its disclosure is limited to the bid evaluation team.

Note: In instances where the bidder has a technology innovation not yet covered by patent protection or is a privately-held corporation, such bidders may elect to use the non-disclosure agreement (NDA) form that has been included as Appendix D.9, *Supplementary Non-Disclosure Agreement* – no other NDA forms will be considered. If the bidder wants this NDA form to be signed, it

must specifically state that as part of its proposal. The suggested approach is for the bidder to fill in its name on two (2) copies of the non-disclosure agreement (included as Appendix D9), attaching these to the requisite cover letter (as described in Section 7.2.1 of the RFP), and including the following statement in the cover letter: "Please arrange for the attached non-disclosure agreement to be signed, with one copy returned, prior to distribution of our proposal to other than London Hydro's Purchasing Agent and the project's former Commissioner."

Failure to provide all the above mentioned information may result in the bid being rejected. Bids that are unclear or leave room for interpretation will be considered non-responsive and will not be evaluated.

2.4 Amendment #RFP-18

- RFP Reference: Appendix D.3, *Technical Information to be Included with Proposals*; page 127 – Inclusion of a standardized table for presenting Notice of Approval information and a reference thereto.

- Original Text: The information listed in the checklist below shall be included in the technical proposal binder:

- Measurement Canada's *Notice of Approval* reference for both the proposed energy meters and those that interoperate with the proposed AMI. Refer to Section 6.2.2 on page 41 herein.
- Description of antennae and transceiver technology ...

- Revised Text: The information listed in the checklist below shall be included in the technical proposal binder:

- Measurement Canada's *Notice of Approval* reference for both the proposed energy meters and those that interoperate with the proposed AMI. Refer to Section 6.2.2 on page 41 herein.
- Bidders are requested to provide Notice of Approval information in a common format by populating table form included as Appendix D.10. *Revised Table of Contents of Approval*
- Description of antennae and transceiver technology ...

2.5 Amendment #RFP-19

- RFP Reference: Section 7.5.7, *Period that Proposals Remain Valid*; page 86. The high interest in this RFP (and the likelihood of a greater than expected number of proposals) and to a lesser extent Christmas vacations suggest that the bid evaluation process, bidder notification, and Statement of Work negotiations may take longer than originally envisioned.

- Original Text: Each bidder agrees that proposals will remain firm for a period of one-hundred and twenty (120) calendar days after the date specified for receipt of proposals.

- Revised Text: Each bidder agrees that proposals will remain firm for a period of one hundred and twenty (120) calendar days and thirty (30) calendar days after the date specified for receipt of proposals.

2.6 Amendment #RFP-20

- RFP Reference: Section 7.2.1, *Cover Letter*, page 81 - extension of proposal validity period.

- Original Text: Bidders shall submit a letter on company letterhead signed by an official who is authorized by and binding on the bidder's organization. The authorized official shall certify that the proposal will remain valid for 120 days from the date submitted, and that upon award of contract all prices shall be firm and valid for the duration of the contract.

- Revised Text: Bidders shall submit a letter on company letterhead signed by an official who is authorized by and binding on the bidder's organization. The authorized official shall certify that all information is true, accurate and complete, and shall further certify that the proposal will remain valid for ~~120 days~~ 180 calendar days from the date submitted, and that upon award of contract all prices shall be firm and valid for the duration of the contract.

2.7 Amendment #RFP-21

- RFP Reference: Section 5.1, *Phase I Smartmeter Deployments*, page 12 - remedying outstanding discrepancies with Amendments #RFP-3 and #RFP-13 (both included in Addendum #2).

- Original Text: In Phase I, London Hydro will acquire and install a developed software and hardware solution capable of supporting at least 200,000 points, and initialize the system with 5,067 electric meters and up to 170 water meter interface units purchased from the successful bidder and installed by London Hydro (undoubtedly with the assistance of contractors) at the locations identified in the subsections below.

- Revised Text: In Phase I, London Hydro will acquire and install a developed software and hardware solution capable of supporting at least 200,000 ~~175,000~~ points, and initialize the system with 5,067 ~~5,079~~ electric meters and up to 170 water meter interface units purchased from the successful bidder and installed by London Hydro (undoubtedly with the assistance of contractors) at the locations identified in the subsections below.

2.8 Amendment #RFP-22

- RFP Reference: Section 5.2.1, *Apartment Buildings with Individual Tenant Metering*; page 21 – In Amendment #RFP-11 (included in Addendum #2), the required quantity adjustment to the “number of water meters” column of Table 5-3 was overlooked.

- Original Text:

Table 5-3, Phase II Apartment Building Deployments

Municipal Address of Apartment Building	Number of Network Meters	Number of 3Ø House Meters	Meter Seal Expiry Year	Number of Water Meters
380 Adelaide Street	78	1	2010	1
430 Adelaide Street	36	1	2010	1
750 Wonderland Road	143	1	2010	1
800 Wonderland Road	142	1	2010	1
Total Meter Deployments:				86

- Revised Text:

Table 5-3, Phase II Apartment Building Deployments

Municipal Address of Apartment Building	Number of Network Meters	Number of 3Ø House Meters	Meter Seal Expiry Year	Number of Water Meters
380 Adelaide Street	78	1	2010	1
430 Adelaide Street	36	1	2010	1
750 Wonderland Road	143	1	2010	1
800 Wonderland Road	142	1	2010	1
Total Meter Deployments:				86

2.9 Amendment #RFP-22

- RFP Reference: Section 5.2.8, *Summary of Phase I Smartmeter Deployments*; page 28 – In Amendment #RFP-14 (included in Addendum #2), the required quantity adjustment to the “water meter interface” column of Table 5-4 was overlooked.

- Original Text:

For convenience, the Phase II Smartmeter deployment quantities have been tabulated below.

Table 5-4, Phase II Smartmeter Deployment Summary

Section	Page	Single-Phase Meters	Network Meters	Polyphase Meters	Water Meter Interfaces
5.2.1	21	--	6,468	86	86
5.2.2.1	23	--	--	176	--
<hr/>					
			19,182	276	86

- Revised Text: For convenience, the Phase II Smartmeter deployment quantities have been tabulated below.

Table 5-4, Phase II Smartmeter Deployment Summary

Section	Page	Single-Phase Meters	Network Meters	Polyphase Meters	Water Meter Interfaces
5.2.1	21	--	6,468	86	86
5.2.2.1	23	--	--	176	--
5.2.2.2	24	--	--	33	--
5.2.3	24	6,100	--	--	--
5.2.4	25	3,380	--	--	--
5.2.5	26	3,670	--	--	--
5.2.6	26	2,400	--	--	--
5.2.7	27	3,632	--	28	--
<hr/>					
			19,182	276	86

Note to Bidders: For technical accuracy, the foregoing minor adjustments to meter quantities should properly be carried through to the answer given to Question #13 within Addendum #2. However, the question relates to phased system expansions and the answer given remains valid for both the correct meter quantities and the outdated quantities given in the answer.

3. INFORMATION SUPPLEMENT CORRECTIONS AND REVISIONS

The Information Supplement amendments given below, issued subsequent to the original Information Supplement document, override the referenced clauses within the original Information Supplement document.

3.1 Amendment #IS-6

- IS Reference: Section 2.2, *Municipal Broadband Wireless Network (Section 2.5)*; page 2; inclusion of Burlington Hydro's circumstances.

- Original Text: In Peterborough, affiliate company Peterborough Utilities Inc has an extensive fibre network running throughout the city servicing all schools, many businesses and providing access to the SCADA system and substations. The company's website can be found at: <http://www.pui.ca/>

In these named communities, if there exists a migration option within the bidder's regional collector ...

- Revised Text: In Peterborough, affiliate company Peterborough Utilities Inc has an extensive fibre network running throughout the city servicing all schools, many businesses and providing access to the SCADA system and substations. The company's website can be found at: <http://www.pui.ca/>

In Burlington, affiliate company **FibreWired Burlington** has a fibre optic cable network spanning approximately 350 km. The company's website is found at URL: www.fibrewiredburlington.com

In these named communities, if there exists a migration option within the bidder's regional collector ...

3.2 Amendment #IS-7

- IS Reference: Section 2.5, *Phase I Smartmeter Deployments (Section 5.1)*; page 3; inclusion of Burlington Hydro's circumstances in Table 2-1.

Table 2-1, Variations in Meter Application Environments

Local Distribution Company	Network Meters (5.1.1)	Subsurface/ Basement Meters (5.1.3)	600 V Delta Meters (5.1.4)	Network Grid Distribution (5.1.5)	Rural Installations (5.1.6)
Bluewater Power	✓	✓	✓	N.A.	✓
Cambridge	✓	✓	✓	N.A.	✓
Thunder Bay	✓	✓	✓	N.A.	✓

- IS Reference: Section 2.7, *Installing Regional Collectors / Repeaters on Luminares* (Section 6.1.3.1); page 5; inclusion of Burlington Hydro's circumstances.
- Original Text: In Guelph and Cambridge, the LDC's have established the restriction that no smart-metering communications infrastructure will be installed on municipally-owned streetlighting poles or appurtenances (davit arms and cobra head luminaires). Instead, for systems using regional collectors and RF repeaters, such devices shall be designed for distribution system assets (i.e. poles).
- Revised Text: In **Burlington**, Guelph and Cambridge, the LDC's have established the restriction that no smart-metering communications infrastructure will be installed on municipally-owned streetlighting poles or appurtenances (davit arms and cobra head luminaires). Instead, for systems using regional collectors and RF repeaters, such devices shall be designed for installation on the LDC's distribution system assets (i.e. poles).

3.3 Amendment #IS-8

Bluewater Power	✓	✓	✓	✓	✓
Cambridge	✓	✓	✓	✓	✓
Erie Thames	✓	✓	✓	✓	✓
ENWIN	✓	✓	✓	✓	✓
Festival	✓	✓	✓	✓	✓
Guelph	✓	✓	✓	✓	✓
Kitchener	✓	✓	✓	✓	✓
St Thomas	✓	✓	✓	✓	✓
Tilsonburg	✓	✓	✓	✓	✓
Waterloo	✓	✓	✓	✓	✓
West Coast	✓	✓	✓	✓	✓
Woodstock	✓	✓	✓	✓	✓
Oakville	✓	✓	✓	✓	✓
Peterborough	✓	✓	✓	✓	✓
Sudbury	✓	✓	✓	✓	✓
Atikokan	✓	✓	✓	✓	✓
Fort Frances	✓	✓	✓	✓	✓
Kenora	✓	✓	✓	✓	✓
Sioux Lookout	✓	✓	✓	✓	✓
Thunder Bay	✓	✓	✓	✓	✓
Burlington Hydro	✓	✓	✓	✓	✓
Local Distribution Company					
Network Meters (5.1.1)	✓	✓	✓	✓	✓
Subsurface / Basement Meters (5.1.3)	✓	✓	✓	✓	✓
600 V Delta Meters (5.1.4)	✓	✓	✓	✓	✓
Network Grid Distribution (5.1.5)	✓	✓	✓	✓	✓
Rural Installations (5.1.6)	✓	✓	✓	✓	✓

Table 2-1, Variations in Meter Application Environments

- Revised Text:

3.4 Amendment #IS-9

- IS Reference: Section 2.8, *Licensed Spectrum* (Section 6.1.4.1); page 7; inclusion of Burlington Hydro's circumstances.
- Original Text: Most frequencies are used for SCADA and communication for Load Control Systems.
- Revised Text: Most frequencies are used for SCADA and communication for Load Control Systems.

2.9 Power Line Carrier (PLC) LAN Offerings (Section 6.1.5)

2.8.5 Burlington Hydro Spectrum Licenses

Burlington Hydro holds licenses from Industry Canada for the radio spectrum identified below:

Industry Canada Reference No.	Xmit Freq (MHz)	Rev Freq (MHz)	Application Notes
44-080003529	169.29000	165.19500	Rattlesnake Point
!	169.29000	165.27000	King Road
!	165.27000	165.29000	1340 Brant Street

Table 2-4A, Burlington Hydro's Licensed Radio Spectrum

Burlington Hydro is also using unlicensed 902 - 928 MHz spread-spectrum for forty-seven (47) ScadaMate distribution automation switches (each equipped with an UtilNet® intelligent radio).

2.9 Power Line Carrier (PLC) LAN Offerings (Section 6.1.5)

3.5 Amendment #IS-10

- IS Reference: Section 2.10, *Revenue Meters within Scope of Provincial AMI Specification* (Section 6.1.7.1); inclusion of meter population information for Burlington Hydro; page 8.
- Original Text: Table 2-6, *Bluewater Power's Population of Energy-Only Revenue Meters*

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	30,725
Single-Phase; 2W, 120 V, SC	28
Polypphase; 4W, 120/208Y V, Tx	585

Table 2-7, Cambridge & ND Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	42,046
Single-Phase; 2W, 240 V, Tx	442
Polyphase; 4W, 120/208Y V, Tx	185

- Revised Text: Table 2-6, Bluewater Power's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	30,725
Single-Phase; 2W, 120 V, SC	28
Single-Phase; 2W, 240 V, Tx	1
Network; 3W, 120/208Y V, SC	789
Polyphase; 4W, 120/208Y V, SC	681
Polyphase; 4W, 347/600Y V, SC	537
Polyphase; 3W, 600V Δ, SC	109
Polyphase; 3W, 240V Δ, SC	25
Polyphase; 3W, 120V Δ, Tx	213
Polyphase; 4W, 120/208Y V, Tx	585

Table 2-6A, Burlington Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	33,631
Single-Phase; 2W, 120 V, SC	1
Single-Phase; 2W, 240 V, Tx	260
Network; 3W, 120/208Y V, SC	3,156
Polyphase; 4W, 120/208Y V, SC	472
Polyphase; 4W, 347/600Y V, SC	1,938
Polyphase; 3W, 600V Δ, SC	160

Table 2-7, Cambridge & ND Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	42,046
Single-Phase; 2W, 240 V, Tx	442
Network; 3W, 120/208Y V, SC	1,836
Polyphase; 4W, 120/208Y V, SC	1,528
Polyphase; 4W, 347/600Y V, SC	1,082
Polyphase; 3W, 600V Δ, SC	94
Polyphase; 3W, 120V Δ, Tx	317
Polyphase; 4W, 120/208Y V, Tx	185

3.6 Amendment #IS-11

- IS Reference: Section 2.10, Revenue Meters within Scope of Provincial AMI Specification (Section 6.1.7.1); inclusion of meter population information for Erie Thames Powerlines; page 8.

- Original Text: Table 2-8, ENWIN Utilities Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	78,792
Single-Phase; 2W, 120 V, SC	94
Polyphase; 3W, 240V Δ, SC	10

Table 2-9, Festival Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	18,000
Single-Phase; 2W, 120 V, SC	15
Polyphase; 3W, 120V Δ, Tx	14

- Revised Text: Table 2-8, ENWIN Utilities Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	78,792
Single-Phase; 2W, 120 V, SC	94
Single-Phase; 2W, 240 V, Tx	154
Network; 3W, 120/208Y V, SC	1,982
Network; 3W, 347/600Y V, SC	83
PolypHase; 4W, 120/208Y V, SC	862
PolypHase; 4W, 347/600Y V, SC	1,173
PolypHase; 3W, 600V Δ, SC	390
PolypHase; 3W, 240V Δ, SC	10

Table 2-8A, Brite Ilium's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	13,046
Single-Phase; 2W, 120 V, SC	13
Single-Phase; 2W, 240 V, Tx	106
Network; 3W, 120/208Y V, SC	261
PolypHase; 4W, 120/208Y V, SC	65
PolypHase; 4W, 347/600Y V, SC	30
PolypHase; 3W, 600V Δ, SC	29
PolypHase; 3W, 120V Δ, Tx	45
PolypHase; 4W, 120/208Y V, Tx	134

Table 2-9, Festival Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	Quantity
Single-Phase; 3W, 240 V, SC	18,000
Single-Phase; 2W, 120 V, SC	15
Single-Phase; 2W, 240 V, Tx	37
Network; 3W, 120/208Y V, SC	1,750
PolypHase; 4W, 120/208Y V, SC	287
PolypHase; 4W, 347/600Y V, SC	425
PolypHase; 3W, 600V Δ, SC	39
PolypHase; 3W, 120V Δ, Tx	14

3.7 Amendment #IS-12

- IS Reference: Section 2.11, Revenue Meters beyond Scope of Provincial AMI Specification (Section 6.1.7.2); inclusion of meter population information for Burlington Hydro; page 14.

Original Text: Table 2-22, Atikokan Hydro's Population of Energy-Only Revenue Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
> 50 kW and ≤ 200 kW	5			
• 1-Phase; energy & demand				
• 3-Phase; energy & demand				
Greater than 200 kW:				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				

* Number of elements in revenue meters unstated.

Table 2-23, Cambridge's Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
> 50 kW and ≤ 200 kW	20	50	645	96
• 1-Phase; energy & demand				
• 3-Phase; energy & demand				
Greater than 200 kW:				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				

Revised Text: Table 2-22, Atikokan's Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
> 50 kW and ≤ 200 kW	5			
• 1-Phase; energy & demand				
• 3-Phase; energy & demand				
Greater than 200 kW:				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				

* Number of elements in revenue meters unstated.

Table 2-22A, Burlington Hydro's Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
> 50 kW and ≤ 200 kW				
• 1-Phase; energy & demand				
• 3-Phase; energy & demand				
Greater than 200 kW:				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				
• 3-Phase; energy & demand				

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
• 1-Phase; energy & demand > 50 kW and ≤ 200 kW	20	50	645	96
• 3-Phase; energy & demand Greater than 200 kW:	10	10	10	171
• 3-Phase; energy & demand • 3-Phase; energy & demand				

Table 2-23, Cambridge & ND Hydro's Population of Transformer-Rated Combination Meters

3.8 Amendment #IS-13

- IS Reference: Section 2.11, Revenue Meters beyond Scope of Provincial AMI Specification (Section 6.1.7.2); inclusion of meter population information for Erie Thames Powerlines; page 14.

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
• 1-Phase; energy & demand > 50 kW and ≤ 200 kW	313	79	0*	605
• 3-Phase; energy & demand Greater than 200 kW:		173	0*	1,453
• 3-Phase; energy & demand • 3-Phase; energy & demand				

- Original Text: Table 2-24, ENWIN Utilities' Population of Energy-Only Revenue Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
• 1-Phase; energy & demand > 50 kW and ≤ 200 kW	2	↔	124	↔
• 3-Phase; energy & demand Greater than 200 kW:		25	6	56
• 3-Phase; energy & demand • 3-Phase; energy & demand				

Table 2-25, Festival Hydro's Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
• 1-Phase; energy & demand > 50 kW and ≤ 200 kW	313	79	0*	605
• 3-Phase; energy & demand Greater than 200 kW:		173	0*	1,453
• 3-Phase; energy & demand • 3-Phase; energy & demand				

- Revised Text: Table 2-24, ENWIN Utilities' Population of Energy-Only Revenue Meters

* All existing 2½-element meters will be replaced with 3-element meters

Table 2-24A, Title 11A-mcs' Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
≥ 50 kW and ≤ 200 kW				
1-Phase; energy & demand	↔	↔	↔	↔
3-Phase; energy & demand				
Greater than 200 kW				
3-Phase; energy & demand				
3-Phase; energy & demand				

Table 2-25, Festival Hydro's Population of Transformer-Rated Combination Meters

Style of Revenue Meter	1-Element	2-Element	2½-Element	3-Element
> 50 kW and ≤ 200 kW	2	↔	124	↔
1-Phase; energy & demand				
3-Phase; energy & demand				
Greater than 200 kW				
3-Phase; energy & demand				
3-Phase; energy & demand				

3.9 Amendment #IS-14

- IS Reference: Section 2.12, *Loss of Supply Response* (Section 6.2.7.3); page 17; inclusion of Burlington Hydro's design preference.

- Original Text: Some Consortium LDC's have expressed interest in a greater capacity backup power option (in the regional collector) due to differences in geography, operating practices and constraints, etc. Expressed preferences for minimum backup capacities are:

- Bluewater Power.....4 hours
- Fort Frances Power.....4 hours

- Revised Text: Some Consortium LDC's have expressed interest in a greater capacity backup power option (in the regional collector) due to differences in geography, operating practices and constraints, etc. Expressed preferences for minimum backup capacities are:

- Bluewater Power.....4 hours
- Burlington Hydro.....4 hours
- Fort Frances Power.....4 hours

3.10 Amendment #IS-15

- IS Reference: Section 2.14, *Value Added Functionality* (Sections 6.2.9 and 6.2.10); page 18; inclusion of Burlington Hydro's requirements.

- Original Text: The following tabulation is intended to illustrate these differences, with the symbol "✓" meaning "this functionality is important – if not inherent, an adder price shall be included", the symbol "X" meaning "this functionality isn't required – it is achieved via other methods in our

LDC, and the symbol “?” meaning “this functionality may be procured if it is mature and provides tangible value greater than the investment cost”.

Table 2-36, Variations in LDC Priorities in Additional AMI Functionality

	Bluewater	Cambridge	Thunder Bay
Local Distribution Company	X	?	?
Outage Management System I/F (6.2.9.2)	✓	✓	?
QoS Voltage Reporting (6.2.9.3)	✓	✓	?
Bi-directional Meters (6.2.9.4)	✓	✓	?
Phase Registration Failure (6.2.9.5)	X	?	?
Remote Disconnect (6.2.10.2)	X	?	?
Tamper Detection (6.2.10.3)	✓	✓	?
Water Meter AMR (6.2.10.4)	✓	✓	X
In-Home Displays (6.2.10.5)	X	?	?
Demand Response (6.2.10.6)	X	?	?
Prepayment Metering (6.2.10.7)	X	?	?
Remote Diagnostics (6.2.10.8)	?	✓	?
On-Demand Reads (6.2.10.10)	✓	✓	?
Inter-Master Comm's (6.2.10.11)	?	✓	?
Configuration Management (6.2.10.9)	?	✓	?
Check Meter Discrepancy (6.2.10.12)	X	?	?

- Revised Text:

The following tabulation is intended to illustrate these differences, with the symbol “✓” meaning “this functionality is important – if not inherent, an adder price shall be included”, the symbol “X” meaning “this functionality isn't required – it is achieved via other methods in our LDC”, and the symbol “?” meaning “this functionality may be procured if it is mature and provides tangible value greater than the investment cost”.

Table 2-36, Variations in LDC Priorities in Additional AMI Functionality

Functionality	Bluewater	Burlington	Cambridge	Erie Thames	ENWIN	Festival	Guelph	Kitchener	St Thomas	Tillsonburg	Waterloo	West Coast	Woodstock	Peterborough	Oakville	Sudbury	Aitkokan	Fort Frances	Kenora	Sioux Lookout	Thunder Bay
Local Distribution Company	X	☒	?	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
Outage Management System I/F (6.2.9.2)	✓	☒	✓	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
QoS Voltage Reporting (6.2.9.3)	✓	☒	✓	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
Bi-directional Meters (6.2.9.4)	✓	☒	✓	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
Phase Registration Failure (6.2.9.5)	X	☒	?	?	?	X	?	?	?	?	?	?	?	?	?	?	?	?	X	X	?
Remote Disconnect (6.2.10.2)	X	☒	?	?	?	X	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Tamper Detection (6.2.10.3)	✓	☒	✓	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
Water Meter AMR (6.2.10.4)	✓	☒	✓	✓	?	✓	?	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	X
In-Home Displays (6.2.10.5)	X	☒	?	?	?	X	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Demand Response (6.2.10.6)	X	☒	?	?	?	X	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Prepayment Metering (6.2.10.7)	X	☒	?	?	?	X	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?
Remote Diagnostics (6.2.10.8)	?	☒	✓	✓	?	✓	✓	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
On-Demand Reads (6.2.10.10)	✓	☒	✓	✓	?	✓	?	✓	?	✓	✓	✓	?	✓	✓	✓	✓	?	✓	✓	?
Inter-Master Comm's (6.2.10.11)	?	☒	✓	✓	?	?	?	?	?	?	?	?	?	?	?	?	?	?	X	X	?
Configuration Management (6.2.10.9)	?	☒	✓	✓	?	✓	?	?	?	?	?	?	?	?	?	?	?	?	X	X	?
Check Meter Discrepancy (6.2.10.12)	X	☒	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	X	X	?

3.11

Amendment #IS-16

- IS Reference: Section 2.15, *Automated Reading of Water Meters (Section 6.2.10.4)*; page 21; inclusion of Burlington Hydro's circumstances.
- Original Text: Peterborough Utilities Commission, a member of the Peterborough Utilities Group, reads and bills metered water for all commercial accounts and offers optional water metering for residential customers. Peterborough Utilities Commission is in the process of undertaking a Water Efficiency Study to determine costing and to look at the feasibility of full-scale water metering for residential customers. It is critical that the Peterborough solution enables remote reading of water service through the AMI structure.

Waterloo North Hydro – this pilot system consists of approximately 500 GE i210 electronic single-phase residential meters, with factory-installed Tantalus TC-1200 communication modules, that communicate over a 900 MHz LAN to TUNet RT-3205 (or Sharkfin) regional collector devices. WAN communications between the regional collector devices.

The intention of these pilot projects was that LDCs work together and share their findings (with each other and government), thereby providing greater efficiencies and allowing the sector to take advantage of 'collective' best practices.

Waterloo North Hydro – this pilot system consists of approximately 500 GE i210 electronic single-phase residential meters, with factory-installed Tantalus TC-1200 communication modules, that communicate over a 900 MHz LAN to TUNet RT-3205 (or Sharkfin) regional collector devices. WAN communications between the regional collectors and central server is via a 220 MHz wireless network, also provided by Tantalus.

Section 2.17, *Disclosure of Smartmeter Pilot Projects*; page 22; inclusion of Burlington Hydro's circumstances.

3.12 Amendment #IS-17

The respective cities / municipalities will ultimately develop their own cost/benefit study to justify the extension of the smart metering infrastructure to accommodate automated meter reading (AMR) of domestic water meters and / or natural gas meters.

Burlington Hydro reads and bills approximately 48,450 water meters for the Region of Halton. While the Region is aware of the Smartmeter initiative (and its potential impact on the future costs of reading water meters), no pilot testing of water meter interfaces is contemplated at the outset. Nonetheless, vendor selection should not preclude the possibility of water meter interfaces being utilized in future.

Peterborough Utilities Commission, a member of the Peterborough Utilities Group, reads and bills metered water for all commercial accounts and offers optional water metering for residential customers. Peterborough Utilities Commission is in the process of undertaking a Water Efficiency Study to determine costing and to look at the feasibility of full-scale water metering for residential customers. It is critical that the Peterborough solution enables remote reading of water service through the AMI structure.

The respective cities / municipalities will ultimately develop their own cost/benefit study to justify the extension of the smart metering infrastructure to accommodate automated meter reading (AMR) of domestic water meters and / or natural gas meters.

collectors and central server is via a 220 MHz wireless network, also provided by Tantalus.

o **Burlington Hydro - Burlington Hydro** has engaged in four (4) pilot programs designed to evaluate available technology and implementation strategies. The pilot projects differ considerably by customer type and technology. The following is a summary of the programs, their outcomes and lessons learned:

❖ **Residential Condominiums - Several condominium buildings** were reworked with Quadlogic networked meter systems between 2005 and 2007. Data is transmitted between data collection panels via power-line carrier. The common area major loads (chillers, lighting, etc.) are monitored separately to provide detailed information regarding power use within the facility.

Space limitations within existing electrical closets mandated the use of networked systems as opposed to installing individual smart meters for each condominium unit. Usage data is remotely read through a telephone line and managed via Burlington Hydro's M90x2 software. The condominium corporations themselves continue to be "bulk metered" accounts. Each individual unit (suite) has become a separate residential customer.

❖ **Single Family Residential Community - Burlington Hydro** conducted a pilot program in 2006 to install Elster type REX smart meters in a new development. This was comprised of 264 meters. The pilot effectively demonstrated the reliability of the technology.

❖ **Downtown Burlington Wi-Fi - Two hundred and forty-two (242)** Elster type REX and type ALPHAT smart meters were installed for residential, commercial and industrial customers in Burlington's downtown core. Data from the collectors is collected through a IX wireless telephone network.

❖ **Existing Residential Community - One hundred (100) Elster type REX smart meters** were installed in a rural residential neighborhood, which features very hilly terrain, to test the ability of the meters to communicate amongst each other and the collectors. Data from the collectors is transmitted through a B-Hill fibre connection.

Notes: For the latter three (3) proof-of-concept projects involving Elster electricity meters, the revenue meters are remotely managed by a third-party (Olaner) with the meter readings subsequently transferred to Burlington Hydro in XML format.

The intention of these pilot projects was that LDCs work together and share their findings (with each other and government), thereby providing

greater efficiencies and allowing the sector to take advantage of
'collective' best practices.

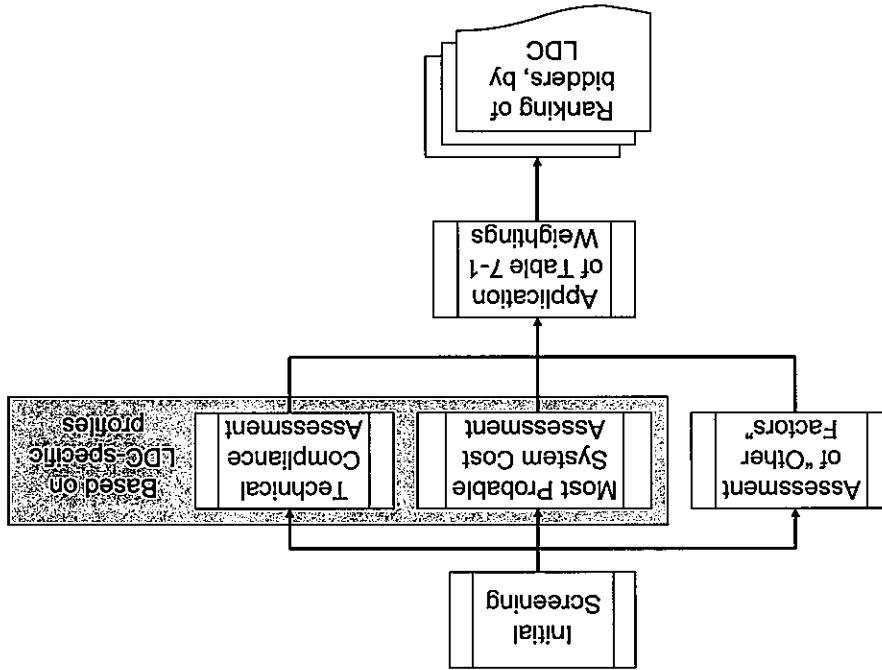
Addendum #3 to London Hydro's Request for Proposal for Advanced Metering Infrastructure (AMI) –
Phase I Smartmeter Deployment

4. ANSWERS TO BIDDERS QUESTIONS

The questions raised to date by one or more bidders have been captured below, along with the Smartmeter consortium's answers. These answers to bidders' questions are intended only to assist bidders in better understanding the prevailing conditions, the consortium's expectations, and guidance to bidders in the preparation of their respective proposals. Nothing in this section should be construed as modifying or overriding any requirement stated in the RFP or Information Supplement.

Question #1: With reference to Section 2.1, *Provincial Context for Project*, and specifically the final paragraph ("*The Ontario Ministry of Energy has an expressed interest in promoting smart-meter procurement effectiveness... The results of this RFP, including vendor selection list, pricing terms, specifications and service terms will be made available... LDC buying groups and cost effectiveness*"), several bidders have inquired about the process by which information is shared with non-consortium LDC's whilst the integrity of "*confidential*" information is to be preserved.

Answer: Prior to answering this question, it would be worthwhile to again review the mechanism that will be used by the Smartmeter consortium's bid evaluation panels to rank the proposals on a per-LDC basis from "*best value*" to "*least value*".



As depicted on the flow chart above (and described at the *Bidders Conference*), there are two (2) initial screenings of proposals; the first for commercial completeness (e.g. proper signatures, inclusion of bid security, etc.), and the second for compliance with the Ministry of Energy's *Functional Specification*.

Based on LDC-specific profiles (e.g. types of meters, meter populations, design preferences, interest in value-added functions, etc.), the financial bid evaluation panel will construct "*most*

probable system cost" projections for each bidder and each LDC. The technical bid evaluation panel will similarly carry out a technical evaluation considering the LDC-specific profiles. Evaluation of "Other Factors" (e.g. reference checks, corporate capability, etc.) is not LDC-specific.

Finally, the weightings given in Table 7-1, *Proposal Evaluation Weightings*, of the RFP are applied to the outcomes to assess the rankings of proposals (from "best value" to "least value") on a per-LDC basis. The Fairness Commissioner will then carry out a final process review to confirm that the process was "fair" and in compliance with the RFP, after which Ministry of Energy will review the findings and formulate a recommendation to the Provincial Cabinet to "name" consortium LDC's in the Regulations (as indicated in their letter included as Appendix B.2 in the RFP). At such time that Cabinet approves an amendment to the Regulation, it is anticipated that individual LDC's would commence negotiating a *Statement of Work* with their respective "best value" bidder as set forth in Section 7.5.14, *Final Contract Negotiations*, of the RFP. Where multiple LDC's selected the same bidder, it is conceivable that the cooperative approach would be continued to prepare a common *Statement of Work*.

Given the combinations and permutations (of proposals and LDC-specific requirements), much of the detailed analysis effort will be carried out using several complex spreadsheets. Theoretically, it would seem possible to extend the results of this Smartmeter consortium's procurements to other buying groups without divulging confidential information or sensitive pricing information by changing selected user input fields in the analysis model (i.e. spreadsheets). This would be accomplished by having individual LDC's from other buying groups submit their LDC-specific information (e.g. meter types, meter quantities, roll-out schedule, preferences, etc.) and their preferred weighting scheme (if different from Table 7-1 of the RFP) for analysis using the same model as was used by the Smartmeter consortium.

While many details remain to be worked out, conceptually:

- The Fairness Commissioner could certify that the analyses carried out for other buying groups were done in accordance with the established process for the Smartmeter consortium.
 - The rankings of bidders would be released to specific LDC's.
 - The specific LDC's could formally request their own copies of the submitted proposals directly from the top two or three bidders under the terms of whatever non-disclosure agreement that was acceptable to the bidder and LDC.
- Note: LDC's need to be familiar with at least the top two proposals for their circumstances. Pursuant to Section 7.5.14, *Final Contract Negotiations*, of the RFP, in circumstances whereby *Statement of Work* negotiations with the "best value" bidder fail, the LDC holds the option of suspending these negotiations and commencing negotiations with the second best bidder.

- There needs to be provision for LDC's to assess a "capacity to pursue factor" to the top two or three bidders (based on information supplied by the bidder on the Appendix D.11 form). If, for example, bidder "X" was awarded a significant number of contracts within the Smartmeter consortium, and also happened to be the highest ranked bidder for the specific LDC, the specific LDC may determine that bidder "X" doesn't have adequate resources for additional contracts and thereby reduce that bidder's overall ranking accordingly.

- Once "named" in the Regulations (according to the process previously described), the specific LDC could start Statement of Work negotiations with their "best value" proposal.

Given that the procurements of these other buying groups may lag those of the Smartmeter consortium by a few months, bidders will be formally asked if they want their proposal to remain valid for such procurements, and any special conditions or limitations that would apply to such procurements.

The Smartmeter consortium would expect to receive benefit from their efforts in the way of volume discounts associated with contracts signed with other buying groups. For the purposes of an illustrative example, suppose that bidder "X" quoted the following breakpoint pricing on two-element self-contained network meters:

Procurement Quantity	Unit Price
0 to 500	\$140
501 to 5,000	\$130
5,001 to 20,000	\$125

Suppose now, that three (3) LDC's from the Smartmetering consortium all selected bidder "X" as their "best value" supplier and negotiated a common Statement of Work. Collectively, their Phase I deployment quantity of network meters is 4,500 units, meaning that the unit price for such network meters is \$130.

Suppose also that two (2) other LDC's from a different buying group also selected bidder "X" (as an extension of the Smartmeter consortium's procurement model) and collectively their Phase I deployment of network meters is 2,000 units.

It is expected that bidder "X" would now deliver the 6,500 network meters to the five (5) LDC's at the lower unit price of \$125 provided that all commitments occurred in the same timeframe for concurrent manufacturing.

Note: It is understood by all parties that volume discounts arise from a variety of concurrent factors within the bidder's supply chain, namely: manufacturing efficiency (i.e. distributing a variety of set-up costs over a larger order quantity), logistics efficiency (i.e. the cost of a transport truck is fixed, whether it is carrying one revenue meter or 10,000 revenue meters), administrative efficiency, and the inherent volume discounts associated with the raw materials. These volume discounts only accrue if procurement commitments amongst the LDC's are coordinated to take advantage of these factors (i.e. permit the bidder to commit to certain volumes of raw materials, a single set-up for manufacturing and testing, and economic shipping from the point of manufacture to the bidder's local distribution centre).

Note: Given that all LDC's will have a phased approach to Smartmeter deployment, and the potential benefit to all parties in consolidating order quantities (thereby maximizing the available volume discount), it is expected that the LDC's that had elected the same bidder's solution would communicate amongst themselves to maximize the economic benefit of their procurements for each phase of their respective projects. Please indicate in your proposal the typical manufacturing lead time for electric meters (i.e. number of calendar days from LDC commitment to start of meter assembly) to appreciate the window of opportunity available to increase order volumes and take advantage of further price discounts, and other factors that the LDC's will need to know, regarding volume discounts.

RFP Section	Revenue Meter Information	Location Information														
	<p>covered elsewhere) and the Phase I deployment described in Section 5.1.2 of the RFP, the existing meter population in this area is:</p> <table border="1"> <thead> <tr> <th data-bbox="889 1696 1008 1728">ANSI Meter Form</th> <th data-bbox="1008 1696 1214 1728">Quantity</th> </tr> </thead> <tbody> <tr> <td data-bbox="889 1661 1008 1692">3A.....</td> <td data-bbox="1008 1661 1214 1692">2</td> </tr> <tr> <td data-bbox="889 1629 1008 1661">2S.....</td> <td data-bbox="1008 1629 1214 1661">3,718</td> </tr> <tr> <td data-bbox="889 1598 1008 1629">12S.....</td> <td data-bbox="1008 1598 1214 1629">1</td> </tr> <tr> <td data-bbox="889 1566 1008 1598">16S.....</td> <td data-bbox="1008 1566 1214 1598">44</td> </tr> <tr> <td data-bbox="889 1535 1008 1566">9A.....</td> <td data-bbox="1008 1535 1214 1566">2</td> </tr> <tr> <td data-bbox="889 1503 1008 1535">36A.....</td> <td data-bbox="1008 1503 1214 1535">12</td> </tr> </tbody> </table>	ANSI Meter Form	Quantity	3A.....	2	2S.....	3,718	12S.....	1	16S.....	44	9A.....	2	36A.....	12	<p>The predicted meter population for this area has been understated in the RFP. The actual meter order quantities (and types) will be adjusted as part of the Statement of Work.</p>
ANSI Meter Form	Quantity															
3A.....	2															
2S.....	3,718															
12S.....	1															
16S.....	44															
9A.....	2															
36A.....	12															

Note: Given the different timings for contract execution amongst the Smartmeter buying groups, it may be that the "second" buying group's Phase I procurements align with the Smartmeter consortium's Phase II procurements.

The mechanics associated with coordination of revenue meter (and regional collector) procurements (both within the Smartmeter consortium and with external buying groups), and the application of volume discount schedules will be documented during the Statement of Work phase when it is understood which bidders were successful and to which LDC's they will be supplying.

Question #2: At least one public carrier has asked if London Hydro would entertain a direct invoicing arrangement for WAN services.

Answer: No. London Hydro will only deal with the established "prime contractor" until conclusion of the System Level Functional Warranty period (as outlined in Section 6.7.1.1 of the RFP). If the prime contractor's solution is based on public carrier WAN services, it is anticipated that the prime contractor would assume full responsibility for defining the traffic model to the public carrier, paying any set-up or service initiation fees associated with the various WAN interface nodes, and paying all monthly WAN usage tariffs. As part of the AMI system handover, it is expected that the name of the various WAN accounts would be transferred from that of the prime contractor to London Hydro (similar to what is expected to occur with various software licenses for the master control computer).

Question #3: London Hydro has provided their deployment schedule (at least as far as Phase I and Phase II meter quantities are concerned) in the RFP. What should be assumed about the other LDC's in the consortium?

Answer: Unless otherwise stated, a good "rule of thumb" for phased Smartmeter deployments by consortium members would be:

- Phase I - 5 percent of the LDC's residential customer base (as given in Section 2.3, *Informal Regional Smart-Meter Purchasing Consortium*, of the RFP), or 200 customers, whichever is greater;
- Phase II - a further 20 percent of the LDC's residential customer base, or 500 customers, whichever is greater.

LDC's with favourable pilot system experience with their "best value" bidder may elect a more aggressive deployment schedule. For example (and with reference to Section 2.17, *Disclosure of Smartmeter Pilot Projects*, of the Information Supplement), if the "best value" bidder for Guelph Hydro was determined to be SilverSpring Networks, Guelph Hydro could adopt a far more aggressive installation plan (e.g. 10% to 15% for Phase I) if the usual "project glitches" had been satisfactorily been overcome during the earlier pilot phase..

¹ Ontario Energy Board letter of September 26th, 2007 to all licensed electricity distributors; Re: Smart Meter Technology Test Guidelines, EB-2007-0778; Section 4.0, *Pilot Criteria*, pg 4.

5. INFORMATIVE

The information given herein is supplementary to the governing Request for Proposal or Information Supplement. It is intended to assist bidders in preparing their proposals, but does not override, amend, or change any of the requirements stated in the baseline documents.

5.1 Locations of London Hydro's Municipal Substations

Some bidders have enquired about the locations (i.e. municipal addresses) of London Hydro's remaining municipal substations. These have been tabulated below:

Municipal Substation Designation	Name of Substation	Municipal Address of Substation
SUB-1	Ridout	75 Horton Street East
SUB-2	Cabell	825 Cabell Street
SUB-4	Carling	119 Carling Street
SUB-5	London Hydro	111 Horton Street
SUB-6	Central	570 Central Avenue
SUB-8	Ann Street	199 Ann Street
SUB-9	McCormick Blvd	508 McCormick Boulevard
SUB-15	Glen Cairn	2 Deveron Crescent
SUB-16	Baseline	715 Baseline Road
SUB-17	Mapledale	1479 Adelaide Street North
SUB-18	Fairmont	1521 Gore Road
SUB-21	Weston	44 Fairview Avenue
SUB-22	Duchess	30 Duchess Street
SUB-23	Dearness	672 Southdale Road East
SUB-24	Oxford Park	314-A Oxford Street West
SUB-25	Oakridge	1343 Oxford Street West
SUB-26	Eleanor St	1101 King Street
SUB-27	Adelaide	1099 Adelaide Street North
SUB-28	Nelson	505 Nelson Street
SUB-29	Second	418 Second Street
SUB-35	Byron	1188 Byron Baseline Road
SUB-36	Northridge	Adjacent 904 Blackmaple Court
SUB-37	Masonville	31 Fanshawe Park Road East
SUB-38	Whamcliffe	84 Riverside Drive
SUB-39	Kingsway	607 Wonderland Road North
SUB-44	Riverside	On Thames Valley Golf Course
SUB-46	King Street	1309 King Street
SUB-48	Admiral Park	2125 Trafalgar Street
SUB-49	Clarke Road	573-A Clarke Road
SUB-51	Oxford	1011 Oxford Street West
SUB-52	Ridout	394 Ridout Street
SUB-54	Trafalgar	1500 Trafalgar Street
SUB-55	Glendale	3047 White Oaks Road
SUB-83	Grove Road	1780 Huron Street

It is understood that there are two (2) conventions for expressing quantity discount functions, which may effect the manner in which bidders respond to Appendix D.5, *Price Proposal and*

5.3 Quantity Discount Schedules

The electrical distribution maps are produced using the City of London's land base. Bidders therefore need scaling information (e.g. determination of the distance between say two intersections) are referred to the City of London's interactive maps at URL: <http://www.city.london.on.ca/private/Maps/Maps.htm>

Note: There is another layer within our AM/FM system that depicts the actual location of all poles, transformers, switchgear, and the actual routing of all interconnecting circuitry, but this layer is more commonly used for the design of system upgrades and expansions. The interconnectivity of the feeder circuits would not likely be readily apparent to other than those with a comprehensive understanding of London Hydro's distribution circuitry.

For this purpose, clarity of the electrical interconnections and operating device designations is significantly more important than the precise location of equipment and routing of circuitry. For example, an S&C Electric type PMH-12 padmounted air-insulated sectionalizing switchgear in reality has a footprint of roughly 7 ft x 7 ft but is depicted on the electrical distribution maps as having a footprint larger than a house so that the internally operating devices and interconnectivity is readily apparent to the control room operators.

Some bidders have enquired about the drawing scale for London Hydro's electrical distribution maps. Bidders are advised that these maps are intended primarily for system operation and planning and as such are SEMI-GEOGRAPHIC in nature.

5.2 Semi-Geographic Electrical Distribution Maps

Like most distribution utilities, London Hydro's long-term planning strategy is to phase out 2.4/4.16Y kV distribution (in favour of higher distribution voltages such as 16/27.6Y kV) as part of any infrastructure renewal project (e.g. rebuilding end-of-service life aerial circuits). When the majority of the electrical load has been eliminated from a given municipal substation, the substation will be decommissioned, and the property offered for sale. Placing Smartmeter communications infrastructure at these substation sites may hamper long-term plans, and as such, proposals that advocate such placements will have to be individually examined based on their own merit (e.g. size of equipment, anticipated remaining life of substation versus Smartmetering technology, zoning, etc.).

The locations of the listed municipal substations can be found on the City of London's interactive maps at URL: <http://www.city.london.on.ca/private/Maps/Maps.htm>

Municipal Substation Name of	Municipal Address of
SUB-92	Wavell
SUB-93	Topping Lane
SUB-97	Scottsdale
SUB-98	Whiteoaks
	3102 Dingman Drive
	5125 Colonel Talbot Road
	524 Topping Lane
	1927 Wavell Street

Cost Elements, of the RFP. The conventions are usually referred to as the "all-items" form and the "incremental" form.

For the example discrete stepwise quantity discount schedule to the right (that is unrelated to metering), assume that the order quantity is 9,500 units. An all-items form means that all units receive the same discount (i.e. all 9,500 units are priced at 45.4¢). An incremental form means that only the items within a price break interval receive that interval's discount (i.e. the first 4,999 units are priced at 50¢ and the remaining 4,501 units are priced at 45.4¢).

Quantity	Price per item
1,000 – 4,999	50.0
5,000 – 9,999	45.4
10,000 – 29,999	40.9
30,000 – 49,999	38.1
50,000 – 99,999	37.1
100,000 and more	33.5

For this procurement, the preferred presentation of quantity discount schedules is the "all-items" format. If the "incremental" form is the only convention used by a bidder, this fact shall be clearly denoted in that bidder's submission of Appendix D.5.

Although Appendix D.5 only has space provisions for three discrete volume discounts, bidders are free to edit the form to increase the number of breakpoints in their quantity discount schedule.

If further discounts are available for "multiple" item aggregation (price breaks based on the total volume across all products purchased), bidders are encouraged to convey this information in their proposals.

5.4 Smartmeter Supplementary Information

The tabulation below is the promised last four row entries in Table 5-1 within Addendum #2.

Table 5-1a, Supplementary Meter Population Information (Continued)

RFP Section	Revenue Meter Information	Location Information
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5.2.3 Since the publication of the RFP, queries have been developed from which we are able to extract (from our AM/FM and CIS systems) the quantities and types of revenue meters within a user-defined polygon. Excluding network meters in apartment buildings (which are covered elsewhere) and the Phase I deployment described in Section 5.1.3.1 of the RFP, the existing meter population in this area is:

ANSI Meter Form Quantity

1A..... 12

3A..... 15

2S..... 7,171

16S..... 126

9A..... 4

36A..... 35

35A..... 6

13S..... 23

The predicted meter population for this area has

RFP Section	Revenue Meter Information	Location Information																		
<p>been understated in the RFP. The actual meter order quantities (and types) will be adjusted as part of the Statement of Work.</p>	<p>5.2.4</p> <p>Since the publication of the RFP, queries have been developed from which we are able to extract (from our AM/FM and CIS systems) the quantities and types of revenue meters within a user-defined polygon. Excluding network meters in apartment buildings (which are covered elsewhere) and the Phase I deployment described in Section 5.1.3.2 of the RFP, the existing meter population in this area is:</p> <table border="1"> <thead> <tr> <th>ANSI Meter Form</th> <th>Quantity</th> </tr> </thead> <tbody> <tr><td>1A</td><td>6</td></tr> <tr><td>3A</td><td>16</td></tr> <tr><td>2S</td><td>3,782</td></tr> <tr><td>16S</td><td>219</td></tr> <tr><td>9A</td><td>6</td></tr> <tr><td>36A</td><td>70</td></tr> <tr><td>35A</td><td>1</td></tr> <tr><td>13S</td><td>1</td></tr> </tbody> </table> <p>The predicted meter population for this area has been understated in the RFP. The actual meter order quantities (and types) will be adjusted as part of the Statement of Work.</p>	ANSI Meter Form	Quantity	1A	6	3A	16	2S	3,782	16S	219	9A	6	36A	70	35A	1	13S	1	<p>Figure 5-17, <i>Southeast Residential Community</i>, of RFP.</p>
ANSI Meter Form	Quantity																			
1A	6																			
3A	16																			
2S	3,782																			
16S	219																			
9A	6																			
36A	70																			
35A	1																			
13S	1																			
<p>5.2.5</p> <p>Since the publication of the RFP, queries have been developed from which we are able to extract (from our AM/FM and CIS systems) the quantities and types of revenue meters within a user-defined polygon. Excluding network meters in apartment buildings (which are covered elsewhere), the existing meter population in this area is:</p> <table border="1"> <thead> <tr> <th>ANSI Meter Form</th> <th>Quantity</th> </tr> </thead> <tbody> <tr><td>1A</td><td>1</td></tr> <tr><td>3A</td><td>11</td></tr> <tr><td>2S</td><td>3,329</td></tr> <tr><td>16S</td><td>39</td></tr> <tr><td>9A</td><td>4</td></tr> <tr><td>36A</td><td>28</td></tr> <tr><td>35A</td><td>2</td></tr> </tbody> </table> <p>The predicted meter population for this area has been slightly over-stated in the RFP. The actual meter order quantities (and types) will be adjusted as part of the Statement of Work.</p>	ANSI Meter Form	Quantity	1A	1	3A	11	2S	3,329	16S	39	9A	4	36A	28	35A	2	<p>Figure 5-18, <i>Argyle Residential Community (West Portion)</i>, of RFP.</p>			
ANSI Meter Form	Quantity																			
1A	1																			
3A	11																			
2S	3,329																			
16S	39																			
9A	4																			
36A	28																			
35A	2																			
<p>5.2.6</p> <p>Since the publication of the RFP, queries have been developed from which we are able to extract (from our AM/FM and CIS systems) the quantities and types of revenue meters within a user-defined polygon. Excluding network meters in apartment buildings (which are</p>	<p>Figure 5-19, <i>Westminster Park Community</i>, of the RFP.</p>																			



Attachments

Supplementary Non-Disclosure Agreement

Summary Tabulation of Required Types of Revenue Meters

Tabulation of Revenue Meter Notices of Approval

Agreement Form (Optional) to Extend Proposals to Other LDC's

- (c) subject to the previous subsections, not disclosing the Confidential Information to anyone without the prior written authorization of the Bidder; and
- (d) handling, preserving and protecting the Confidential Information with at least the same degree of care it would afford to its own Confidential Information, including taking all reasonable efforts to avoid disclosure of such Confidential Information to any third party.

3. The Bidder acknowledges that the undersigned is subject to the Municipal Freedom of Information and Protection of Privacy Act (MFPPA) and/or other legislation regarding the disclosure and confidentiality of certain information, and that the undersigned's obligations herein are subject to any obligations to disclose the Confidential Information contained in any relevant legislation.

4. The obligations to maintain confidentiality shall last indefinitely.

5. Neither the execution of this agreement nor the disclosure of the Confidential Information by the Bidder hereunder shall be construed as granting to the undersigned any right in or license to, other than expressly contained herein, the Confidential Information.

6. This agreement shall be interpreted in accordance with and governed by the laws of the Province of Ontario, excluding conflicts of laws provisions and excluding the United Nations Convention on Contracts for the International Sale of Goods. The Parties hereby submit to the non-exclusive jurisdiction of the courts of Ontario, and the Federal Court of Canada.

7. This agreement and the RFP contains the entire understanding between the parties hereto relating to the subject matters hereof and supersedes all prior and collateral communications, reports, understandings and agreements, if any, between the parties.

8. The terms and conditions of this agreement are binding and enure to the benefit of the successors and assigns of the Bidder and the undersigned.

IN WITNESS WHEREOF this agreement has been executed by the undersigned as of the date first set forth above.

London Hydro Inc.

Per:

Vinay Sharma, V.P. Customer Services & Strategic Planning

Summary Tabulation of Required Types of Revenue Meters

The matrix on the reverse side of this page has been developed as a filter to match LDC's with bidders that have complete Smartmetering solutions for that LDC. For example, the matrix shows 19 LDC's have an installed base of 2-wire 120 V energy meters (see second column in tabulation). Bidders that don't have a 2-wire 120 V energy meter amongst their portfolio would be identified as offering only a "partial" solution to these 19 LDC's.

Addendum #3 to London Hydro's Request for Proposal for Advanced Metering Infrastructure (AMI) – Phase I Smartmeter Deployment

Service Type	Single-Phase Meters			Network Meters		Three-Phase Meters											
	Energy Only			Combination	Energy Only	Energy Only			Combination								
Metering Elements:	1	1	1½	1	2	2	2	2	2½	3	3	2	2	2½	3	3	
Wires:	2	2	3	2	3	3	3	4	4	4	4	3	3	4	4	4	
Self-contained or Tx-rated:	SC	Tx	SC	Tx	SC	SC	Tx	Tx	SC	Tx	Tx	SC	Tx	Tx	SC	Tx	
Current Class:	200	10	200	10	200	200	10	10	200	10	200	200	10	10	200	10	
Voltage Class:	120	240	240	240	345	600	345	345	345	345	345	600	345	345	345	345	
ANSI Form Numbers:	1	3	2	3	12	13	35	36	16	9	13	35	36	16	9	9	
Distribution Utility																	
Aitkokan Hydro	-	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Burlington Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Bluewater Power	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cambridge & ND Hydro	-	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Eric-Thames Powerlines	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Enwin Utilities	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Festival Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fort Frances Power	-	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greater Sudbury Utilities	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Guelp Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Kenora Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Kitchener-Wilmot Hydro	-	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
London Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Oakville Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Peterborough Distribution	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St Thomas Energy	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sioux Lookout Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tillsonburg Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Waterloo North Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
West Coast Energy	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Woodstock Hydro	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Note: In preparing the above tabulation, self-contained meters with a 100 A current class rating and with a 200 A current class rating have been combined into a single 200 A current class rating. Similarly, network and polyphase revenue meters for application on 120/208Y V and 347/600Y V utilization systems are assumed to be "auto-ranging" and have been combined into a single 345 V class rating.

Note: ANSI Form Numbers will have an "S" suffix for self-contained revenue meters and an "A" suffix for bottom-connected revenue meters.

Appendix D.10 Tabulation of Revenue Meter Notices of Approval

Section 6.2.2, *Purchasing Description for Energy Meters (Level 1)*, of the RFP asks that bidders provide the Measurement Canada *Notices of Approval* reference numbers for the various revenue meters that operate with the bidder's AMI.

It would greatly assist the bid evaluation technical panel (and lessen the likelihood that important information is overlooked) if bidders could submit their NOA information in a uniform manner. As such, bidders are requested to fill in the form on the reverse side of this page, and include this information in their technical response.

Note: The form on the reverse of this page will be made available to bidders in WORD format for their convenience.

Unless otherwise denoted in the bidder's submission, it will be assumed that revenue meters are available in both "Type S" (socket-style) constructions and "Type A" or "Type P" (bottom connected) constructions, as defined in CSA Standard CAN3-C17, *Alternating-Current Electricity Metering*.

Note: The "ANSI Form Numbers" is a convention used within ANSI Standard C12.10-2004, *Physical Aspects of Watt-hour Meters — Safety Standard*, but not widely used in Canada. It is included as a convenience to bidders.

It is assumed that state-of-the-art network and polypphase revenue meters would inherently have an input-voltage auto-ranging feature. Those meters with the voltage class designation "345" need to be suitable for operation on 120/208Y V and 347/600Y V utilization systems. Those meters with the voltage class designation "600" need to be suitable for operation on 600Δ V utilization systems.

I have authority to bind the Respondent

Date of Signature

Name and Title

Signature of Respondent's Representative

Any and all resulting Smartmeter contracts that were executed in the six month period past the Proposal validity period (refer to Section 7.5.7, *Period that Proposals Remain Valid*, of the RFP) shall be considered an expansion of the original Smartmeter consortium, and the quantity discount schedule shall apply to the expanded buying group.

Suppliers that bid on contracts in overlapping RFP's face a similar problem - being limited by their capacity to fulfill multiple orders and manage a number of concurrent projects if several bids are accepted. The resource constraints that I/we have to handling multiple simultaneous contracts are outlined below:

I/We hereby consent to the expanded use of our Submission to the RFP to other LDC's in general accordance with the process outlined in the "Answer to Question #1" of Addendum #3.

Bidders Declaration:

As noted in Section 4, *Answers to Bidders Questions*, Answer to Question #1, of Addendum #3, there is an interest in expanding the results of this RFP to at least one other Smartmeter buying group in the province of Ontario. The mechanics envisioned for this process are outlined also in the Answer to Question #1. Bidders wishing to have their proposals considered for this second Smartmeter buying group shall provide their formal consent herein.

Background:

Appendix D.11 Agreement Form (Optional) to Extend Proposal to Other LDC's

- End of Addendum #3 -

Q

Q

Q

Appendix D.9 Supplementary Non-Disclosure Agreement

NON-DISCLOSURE AGREEMENT

THIS AGREEMENT made as of the 14th day of November, 2007

TO:

("Bidder")

(← Enter bidder's name)

WHEREAS London Hydro Inc. issued a request for proposal for advanced metering infrastructure dated August 14, 2007 (the "RFP"), to which the Bidder has provided a proposal (the "Proposal");

AND WHEREAS in accordance with the terms of the RFP, the Proposal will be shared with other LDC's, and the Bidder has requested such LDC's to execute this non-disclosure agreement. In consideration of the disclosure of the Proposal, the undersigned hereby covenants and agrees as follows:

1. "Confidential Information" means information contained in the Proposal that:

(a) is financial information of or are financial statements of the Bidder corporation, if the Bidder is a privately held corporation; or

(b) is scientific, technical, research, development, know how or trade secret information that would prejudice the competitive position of the Bidder,

provided that such information is clearly marked as confidential within the Proposal.

"Confidential Information", however, does not include:

(a) the Bidder's pricing of its products or services;

(b) information that is now or becomes generally available to the public through no fault or breach on the part of the undersigned;

(c) information independently developed by the undersigned without the use of any Confidential Information; or

(d) information the undersigned has rightfully obtained from a third party who has the right to transfer or disclose it.

2. Confidentiality

The undersigned agrees to treat such information as confidential and to protect it, including:

(a) not using Confidential Information for any purpose or disclosing to any person other than as contemplated by the RFP;

(b) subject to the previous subsection, disclosing such Confidential Information only to its employees, subcontractors and consultants who require such information

consistent with the purposes of the RFP who will be bound by terms similar to this agreement;