

Request for Proposal

Wide Area Network Solution / Services

RFP 2008-1205

December 5, 2008

Section 1: Background	3
1.1 Introduction.....	3
1.2 Provincial Context for Project.....	3
1.3 CHEC’s Approach to Smart Metering.....	4
1.4 Smart Meter Terminology.....	5
1.5 Key Dates.....	5
Section 2: Instruction to Bidders	6
2.1 Bid Documents.....	6
2.2 Intention to Bid.....	6
2.3 Submission Requirements.....	6
2.4 Proposal Format Instructions	7
2.5 Adjustments / Substitutions	8
2.6 Complete Bid	9
2.7 Clarifications.....	9
2.8 Statement of Understanding	9
2.9 Post Bid Meeting.....	9
2.10 Withdrawal of Proposal	9
2.11 Bid Inconsistencies	9
2.12 Bidder’s Statement of Understanding	10
2.13 Proposal Evaluation	10
2.14 Award of Contract	10
2.15 Freedom of Information.....	11
2.17 Ownership of Data	11
2.18 Proposal Evaluation Criteria	11
2.19 Payment.....	12
2.20 Proposal Forms	12
Section 3: Project Overview	16
3.1 Smart Metering Infrastructure – AMI Landscape	16
3.2 AMI System Deployed	17
3.3 Deployment Territories (CI)	18
3.4 Collector Configuration (CI).....	18
3.5 Scope of Work.....	18
Section 4: Bidder Company Information	20
4.1 Financial / Business Stability (I).....	20
4.2 Experience providing same or similar products & services (I).....	20
4.3 Contract Manager (I).....	20
4.4 Perspectives expressed by references (I)	20
4.5 Subcontractors (I)	20
4.6 Minimum Competencies (CI).....	21
Section 5: AMI WAN Solution Technical Requirements	22
5.1 AMI WAN Solution Overview (I)	22
5.2 AMI WAN Coverage (CI).....	24
5.3 Project Management (I).....	27
5.4 AMI WAN Certifications (I)	27
5.5 AMI WAN Solution Installation (I).....	28
5.6 Value Added Services (I)	28

Section 6: Price Submission Requirements	30
6.1 Pricing Submission.....	30
6.2 Incremental Costs	30
Section 7: Contract Terms and Conditions	31
7.1 Commencement of Contract Time.....	31
7.2 Vendor Claims.....	31
7.3 Changes in the Work.....	31
7.4 Delays & Extension of Time	31
7.5 Termination of Right to Proceed	31
7.6 Right to Operate Unsatisfactory Equipment.....	32
7.7 Work Protection	32
7.8 Site Housekeeping.....	32
7.9 Casualty Insurance	32
7.10 Subcontractors	33
7.11 Payment.....	33
7.12 Acceptance	34
7.13 Shipments	34
7.14 Prices	34
7.15 Compliance with Laws.....	34
7.16 Patents	34

Appendix A

Appendix B

Section 1: Background

1.1 Introduction

To create a conservation culture in Ontario and make the Province a North American leader in energy efficiency, the Government has taken action to facilitate a number of key initiatives, including the introduction of flexible, time-of-use pricing for electricity, and a target reduction in Ontario's energy consumption of 5% by 2007.

The CHEC Group consists of the following 14 electricity Local Distribution Companies:

Centre Wellington Hydro Ltd.	Orangeville Hydro Limited
COLLUS Power Corp.	Orillia Power Distribution Corporation
Grand Valley Energy Inc.	Parry Sound Power Corporation
Innisfil Hydro Distribution Systems Ltd.	Rideau St. Lawrence Distribution Ltd.
Lakefront Utilities Inc.	Wasaga Distribution Inc.
Lakeland Power Distribution Ltd.	Wellington North Power Inc.
Midland Power Utility Corporation	Westario Power Inc.

These utilities collectively represent over 110,000 endpoints across Ontario. CHEC members have been working collaboratively through the planning and preparation stages for the Smart Meter Initiative. CHEC is an association of electricity distribution utilities modeled after a cooperative to share resources and proficiencies as the Ontario electricity industry continues its transformation.

The mission of CHEC is to be recognized as the premier LDC Cooperative in the province, by meeting or exceeding member expectations through the sharing of services, opportunities, knowledge and resources. The values of CHEC include the sharing of resources, both intellectual and technical, enabling members to deliver value to their customers and shareholders ensuring competitiveness in the marketplace. Together the mission and value statements represent lofty but attainable goals for CHEC members. Collaboratively CHEC represents over 110,000 residential end points in Ontario and is comprised of the following member utilities:

1.2 Provincial Context for Project

To create a conservation culture in Ontario and make the Province a North American leader in energy efficiency, the Government has taken action to facilitate a number of key initiatives, including the introduction of flexible, time-of-use pricing for electricity, and a targeted reduction in Ontario's energy consumption of 5% by 2007.

As part of its energy conservation effort, the Ontario government has achieved their commitment to implement 800,000 smart meters by 2007 and is now focused on the replacement efforts of all existing meters (5 million) with smart meters by 2010. Phase One utilities have fulfilled their commitments to install 1 million smart meters by Dec 31, 2007 which assisted the government in exceeding their interim goal of 800,000 by Dec 31, 2007.

The underlying premise behind the provincial mandate to install these meters is to educate customers on their consumption habits and implement new rate structures that will encourage load shifting and conservation of energy, thereby reducing the requirement for increased power generation capabilities.

1.3 CHEC's Approach to Smart Metering

With respect to the Provincial government's Smart Metering Initiative, CHEC has taken a collaborative approach to becoming educated on this mandate by working with other Ontario utilities and advocacy groups.

Along with satisfying the provincial mandate of measuring "how much electricity a customer uses each hour of the day, and to use that data to charge customers an energy price that varies depending on when the electricity was consumed" (OEB Smart Meter Plan; January 26, 2005; page i); CHEC will also implement the Smart Meter Network to improve overall efficiency within member service territories. Real time connectivity with the end use consumer through the installed networks will allow for improvements in the maintenance and management of the distribution network (i.e. improved outage management and restoration) and the utilization of existing infrastructure (e.g. Fiber) where available, will allow for cost effective implementation of these systems.

Through the authorized London Hydro RFP process, CHEC has successfully procured Smart Meters to accommodate their deployment commitments. The following CHEC members will be deploying the Elster EnergyAxis AMI Network (total meters = (approximately) 43,400).

<i>Utility</i>	<i>Meters</i>	<i>Utility</i>	<i>Meters</i>
Centre Wellington Hydro Ltd.	4,986	Rideau St. Lawrence Distribution Ltd.	4,635
Lakeland Power Distribution Ltd.	7,232	Wellington North Power Inc.	2,759
Midland Power Utility Corporation	5,473	Westario Power Inc.	14,682
Parry Sound Power Corporation	2,651		

Details relevant to WAN considerations have been provided within Section 3.2 *AMI System Deployed*. These CHEC members (heretofore referred to as CHEC) will now begin concentrating on establishing a long term relationship with a WAN service provider which will cost effectively provide communication capabilities between the installed regional collectors, and the back office data management systems.

The attached documentation sets out the procedural and technical requirements for the submission of proposals to Cornerstone Hydro Electric Concepts (CHEC), for its AMI WAN connection requirements as per the enclosed specifications; as well as the substantive contractual terms that govern the relationship between parties upon the award of the contract.

CHEC hopes to evaluate Bidders as objectively as possible with the end goal of selecting the best-fit service provider for a WAN solution, thereby allowing CHEC to achieve their goals, as well as those of the provincial Smart Meter mandate. CHEC have chosen to accomplish this objective through a partnership approach. Some components of service that will be required include:

- Hardware Procurement
- Installation and Commissioning
- Ongoing Maintenance

The Ministry of Energy (MoE), in their *Functional Specification For An Advanced Metering Infrastructure Version 2* (dated July 5, 2007, provided for reference as Appendix "A"); Section 2.3, *Performance Requirements* require that at minimum, 98% of all daily reads must be successfully collected, with the intention of providing this data to the centralized Meter Data Management / Repository (MDM/R) by 5 am. The centralized MDM/R is owned and operated by the Independent Electricity System Operator (IESO). CHEC is therefore interested in AMI WAN service providers which can reliably deliver the collected data according to these timelines. CHEC has provided further information regarding collected data in Section 3.4 *Collector Configuration (CI)*.

1.4 Smart Meter Terminology

For the purposes of this procurement process, and within this Request for Proposal document, CHEC has opted to utilize the terminology as defined by the Ministry of Energy in their *Functional Specification For An Advanced Metering Infrastructure Version 2* (dated July 5, 2007), Section 3, *Definitions*. For reference, this document has been included herein as Appendix “A”.

1.5 Key Dates

Below is the expected timeline that CHEC will be following during the evaluation of available WAN solutions. CHEC reserves the right to adjust these dates as needed. All Bidders will be notified if any of the following dates are altered. As can be seen, it is the intention of CHEC to make its decision by January 30, 2009.

RFP released by CHEC:	December 5, 2008
Bidder Response with Intention to Bid:	December 10, 2008
In Person Q&A Meeting:	9:00 a.m. – 12:00 p.m. December 15, 2008
Final Questions Due:	December 17, 2008
Answers to Questions:	December 22, 2008
Closing Time (RFP Due):	3:00 p.m. Eastern Time, January 2, 2008
RFP Decision:	January 30, 2009
Anticipated Start Date:	April 1, 2009

Section 2: Instruction to Bidders

2.1 Bid Documents

This Request for Proposals (RFP), establishes the system products and services that CHEC wishes to acquire. This bid document is the basis upon which CHEC seeks firm proposals from selected Bidders and upon which proposals will be evaluated. The documents are:

- 1) This RFP (a .pdf document), including Appendices that are integral to it
- 2) CHEC_WANRFP_PricingSheet_Dec2008.xls, a Microsoft Excel workbook. This file allows for entry of pricing information, as well as the Statement of Understanding required by Section 2.8 *Statement of Understanding*, and will heretofore be referred to as the Pricing Spreadsheet.

2.1.1 Pricing Spreadsheet

The following tabs are included within the Pricing Spreadsheet:

- 1) CHEC_WANRFP_Section2.8: This tab requires completion by the Bidder, and will act as their compliancy statement according to the requirements of Section 2.8 *Statement of Understanding*
- 2) Pricing_Option1: This tab requires completion by the Bidder
- 3) Pricing_Option2: This tab is optional and only requires completion by the Bidder should they feel that the Pricing provided in Option 1 is not representative of the most cost effective option available (see Section 6: *Price Submission Requirements* for more details).

2.2 Intention to Bid

Recipients of this RFP are asked to inform CHEC of their intention to bid by completing the template form found in Section 2.20 *Proposal Forms*, and by submitting this form by the date shown in Section 1.5 *Key Dates*. Recipients that express intention to bid will be included in all correspondence (if any) during the bidding process.

2.3 Submission Requirements

- 1) A complete proposal will consist of one (1) original and five (5) copies of each of
 - a) The proposal forms (as provided in Section 2.20 *Proposal Forms*, and
 - b) The Bidder's Response document (including all associated attachments).
- 2) The Pricing spreadsheet (CHEC_WANRFP_PricingSheet_Dec2008.xls) and a soft copy of all of the above forms and documents should also be provided on one CD. The Pricing and Compliancy spreadsheet will allow for the Bidder to enter their pricing information in a standard format, as well as allow the vendors to attest to their company's compliancy with the RFP requirements. **As per 2.4 *Proposal Format Instructions*, any hard copies of the pricing submission should be submitted in a separate envelope, marked "PRICE OFFER".**
- 3) The required format of the Bidder's Response document is outlined in Section 2.4 *Proposal Format Instructions*.
- 4) The original hard copy shall be clearly identified as "ORIGINAL"; the remainder (i.e. five copies) shall be marked as "COPY". In the event of discrepancy between the copies of the Response, the one marked "ORIGINAL" shall prevail. Each Bidder's Response shall consist of the required documents with the required number of copies of all commercial information, including pricing, terms and conditions and exceptions (if applicable). Faxed or late proposals will not be accepted. Proposals must be sealed and marked clearly quoting the proposal number referred to on the cover sheet of the proposal documents. The use of any means of delivery of a proposal shall be at the risk of the Bidder.

- 5) CHEC shall not be liable for, nor shall it reimburse any Bidder for costs incurred in the preparation of proposals, or any other services or samples that may be requested as part of the evaluation process.
- 6) The Proposal Forms shall be signed under the Corporate Seal of the Bidder, by the duly authorized signing officer(s). All submitted pages shall be initialled by such officer(s).

2.4 Proposal Format Instructions

Where information has been requested through this RFP, the Bidder's Response should clearly indicate the RFP section number that the Response pertains to. The Bidder's Response should be organized according to the following sections:

- 1) Section 1 of the proposal will contain the Bidder's Executive Summary, no more than two pages in length that introduces the Bidder and highlights key features of the proposal.
- 2) Section 2 of the Proposal **should be provided in a separate envelope which has been clearly marked "PRICE OFFER"**. This section will contain the summary pages pertaining to the Price Offer, contained within the Pricing Spreadsheet. The Bidder's detailed itemized pricing information for all goods or services is to be contained within the Pricing and Compliancy Spreadsheet which is to be included with the Response in its entirety as well as within this section. Any alternative pricing offers may also be included within the Pricing Spreadsheet, by adding tabs as needed. All pricing shall be expressed in Canadian currency, exclusive of taxes. If your originating currency is not Canadian, the currency exchange that was used to calculate the price in Canadian currency is to be provided.
- 3) Section 3 of the proposal will contain the Statement of Understanding that is included within the Pricing Spreadsheet as the tab entitled "CHEC_WANRFP_Section2.8" which will serve to satisfy the requirements of Section 2.8 *Statement of Understanding*.
- 4) Section 4 of the proposal will contain all requested information regarding the Bidder (CHEC RFP Section 4: *Bidder Company Information*) in the order presented in this document, with the numbering used in this document.
- 5) Section 5 of the Bidder's proposal will contain the requirements of Section 5 of this RFP Document (Section 5: *AMI WAN Solution Technology Requirements*), in the order presented in this document, with the numbering used in this document.
- 6) Any Bidder wishing to provide additional information other than what is requested in this proposal document must place such additional information in Section 6 of the Bidder's response which should be marked Supplementary Information. Any Additional Information or any unsolicited value-added alternatives may, in CHEC's absolute discretion, be given due consideration, or not.

2.4.1 Sample Responses to Demonstrate Format

Within the section or subsection heading an indicator has been included to specify whether the Bidder should provide information pertaining to the functionality of their product/service (with regards to the section requirements), or a statement of compliancy AND information pertaining to the functionality of their product with respect to the requirement of the section. Where no indicator is included, a response is not required.

- (I) When an (I) has been included with the section heading, CHEC requires Information regarding the proposed system's functionality, and the methodology utilized to satisfy the RFP requirement.
- (C) When a (C) has been included with the section heading, CHEC requires a statement of compliancy from the vendor. Within the proposal documentation, the Bidder is required to state the compliancy with the requirement by stating Fully Compliant, Partially Complaint, or Not Compliant.

- (CI) When a (CI) has been included with the section heading, CHEC requires both a statement of compliancy, and Information regarding the proposed functionality, and the methodology utilized to satisfy the RFP requirement.

In Section 2.4 *Proposal Format Instructions* subsections 4 and 5, it has been specified that the order and numbering used within this document be retained. A sample has been provided here.

4.1 Financial / Business Stability (I)

1. *What is the current size (number of employees), turnover rates for last three (3) years, and location(s) of the bidder's company?*

Bidder's Functionality Statement: Vendor X currently employs 600 employees. Of the 100 office and management staff, 37 are within the Operations division providing ample redundancy and support to effectively manage this project. Vendor X's head office is located in . . . Turnover is considered low at 3%; we attribute this to an effective Safety and Training program (1 week) in which employees receive ample safety training as well as introduction to the company incentive program which has been seen to improve morale . . .

5.2 AMI WAN Coverage (CI)

It is CHEC's intention to utilize one service provider for AMI WAN coverage. It is therefore expected that the bidder will be capable of ubiquitous coverage across CHEC service areas, as described in Section 3.3 Deployment Territories. If the bidder cannot support all the use cases on their network, and will utilize the capacity of another carrier in order to provide service across all of CHEC's service territories, it is requested that the bidder identify and describe any off-net network elements, and the level of control over these carrier in the event of a critical service interruption. The Service Level agreements and assurances between the bidder and the off-net service provider should be discussed.

Bidder's Statement of Compliancy: Fully Compliant

Vendor X has reviewed the coverage maps provided by CHEC, and can state with certainty that ubiquitous coverage can be provided negating the requirement for any off-net service providers. As a result the information provided regarding Breach Notification, Security Updates, System Updates, Unwanted Traffic, and Service Level Agreements unconditionally applies to the proposed infrastructure.

2.5 Adjustments / Substitutions

- 1) A proposal may be altered by a Bidder only by submitting another proposal at any time up to the Closing Time. Adjustments by telephone, facsimile, telegram or letter to a proposal already submitted will not be considered. The last proposal received by CHEC's designee shall supersede and invalidate all proposals previously submitted by the Bidder for this RFP.
- 2) During the period prior to the Closing Time, changes made by CHEC to the proposal documents will be issued by CHEC to the Bidders as written addenda. The Bidder shall list in its proposal all addenda that were considered in the preparation of its proposal.
- 3) No substitutions or deviation from the Specifications, Proposal Form or General Conditions of Contract will be permitted without CHEC's approval in writing.

2.6 Complete Bid

Bidders are requested to submit bids that are complete and unambiguous without the need for additional explanation or information. CHEC reserves the right to make a final determination as to whether a bid is acceptable or unacceptable solely on the basis of the bid as submitted, and proceed with bid evaluation without requesting further information from any Bidder. If CHEC deems it desirable and in its best interest, CHEC may, in its sole discretion, request from any Bidder or Bidders additional information clarifying or supplementing any submitted bid.

2.7 Clarifications

Upon the issuance of this RFP to Bidders, and continuing through the submission date, all questions or other communications with CHEC shall be by email only, with CHEC's authorized representative:

Mr. James Douglas
Util-Assist Inc.
chec@util-assist.com

CHEC will respond to the question in writing, with both the question and Response provided to each Bidder that has declared intention to bid. No Response will be made to questions submitted after December 10, 2008.

2.8 Statement of Understanding

It is a requirement of this RFP document, that Bidders submitting proposals for evaluation complete a Statements of Understanding which will attest to the Bidder's understanding of:

- 1) The Scope of Work as explained in Section 3: *Project Overview*, and associated subsections which describe:
 - a) CHEC's AMI Performance requirements,
 - b) CHEC members' Service Territories,
 - c) The Bidder's requirement to interface to the chosen AMI,
 - d) The Bidder's requirement to supply the modem hardware.

2.9 Post Bid Meeting

CHEC reserves the right to invite any or all Bidders to make an in-person presentation regarding the proposed AMI WAN solution. CHEC may request Bidder's assistance in arranging visits to other installations where Bidder has deployed the solution.

2.10 Withdrawal of Proposal

Bidders will be permitted to withdraw their proposal unopened after it has been submitted if such a request is received by the designee of CHEC in writing, prior to the Closing Time.

2.11 Bid Inconsistencies

Any provisions in Bidder's proposal that is inconsistent with the provisions of this Request for Proposals, unless expressly described in the proposal as being exceptions, are deemed waived by the Bidder. In the event the order is awarded to Bidder, any claim of inconsistency between the proposal and this RFP will be resolved in favour of this RFP unless otherwise agreed to in writing by CHEC.

2.12 Bidder's Statement of Understanding

- 1) The Bidder acknowledges that it has carefully examined, understands and accepts the proposal documents, has carefully examined the requirements contained in the proposal documents and hereby submits an offer according to the requirements set forth in this proposal.
- 2) It is understood that this proposal, if it has not been withdrawn in accordance with Section 2, subsection 2.10 *Withdrawal of Proposal* of the Proposal Instructions, is irrevocable and shall remain open for acceptance by CHEC for a period of ninety (90) working days following the opening of the proposals.
- 3) It is further understood by the Bidder that if CHEC accepts its proposal, then the Bidder (Vendor) is bound by the Contract and agrees to provide the goods and/or services upon the terms and conditions of the Contract.
- 4) The Bidder acknowledges and agrees that all quantities shown in the proposal documents are approximate only. Quantities may be subject to increase, decrease, or total deletion in the event that CHEC determines in its absolute discretion that such change is required.
- 5) While CHEC has used considerable efforts to ensure an accurate representation of information in this Request for Proposal, the information contained in this Request for Proposal is supplied solely as a guideline for Bidders. The information is not guaranteed or warranted to be accurate by CHEC, nor is it necessarily comprehensive or exhaustive. Nothing in this Request for Proposal is intended to relieve Bidders from forming their own opinions and conclusions with respect to the matters addressed in this Request for Proposal.

2.13 Proposal Evaluation

- 1) All proposals shall be opened after the Closing Time in the presence of CHEC Representative or another individual designated to open the proposals by CHEC. The opening will not be public.
- 2) In determining the contract award, the lowest proposal will not necessarily be accepted, and CHEC reserves the right to accept or reject any or all proposals in its absolute discretion. Further, proposals may be accepted or rejected in total or in part.
- 3) The Evaluation Committee will review proposals and will then carry out interviews with selected Bidders for clarification as required.
- 4) It is anticipated that a written contract will be negotiated immediately after the successful Bidder has been notified. If a contract cannot be negotiated within thirty (30) days of notification, CHEC may, at its sole discretion at any time thereafter, terminate negotiations with that Bidder and either negotiate a contract with the next qualified Bidder or choose to terminate the Request for Proposal process and not enter into a contract with any of the Bidders.

2.14 Award of Contract

- 1) The Bidder acknowledges that CHEC reserves the right, privilege, entitlement and absolute discretion, and for any reason whatsoever to:
 - a) Cancel this Request for Proposals at any time, either before or after the Closing Time;
 - b) Accept a proposal which is not the highest scoring proposal submission, or reject a proposal that is the highest scoring proposal even if it is the only proposal received;
 - c) Accept the proposal deemed most favourable to the interests of CHEC or that may provide the greatest value advantage and benefit to CHEC based upon but not limited to price, ability, quality of work, service, past experience, past performance and qualification;
 - d) Accept or reject any and all proposals, whether in whole or in part;
 - e) Award any part of any proposal; or
 - f) Accept or reject any unbalanced, irregular, or informal proposals.

- 2) The Bidder acknowledges that CHEC will evaluate proposals using an internal scoring method as referenced in section 2.18 *Proposal Evaluation Criteria* and other criteria which CHEC deems relevant, even though such criteria may not have been disclosed to the Bidder. By submitting a proposal, the Bidder acknowledges CHEC’s rights under this section and absolutely waives any right, or cause of action against CHEC and its consultants, by reason of CHEC’s failure to accept the proposal submitted by the Bidder, whether such right or cause of action arises in contract, negligence, or otherwise.
- 3) Contract award, if any, will be communicated by written notification from CHEC to the successful Bidder. The successful Bidder, if any, in the presence of the designate, must sign the Contract Agreement in triplicate (3), within seven (7) Working Days of written notification of acceptance.
- 4) Bidders whose proposals have been rejected by CHEC will be notified within thirty (30) days of the award date.
- 5) The successful Bidder shall provide CHEC with a designated inside customer service representative. Any disputes and/or queries with respect to the Contract will be directed to CHEC representative, whose decisions with respect to any matter under dispute shall be final and binding.

2.15 Freedom of Information

Proposals submitted to CHEC become the property of CHEC and, as such, are subject to the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended.

2.17 Ownership of Data

CHEC shall own all data collected by the system. Data collected by the system shall not be used for any purpose without the approval of CHEC.

2.18 Proposal Evaluation Criteria

CHEC will evaluate proposals using an internal scoring method that weights various parameters to give the CHEC Smart Meter Team insight into the strengths of each proposal relative to CHEC’s needs. The CHEC internal scoring method values the following proposal attributes (order of presentation does not reflect priority):

Figure 1 Proposal Evaluation Criteria

Proposal Evaluation Criteria	Section	% Total Points
Project Overview	3	
Bidder Information	4	
AMI WAN Solution Technical Requirements	5	
AMI WAN Solution Overview	6	
AMI WAN Coverage		
Project Management		
AMI WAN Safety Standards		
AMI WAN Solution Installation		
Value Added Services		
Section 3 through 5 inclusive:		40%
Pricing Weighting:		60%
Total		100%

Along with the bidder’s company information, and statements of understanding regarding the project, the technical answers to section 5 will represent 40% of the total weighting of the RFP. Pricing submitted will represent 60% of the total weighting of the RFP. Vendors will be selected for further discussion based on the Team’s judgment, developed using the scoring method.

2.19 Payment

When the Supplier has completed all work in accordance with the terms of the contract documents, the Supplier shall submit to CHEC a request for final payment. The request for final payment shall constitute a waiver of all claims by the Supplier except for claims specifically listed in the request. CHEC will make payment within thirty (30) days of receipt of a request for payment.

Supplier's submission of its request for final payment shall constitute its warrant that the Supplier has to the best of its knowledge fully completed all work included in the Contract and has fully paid for labour, materials, equipment, services, taxes and all other costs and expenses resulting from this Contract.

2.20 Proposal Forms

Within this section, there are two forms required for submission. The first form is found in Section 2.20.1 *Intention to Bid Form*; the intention of this form is to allow the vendor to provide a standard email Response to CHEC designee to notify CHEC of the Bidder's intent to respond to the RFP.

2.20.1 Intention to Bid Form

The procedure to be utilized for this form is to copy and paste the following content into an email, and send the email to:

chec@util-assist.com

according to the time line as established by Section 1.5 *Key Dates*.

INTENTION TO BID NOTIFICATION FORM

PROPOSAL NO. 2008-1205

Intention to Bid:

Please allow this email to represent “ Insert Company Name Here ” intention to respond to the CHEC group RFP 2008-1205.

Contact for communication regarding bid: _____

Contact phone number: _____

Contact email address: _____

We acknowledge the requirement for our WAN solution to, at minimum, NOT inhibit CHEC's requirements to meet the Ministry of Energy's minimum functional requirements as outlined in the document *Functional Specification For An Advanced Metering Infrastructure Version 2* (dated July 5, 2007). Our proposal will include the required compliance statements and documents to properly express our ability to meet these requirements. We also acknowledge the Submission Deadline is 3:00 PM Eastern Time on January 2, 2008.

2.20.2 RFP Submission Form

The procedure to be utilized for this form is to print the following pages to be included with the RFP submission, which should be addressed to:

Mr. Eric Kussen
Midland Power Utility Corporation
16984 Hwy 12, PO Box 820
Midland, Ontario
L4R 4P4

according to the time line as established by Section 1.5 *Key Dates*.

Cornerstone Hydro Electric Concepts

Proposal Number: **2008-1205**

FOR: AMI WAN Solution and Services

THIS PROPOSAL IS SUBMITTED BY: _____

ADDRESS:

TELEPHONE:

FAX NO.:

BIDDER G.S.T. No.:

PERSON(S) SIGNING ON BEHALF: _____ (print)

POSITION(S) OF THE PERSON(S): _____ (print)

To Cornerstone Hydro Electric Concepts, Hereafter called "Owner":

I/WE _____ the undersigned declare:

1. THAT no Person(s), Firm or Corporation other than the one whose signature(s) of whose proper officers and the seal is or are attached below has any interest in this proposal or in the contract proposed to be taken.
2. THAT this proposal is made without any connections, knowledge, comparison of figures or arrangements with any other company, firm or person making a proposal for the same work and is in all respects fair and without collusion or fraud.

THE Bidder insures that no Owner and or employee of the Owner, is, or has become interested, directly or indirectly, as a contracting party, partner, stockholder, surety or otherwise howsoever in or on the performance of the said contract, or in the supplies, work or business in connection with the said contract, or in any portion of the profits thereof, or of any supplies to be used therein, or in any monies to be derived there-from.

3. THAT the several matters stated in the said proposal are in all respects true.
4. THAT I/WE have carefully examined the requirement(s), as well as all the Instruction to Bidders, Project Overview, AMI WAN Solution Technical Requirements, Proposal Forms, and Appendices relating thereto, prepared, submitted and rendered available by the Owner and hereby acknowledge the same to be part and parcel of any contract to be let for the work therein described or defined.
5. THAT I/WE do hereby propose and offer to enter into a contract to deliver all work as described or implied therein including in every case freight, duty, exchange, G.S.T. and P.S.T. in effect on the date of the acceptance of proposal, and all other charges on the provisions therein set forth and to accept in full payment therefore, the sums calculated in accordance with the actual measured quantities and unit prices set forth in the proposal herein.
6. THAT Addendum/Addenda No. ___ to ___ inclusive relate to the said contract and Bidder hereby accepts and agrees to the same as forming part and parcel of the said contract.

7. THAT additions or alterations to or deductions from the said contract, if any, shall be made in accordance with the prices stated in the Schedule of Items of Unit Prices in strict conformity with the requirements of the Contract.
8. THAT this offer is irrevocable and open to acceptance until the formal contract is executed by the awarded Bidder for the said requirement(s) or ninety (90) working days, and unit prices for as long as stated elsewhere in the document, whichever event first occurs and that the Owner may at any time within that period without notice, accept this proposal whether any other proposal has been previously accepted or not.
9. THAT the awarding of the contract, by the Owner is based on this submission which shall be an acceptance of this proposal.
10. THAT I/WE also understand that the Owner reserves the right to accept or reject all or part of this proposal or any other and also reserves the right to accept other than the lowest proposal.

The undersigned affirms that he/she is duly authorized to execute this proposal.

PROPONENT'S SIGNATURE AND SEAL:

NAME: _____
(Please Print) (Signature)

POSITION: _____

WITNESS
NAME: _____
(Please Print) (Signature)

POSITION: _____

(If Corporate Seal is not available, documentation should be witnessed)

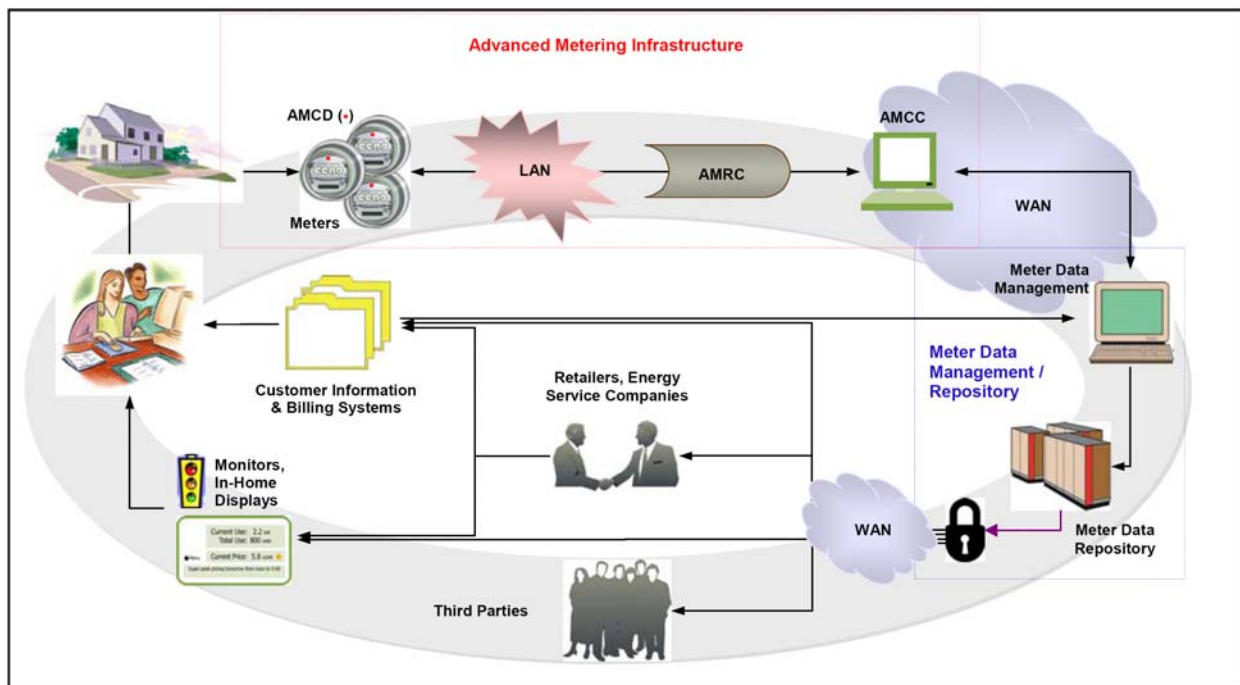
DATED AT THE _____ THIS _____
(City/Town) (Day)
DAY OF _____ 2008.
(Month)

Section 3: Project Overview

3.1 Smart Metering Infrastructure – AMI Landscape

The Advanced Metering Infrastructure (AMI) which CHEC is installing is meant to satisfy the requirements of the provincial Smart Meter Initiative (SMI), which is hoped to contribute to the creation of a conservation culture in Ontario. The metering and associated infrastructure (i.e. AMCDs, AMRCs, and AMCC) will be owned and operated by CHEC, and the centralized Meter Data Management/Repository will be owned and operated by the Independent Electricity System Operator (IESO). There are performance requirements detailing success rates for data collection from the AMI infrastructure, and time requirements within which the data must be provided to the MDM/R. Following is a diagram depicting the data flow for the Ontario Smart Meter landscape.

Figure 2: Ontario Smart Metering System Data Flow



Performance requirements for the AMI have been specified within the Ministry of Energy document entitled *Functional Specification For An Advanced Metering Infrastructure Version 2* (dated July 5, 2007, which has been provided for reference as Appendix “A”). As discussed within this document the AMI system includes the Advanced Metering Communication Devices (AMCD), the Local Area Network (LAN), Advanced Metering Regional Collector (AMRC), the AMI Wide Area Network (AMI WAN) and an Advanced Metering Control Computer (AMCC). The system will provide the infrastructure within which date and time stamped hourly meter reads are remotely collected and transmitted daily to CHEC’s AMCC, and which will eventually be sent to the centralized Meter Data Repository (MDM/R) through the MDM/R Wide Area Network (MDM/R WAN).

The MDM/R functions include collecting and storing data, processing it for TOU and CPP billing, and making it accessible to consumers and to LDC’s in accordance with their billing cycles. The data will also be made available to retailers, energy service companies and other interested parties in a manner that protects the privacy of consumers.

As discussed in Section 1.3 *CHEC's Approach to Smart Metering*, CHEC is currently engaged in a project to install Smart Metering in all residential locations by December 2010. Planning for the commercial and industrial component of the smart meter initiative is currently being developed and is not considered part of this proposal. However, bidders are welcome to provide comments on their offering for industrial coverage and budgetary figures should be provided separately should the vendor decide to do so.

3.2 AMI System Deployed

As stated within Section 1.3 *CHEC's Approach to Smart Metering*, the following CHEC utilities will be deploying the Elster Energy Axis AMI network:

<i>Utility</i>	<i>Collectors</i>	<i>Utility</i>	<i>Collectors</i>
Centre Wellington Hydro Ltd.	6	Rideau St. Lawrence Distribution Ltd.	8
Lakeland Power Distribution Ltd.	23	Wellington North Power Inc.	5
Midland Power Utility Corporation	8	Westario Power Inc.	24
Parry Sound Power Corporation	3		

The Elster Energy Axis system is a MESH network. In this system the REX2 meters that are deployed also act as Radio “repeaters”, transmitting the data from meter to meter, until the information is received by a Collector. In the Energy Axis system, A3 Alpha meters act as collectors (in addition to having the ability to act as a residential or commercial meter), which can handle data from a maximum of 2000 REX2 meters. It is not considered best practices to implement the maximum meters per collector; it has been determined that somewhere around 750 meters per collector provides optimum redundancy, and also allows for future addition of water or gas meters to the network. Appendix “B” contains CHEC service territory maps, with the anticipated AMRC locations.

The Elster EnergyAxis Metering Automation Server (MAS) is the advanced metering control computer (AMCC) component of the system for data collection and system management. The AMCC, on a predetermined/preset schedule, polls the AMRC for the metering data. This communication between the AMRC and the AMCC is via commercial WAN networks.

In the Elster EnergyAxis system, normal billing data and meter statuses are stored in the electronic registers in each meter. The A3 Alpha Meter/Collectors automatically set up their local RF networks and poll each meter six times daily. The incoming data from the individual meters is stored in the Meter/Collector. Elster’s LAN technology also supports both broadcast outbound and inbound capabilities as required for real-time meter reads or remote programming. For the Elster EnergyAxis system the regional collector would be installed in a residential meter base (i.e. typically at the side of residential dwelling, approximately 1.7 meters from the ground).

The MAS server provides central system management to support both scheduled and on request meter readings. Data from the reads is output in industry-standard XML file formats for import into billing, enterprise or MDM/R applications.

The majority of data collection will occur during the Daily Read Period, and there will be situations where data collection will occur during regular business hours for the purpose of on-demand readings, troubleshooting, or network commissioning.

3.3 Deployment Territories (CI)

Maps of CHEC's individual service territories are provided within Appendix "B" to identify the areas where coverage will be required. The provided maps should aid the bidders in understanding the environment and location of CHEC's smart metering system, including the anticipated collector (i.e. WAN service points) locations.

Vendors are asked to provide a statement of recognition (i.e. compliancy) that the bidder understands CHEC's schedule for deployment and the deployment territories, and that they are providing a bid response with the intention of performing the required services for all required territories of CHEC. Given the diverse nature of the service territories, and that there are Smart Meter Deployments occurring across the province, bidders have the opportunity within this section to demonstrate (through submitted documentation/statements), how they will be able to accommodate the unique requirements of CHEC. (i.e. installation across the area according to the projected timelines).

3.4 Collector Configuration (CI)

As part of the Bidder's proposal, CHEC requires a statement of compliancy to demonstrate the understanding that as a turnkey solution provider the Bidder will be providing the required modem hardware interface to connect the AMRC (Elster A3 meter) to the WAN solution infrastructure. Vendors should confirm that the proposed hardware is certified for use with the Elster's EnergyAxis system.

There are several configurations of A3 Alpha Collectors including meter based or standalone (i.e. pole top) collectors. The collector, whether meter based or pole top can be supplied with the option of Ethernet, RS232 Output, or an internal POTS modem.

The POTS based collector has a communication rate of 2400 baud. This type of collector requires a telephone line connection. Based on preliminary data, for a regional collector (AMRC) with approximately 500 smart meters (AMCD) associated, the AMRC transmits on average approximately 55,000 bytes (0.05 MB) data daily during the daily read period. Similarly during the daily read period, the AMRC receives on average 170,000 bytes (0.17 MB) per collector to retrieve 24 hours worth of data daily.

It is recommended that WAN Solution Providers contact Elster to ensure that the solution being proposed utilizes hardware that is compatible with the Elster AMRC hardware:

Mr. Clarence Batterink
Elster Metering, Product Manager - Electricity
(905) 634-4895 x104
clarence.e.batterink@ca.elster.com
3450 Harvester Road
Burlington Ontario L7N 3W5

3.5 Scope of Work

CHEC, through this RFP, is seeking a cooperative and mutually beneficial relationship with a WAN provider which will allow CHEC to successfully fulfill their regulatory requirements for data collection. It is hoped that through this relationship, a high level of quality and service with regards to installation, security, and on-going maintenance can be acquired at a reasonably low cost. CHEC would like to explore opportunities which can potentially enhance the utility through standardized processes, improved end to end functional capabilities, and combined service offerings.

This request for proposal for AMI WAN solution addresses CHEC's requirements for smart metering in residential

applications. If the bidder also provides a solution for commercial and industrial applications, the response may also address this solution distinctly segregated from the solution provided for residential application, if possible. Specifically, if the proposed solution is applicable for commercial and industrial customers with no modifications, the bidder shall identify such.

As stated previously, the AMI commercial and industrial portion of CHEC's smart meter initiative is currently under review and is not considered part of this proposal. However, bidders are welcome to provide information on their offering for these future requirements; budgetary information should be provided separately and marked clearly as "**Supplementary Information**", as detailed in Section 2.4 *Proposal Format Instructions*.

With regards to the requirements for the wirelessly connected collectors that are being installed through this second phase of AMI deployment, CHEC considers the following list of services as required to successfully satisfy the intent of this RFP:

- Project management, system design, commissioning and training
- AMI WAN system hardware and equipment
- System security (i.e. detailed security parameters to protect all information collected)
- Service levels and value added services
- Applicable costs, pricing and rates
- Provide the technical expertise required to establish communications between the AMI collector points and CHEC member utilities' back office systems
- Establish an understanding of the demarcation point
- Describe the technology roadmap for the proposed system/technology

Section 4: Bidder Company Information

4.1 Financial / Business Stability (I)

- 1) What is the current size (number of employees), turnover rates for last three (3) years, and location(s) of the Bidder's company?
- 2) Number of employees assigned to application development and support.
- 3) What is the current financial condition of the Bidder's company? Provide supporting documentation and annual reports for the last three years. If the company is privately held, supply sufficient information to document the company's financial status.

4.2 Experience providing same or similar products & services (I)

- 1) How many years has the Bidder been in business?
- 2) How long has the Bidder been providing WAN solutions?
- 3) Describe the Bidder's primary line of business and the percentage of its business derived from the sale of WAN solutions and associated services.
- 4) Bidders should identify and describe services they could offer CHEC as part of the Contract that would support environmentally responsible business practices.
- 5) Bidders are to provide data to support their safety record such as corporate safety statistics, internal safety record, WSIB rating, injury rate or injury severity. In addition, Bidders must provide documentation supporting their commitment to safety within their manufacturing facilities and design of products.

4.3 Contract Manager (I)

The vendor is asked to acknowledge the requirement to designate a contract manager, who shall have the authority to handle and resolve any technical issues, disputes or contractual issues in a timely manner. The bidder should describe the Contract Manager's experience with managing projects of a similar size and scope, including timelines, and results if applicable. Response should include the Contract Manager's and any other related team member's Curriculum Vitae (CV).

4.4 Perspectives expressed by references (I)

To ensure long-term viability and maintenance of the system, the selected Bidder must be a proven vendor in the area of application software. Bidders are requested to provide a list of at least three (3) references (contact names and phone numbers) for companies using the Bidder's proposed system to perform the same or similar application(s) as the one(s) described in this RFP for the past three (3) years.

4.5 Subcontractors (I)

Does the bidder intend to subcontract any component, service or support requested in this RFP? If so, indicate which components, services or support and identify the subcontractors. If there is an intention to utilize a subcontractor, all information requested as part of this RFP, should be provided for the subcontracting firm as well as for the prime bidder.

4.6 Minimum Competencies (CI)

First and foremost it must be stated the CHEC group's number one requirement will always remain the health and safety of its employees and customers and that proponents must comply with all applicable Provincial, Federal and Municipal acts and regulations that pertain to the work solution being proposed. The successful proponent will be:

- Responsible for knowing, understanding and ensuring that work is done in compliance with the appropriate safety legislation, EUSA rules, CHEC rules, policies, procedures and safe work practices that apply to the work.
- Responsible for identifying the job hazards, determining the solutions or barriers required to provide safe working conditions and communicating this information to all workers under their supervision.
- Responsible for ensuring all job information such as daily tailboard conference sheets, traffic plans, vehicle and equipment inspection sheets are filled out properly and returned to the office as appropriate.
- Responsible for holding documented tailboard conferences daily and ensuring appropriate worker participation in order to complete the work safely. Responsible for directing the work in a safe manner.
- Responsible for using and ensuring all crew members use and wear at all times the appropriate personal protective and safety equipment required for the work.
- Responsible for using and ensuring all crew members use the equipment, materials, and protective devices in a proper and safe manner.
- Responsible to ensure loss incidents and potential loss incidents are reported to CHEC immediately. Provide preliminary details, fill out the proper documentation and participate in the incident investigation as required.
- Responsible to report workers who do not comply with their health and safety responsibility, for corrective action by their supervisor.

Based on the nature of the work being procured through this RFP, and in accordance with the CHEC Health and Safety Policy, and depending on the WAN solution proposed, the successful Bidder will furnish the following items 21 days prior to the formal award of the contract without which is grounds for disqualification from the process:

- Acknowledgement from the Proponent that they are aware of and agree to adhere to the terms and conditions as per Section 7.
- A WSIB Clearance Certificate indicating the Proponent's firm number, account number, and that their account is in good standing.
- The Proponent further agrees to maintain their WSIB account in good standing throughout the contract period and shall produce a Clearance Certificate from WSIB from time to time during the contract on request and/or prior to final payment.
- Liability Insurance.

In addition, prior to the start of work (and throughout the duration of the work, should a CHEC utility make a request), the proponent (as is the case for any contractor working for a utility forming the CHEC), will provide:

- Field Service Personnel Health and Safety Policy and Training Program
- Proof of drivers license/insurance/police check and driver's abstract for those staff working within the CHEC territory
- EUSA electrical safety and awareness course
- Health & Safety Policy / Program (including policies/procedures for working in and around live lines, ladder safety training, MTO Book 7, fall arrest/second man/ladder rescue requirements, WHMIS MSD documentation for any hazardous materials used in the job,
- CPR/First Aid certifications
- Documentation of injury experience
- List of PPE utilized for work within CHEC
- And, any other documentation that may be deemed necessary by CHEC

Section 5: AMI WAN Solution Technical Requirements

CHEC's general expectation is that flexibility and functionality of the chosen AMI WAN Solution will enable the chosen AMI Solution to meet the requirements as outlined in the Ministry of Energy's *Functional Specification For An Advanced Metering Infrastructure Version 2* (dated July 5, 2007), included herein as Appendix "A" for reference.

As well as a response to the following subsections, the bidder's response should include (in section 5 of the response) an overview of the proposed solution. Please ensure the current functionality of your product is clearly explained. If the product is not currently able to accommodate the requirements as explained in this document, please provide a detailed development path/plan for the product. This document details the level of priority assigned to all Smart Meter technology functions.

As well as an overview of the proposed system architecture and system functionality, the documentation submitted by the bidder should include installation requirements, expected labour requirements, and any requirements for ongoing labour / operations; as this information will be of value in CHEC's SMI budgeting process.

5.1 AMI WAN Solution Overview (I)

Bidders shall provide a work/data flow diagram and comprehensive explanation demonstrating how the communications will work between the AMRC and the AMCC. Coverage maps are requested to indicate whether or not all of CHEC's service territories (as depicted in Section 3.3 *Deployment Territories*) are covered by the proposed WAN solution.

In addition, the following technical information is requested as it pertains to the proposed AMI WAN Solution:

- technical descriptions of all equipment in the proposed solution, including size, shape and weight of all proposed devices
- a description of how the equipment is mounted
- the power requirements and source of voltage for all equipment
- technical details of the equipment used to enable communication to the AMRC (i.e. Elster A3 collector) which will be equipped with a modem which will enable communications between the AMRC and the AMCC.

5.1.1 AMI WAN Solution Roadmap (I)

As per the MoE Minimum Functionality Specifications (Appendix "A"), the AMI solution chosen by CHEC will have a 15 year life. As a result, CHEC requests that bidders identify the development roadmap for the proposed WAN solution. Bidders should describe how the product will maintain backward compatibility for hardware, software, and any other required network components. In the event that hardware and/or software upgrades are required, and/or if over-the-air firmware or software upgrades are possible, the bidder should provide policies and procedures for these upgrades to demonstrate that CHEC's system uptime will be minimally affected. This is considered critical due to the performance specifications that have been specified by the Ministry of Energy.

Bidders are also requested to, if applicable, discuss possible modifications which might be necessary should CHEC deploy another AMI solution in future stages of the Smart Meter Initiative.

5.1.2 AMI WAN Solution Security (CI)

It is essential that the WAN solution have, as a minimum, end-to-end protection against cyber attack and unauthorized intrusions. Bidders shall provide comprehensive documentation describing the security measures that have been implemented to insure:

- 1) Data integrity
- 2) Data security
- 3) Immunity from outside (electromagnetic) interference as well as from fading and other forms of signal degeneration or attenuation,
- 4) Data encryption
- 5) MAC address filtering
- 6) DHCP (dynamic host configuration protocol)
- 7) NAT (network address translation)
- 8) Built-in firewall
- 9) User authentication (CHAP)
- 10) Password access (PAP)
- 11) Centralized password repository (global, regional, cluster or unit remote updates)
- 12) Bandwidth restrictions (limited data rate per unit)
- 13) Traffic analysis restrictions (watch for irregular traffic flows)
- 14) Automatic “call home” modems
- 15) ACL (access control lists)
- 16) Traffic logging

Where a security technique has been specified (i.e. DHCP) that the bidder does not apply, but where an alternative strategy has been utilized, documentation should explain both the effectiveness of their strategy and the reasons why it is felt that their solution is at least as effective as the strategy specified.

Vendors should also describe how proximity to AMCDs, topography, foliage, terrain, weather conditions, and other (neighboring utility’s) AMI, etc. are expected to impact the transmission and integrity of data integrity over the fifteen (15) year operating life of the AMI will be maintained.

For bidders that are proposing the use of any off-net service providers, it is required that their security documentation include description of how security will be implemented over public domain, such as the Internet. If the proposed solution will utilize globally routable addresses, or any assigned IP prefixes are part of a global routing database, the security measure that would be implemented should be clearly explained.

Once the successful bidder has implemented their proposed WAN solution, and all necessary acceptance testing has been performed in order to show that the system is fully functional, the bidder will work with CHEC to select a mutually agreeable independent 3rd party security firm to perform an audit of the AMI WAN solution. The bidder also agrees to work with CHEC to implement any suggested improvements made by the security firm, should they be considered reasonable, and not cost prohibitive in order to eliminate (or minimize) any security breaches which may be identified by the security audit, to CHEC’s satisfaction.

5.1.2.1 Breach Notification (I)

CHEC is interested in understanding the monitoring processes, as well as notification and corrective measures that are utilized by the WAN solution provider in the event that the WAN solution is breached. Additionally, bidders should discuss examples of past breaches, how they were handled, and the measures that were implemented to minimize risk of future occurrences.

5.1.2.2 Security Updates (I)

In the event that a component manufacturer releases system (i.e. security) updates for their equipment, CHEC would like to understand the WAN solution provider's policy regarding implementation and notification (i.e. timeframe) of said upgrade (i.e. what is the time from update release to update implementation?).

5.1.2.3 Unwanted Traffic (I)

Bidders should explain how the network protects against unwanted traffic (i.e. text messaging, spamming, etc). If Bidders have addressed this through Service Level Agreements in the past with other customers, CHEC is interested in any information that can be provided in this regard.

5.1.3 AMI WAN Scalability (I)

Bidders should demonstrate through documentation that the system is capable of at least the 76 WAN points being procured through this RFP, that the system has been tested to higher volumes, and also describe larger deployments and other business endeavours which demonstrate scalability. Depending on future growth, or the addition of other commodities to the AMI (i.e. water, gas), there is the potential for more endpoints to be deployed.

5.1.3.1 Bandwidth (I)

It is acknowledged that the bandwidth required for Smart Metering applications may, at this time, be considered minimal (see Section 3.4 *Collector Configuration (CI)* for estimation of current bandwidth usage). However, CHEC has intentions of exploring the possibilities of incrementally expanding use of the Smart Metering network to include other functions such as Smart Grid (i.e. transmission/distribution monitoring equipment) as well as security camera functions, VoIP, multi-commodity data collection, etc. Bidders are asked to provide details around the amount of bandwidth being proposed with the Smart Metering solution, as well as the flexibility (and incremental costs associated) to expand the solution should that be required in order to accommodate additional functions.

5.2 AMI WAN Coverage (CI)

It is CHEC's intention to utilize one service provider for AMI WAN coverage. It is therefore expected that the bidder will be capable of ubiquitous coverage across CHEC service areas, as described in Section 3.3 *Deployment Territories*. If the bidder cannot support all the use cases on their network, and will utilize the capacity of another carrier in order to provide service across all of CHEC's territories, it is requested that the bidder identify and describe any off-net network elements, and the level of control over these carrier in the event of a critical service interruption. The Service Level Agreements and assurances between the bidder and the off-net service provider should be discussed.

5.2.1 Quality Assurance (I)

Bidders should describe how they will measure and track their performance as a service provider. Samples of any discussed reporting functions should be included in the response. Describe any ongoing maintenance service offerings relevant to the proposed solution, and any additional costs which might be required as part of the maintenance agreement.

Explanation should include how the bidder would keep CHEC informed of scheduled downtime/maintenance, keeping in mind the importance of the midnight to 5 am period of time which is so critical in allowing CHEC to meet the regulated requirements for AMI performance (as found in Appendix "A").

5.2.1.1 Claims Administration (CI)

As part of providing exemplary customer service, the bidder is expected to handle customer complaints that are related to their services and provide customer assistance to resolve issues resulting from negligence to the satisfaction of the utility, ensuring all claims are reported. Claims not resolved after 10 days should be reported to the utility for resolution.

5.2.2 Disaster Recovery (I)

The Proponent shall provide comprehensive information around disaster recovery; explanation should include disaster recovery for equipment in the field, equipment at the service provider's facility, and any equipment which is intended to reside at any of CHEC's facilities. Bidders should explain the capacity within the proposed solution for remote fault resolution due to device malfunction.

Included in the description of technical services available to best ensure the AMI WAN solution maintains an acceptable level of performance (as detailed in Appendix "A"), the bidder is asked to discuss how proactive, real time WAN network surveillance, alarming and trouble ticketing would be accomplished. If there are any network elements provided by the Vendor that cannot or will not be monitored remotely, this should be clearly explained. If off-net facilities are to be used in the proposed system, describe the off-net provider's network monitoring capability.

5.2.2.1 Equipment Configuration (I)

It is critical that CHEC understand the configuration of the equipment (hardware settings, software settings, all known optionable user configuration parameters) so that in the event that a WAN related issue is encountered, requiring equipment restart, the necessity of a truck roll is minimized. It would be CHEC's preference that in the vast majority of instances, equipment could be remotely restarted and reset.

5.2.2.2 Surge Transient Protection (I)

Transient Voltage Surge Suppressors protect against transient voltage spikes which can be caused by in building events such as switching of lighting and the starting and stopping of motors, electrical fault conditions (equipment failure which passes high currents to ground or from phase to phase, power failure and the subsequent return of power, or external causes such as lightning strikes that hit the electrical system in your nearby geographical area, and lightning strikes that induce transients through radiation of electric-magnetic fields without hitting the electrical system. Transient surges may cause serious damage to communication interfaces inside a building.

Due to the many ways a transient surge may be created, a single surge suppression layer applied to incoming lines may not be appropriate to completely shield the internal lines and equipment from transient voltages.

Bidders are asked to provide details around the layering of surge protection devices/solutions that are provided with the proposed solution.

5.2.3 AMI WAN Service Level Agreements (CI)

Bidders should state their acceptance with CHEC's Service Level Agreement requirements for WAN coverage, as outlined below:

- 99.99% uptime during the Midnight through 5:00 am time period.
- 98% uptime during the remaining daily time period (i.e. 5:00:01 am through 11:59:59 pm)
- Percent of daily (register) readings captured: 98% in 24 hours

The AMI system has been designed (with appropriate infrastructure) to accommodate the Ministry of Energy specified performance requirements. It is imperative that the proposed WAN solution not impede the AMI system's ability to meet these performance requirements. AMI WAN solution providers are requested to acknowledge that the proposed AMI WAN solution will facilitate the achievement of these statistics, rather than impede success, and that the pricing provided within the Pricing and Compliancy spreadsheet has been provided with these Service Level Agreements in mind (Pricing option tabs have been provided in the event that a bidder would like to provide pricing for a solution they might consider the most "cost-effective", but it is imperative that the pricing that has been entered in tab 1 reflect the costs associated with a system which will allow the above stated Service Levels to be met).

In addition, AMI WAN providers are asked to provide examples of Service Level Agreements that have been constructed with clients in the past (who have like data transfer requirements).

5.2.3.1 Redundancy / Auto Failover (I)

Bidders are requested to provide detail regarding the coverage redundancy and fail over planning (i.e state tower:AMRC ratio) that is inherent to the proposed solution which will ensure the performance levels that are expressed in Section 5.2.3.1 *AMI WAN Service Level Agreements* can be achieved.

In addition to redundancy planning, CHEC would like to understand the immediate and near term maintenance requirements for the system.

5.2.3.2 Remote Monitoring, Logging & Alerting (I)

If the bidder's proposed WAN solution includes remote monitoring functionality such that CHEC is able to troubleshoot encountered problems to alleviate potential service calls, resulting in increased system uptime, bidders are asked to provide details.

5.2.3.3 System Updates (I)

With respect to the Service Level Agreements required in Section 5.2.3.1 *AMI WAN Service Level Agreements* CHEC acknowledges that the WAN solution provider will need to upgrade system components. CHEC is interested in the WAN solution provider's capabilities to do this remotely, the anticipated frequency with which this will occur, and the actual impact to system uptime.

5.2.4 AMI WAN Solution Warranty (I)

Bidder should provide documentation and field testing results attesting to the expected life of the proposed equipment. For equipment that will be used outdoors, the durability and ruggedness should be discussed as well as the Mean Time Between Failure and Mean Time to Repair for all proposed equipment.

The Bidder shall provide information detailing the warranties that are provided with the proposed AMI WAN solution. Should the Bidder's warranty statement be greater than one page in length, please include a summary highlighting the following items:

- 1) Term: term of warranty for all associated hardware and software, and possible pro-rated scenarios,
- 2) Fault: cost coverage and obligations depending on whether deficiency is attributed to manufacture / workmanship, off-net service provider, or some fault of CHEC,
- 3) Labour: detail whether labour costs covered by the WAN Solution Provider if a fault is found in the product after the solution has been deployed.

The Bidder's warranty information should include the procedure which would be required by CHEC when defects in materials and/or workmanship are found. Bidder's Response should include descriptions of the Bidder's obligations, as well as the obligations of CHEC.

CHEC's assumption (with regards to warranty) is that the proposed AMI WAN solution infrastructure will function as an integrated system, as represented in the Bidder's proposal document. If this assumption (with regards to warranties) is incorrect, the Bidder's documentation should include documentation regarding potential communication problems and their impact to the system warranty.

5.3 Project Management (I)

It is preferred that the proposed WAN solution be flexible enough that the schedule for Smart Meter deployment is not impeded by the WAN solution requirements. As CHEC prepares to deploy meters within an area, a list of possible collector sites would be provided to the successful WAN solution provider with the intention (ideally) that the WAN solution would be installed in conjunction with the meters.

Bidders are asked to propose a project plan complete with milestones and deliverables. It is CHEC's expectations that this project will be managed by the Contract Manager referenced in Section 4.3 *Contract Manager* of the bidder's response.

The project plan should include the process for end-to-end testing, and the procedure to install and commission the AMI WAN solution with the AMI system. Tasks that are to be completed by CHEC should be clearly identified along with the required skill sets for CHEC's team members and any training that may be required for CHEC's staff (including field service representatives, management and IT personnel). Bidders should provide training requirements (description of training required, time required for training, training format), in order to bring applicable CHEC Staff to a level of proficiency which will allow basic troubleshooting to identify possible communication equipment failure and the area of responsibility.

5.4 AMI WAN Certifications (I)

Bidders are to identify all applicable Health Canada and Industry Canada requirements and CSA certifications that pertain to the proposed solution. Information should include all manufacturing approvals that might be required. Response to this section should include safety standards for the manufacture of equipment as well as safety standards that must be met for the installation of the proposed solution.

Documentation demonstrating the bidder's license to operate on the proposed frequencies should be included.

Within this section, Bidders are also requested to describe any precautions that are taken to reduce and/or eliminate the possibility of tampering with the proposed solution.

5.5 AMI WAN Solution Installation (I)

Bidders should provide a comprehensive description pertaining to the installation of the proposed equipment. Within their explanation regarding the installation of the proposed AMI WAN solution, bidders should include the following:

- i. The environmental tolerances of all proposed equipment. Bidders may choose to provide technical specifications for the proposed equipment, however, included within this section should be an explanation of their operating tolerances with regards to temperature and humidity, and whether the equipment is intended for installation indoors or is expected to be mounted outdoors, and where (i.e. pole top, bidder owned antennae, etc)
- ii. As it pertains to section i above, explain the possible impact to the proposed equipment if it were installed indoors, or within a meter cabinet.
- iii. Explain, in detail, how the system configures itself upon installation, as well as recovery from outage events (i.e. power outage, network outage, modem resets, modem hangups, etc).
- iv. Tools that are required to ensure there is coverage at the installation site
- v. Routine operation and required maintenance of the installed system
- vi. Troubleshooting, diagnosis and repair of the installed system
- vii. Training on test equipment needed to maintain the system

The project plan should include the process for end-to-end testing, and the procedure to install and commission the AMI WAN solution with the AMI system. Tasks that are to be completed by CHEC should be clearly identified along with the required skill sets for CHEC team members and any training that may be required for CHEC staff (including field service representatives, management and IT personnel). Bidders should provide training requirements (description of training required, time required for training, training format), in order to bring applicable CHEC Staff to a level of proficiency which will allow basic troubleshooting to identify possible communication equipment failure and the area of responsibility.

5.5.1 System Support (I)

Bidder shall describe the process by which the originally furnished hardware/software is maintained and upgraded. Included in this description should be information pertaining to any 3rd party software licenses, and the associated costs, and any recurring costs associated with maintenance (software or otherwise) or upgrades. Bidders shall describe any one-time or recurring licenses, keys, restrictions of use, or limitations (and all associated costs) that may in any way restrict CHEC's full and open use of the proposed solution. **If restrictions are not described, Bidder represents that there are no such restrictions, or requirements.**

Bidder shall provide an hourly rate for trouble service calls which may be issued by CHEC.

5.6 Value Added Services (I)

CHEC currently utilizes cellular technology devices for field staff including Blackberry devices capable of email functions.

CHEC is also interested in Workforce Management (WFM) systems and may choose to deploy this in their service territories in the future. The handheld devices would be utilized by field staff and will be capable of wireless integration with CHEC back office systems.

CHEC would like to explore opportunities to reduce cost and/or increase efficiencies. If the bidder is able to provide cost savings opportunities by way of device bundling, pooling of minutes, or otherwise, information should be provided.

Section 6: Price Submission Requirements

Please note that all documentation must reflect current capabilities. Any future capabilities must be stated as such, and a development schedule outlined.

Describe in detail the pricing for the systems proposed. Detail any assumptions made in the proposed solution and pricing. All of this information should be included within the Pricing and Compliancy Spreadsheet.

In addition to the minimum functionality required by the Ministry of Energy, CHEC is interested in the ability to support load control devices, and multi-utility meters, as this capability is in line with both the intent of the Ministry of Energy, and the service goals of CHEC. Therefore, in addition to the current data collection requirements outlined in Section 3.4 *Collector Configuration (CI)*, CHEC expects to increase non-scheduled data communications to the network. These anticipated communications would in all likelihood include only specific areas and low volumes of meters during any one communication.

6.1 Pricing Submission

The Pricing and Compliancy Spreadsheets allows for the Bidder to provide two options for the proposed WAN Infrastructure:

- 1) Within the tab labelled “Pricing_Option1” Bidders are required to submit pricing (Capital and 15 year Operating costs) for the proposed WAN Solution (which has been designed with the redundancy required to meet the Service Level Agreements outlined in Section 5.2.3 *AMI WAN Service Level Agreements* and all stated data requirements).
- 2) Within the tab labelled “Pricing_Option2” Bidders are permitted to submit pricing (Capital and 15 year Operating costs) for the proposed WAN solution; in the event that the bidder feels Option 1 is NOT the most cost effective solution. Pricing_Option2 is where the Bidder is able to provide suggestions with regards to the design of the solution which will allow for more “cost effective” service options. If required, the bidder may add tabs to provide further options.

NOTE: As per Section 2.4 Proposal Format Instructions, the PRICE OFFER should be submitted in a separate envelope which has been clearly marked “PRICE OFFER”.

6.2 Incremental Costs

In addition to the Pricing Options described in Section 6.1 *Pricing and Compliancy Submission*, Bidder’s are required to submit the incremental cost for any functionality that is discussed in their proposal which does not come standard with their product. If an incremental cost is not provided, it is CHEC’s understanding that the functionality comes standard with the product being proposed.

Section 7: Contract Terms and Conditions

7.1 Commencement of Contract Time

The successful Vendor shall acknowledge acceptance of the Purchase Order from CHEC within 10 days of its issue.

The Contract Time shall commence to run on the effective date indicated in the Purchase Order. Vendor shall start to perform the Work on the date when the Contract Time commences.

7.2 Vendor Claims

All claims of the Vendor and all questions relating to the interpretation of the Contract, including all questions as to the acceptable fulfillment of the Contract on the part of the Vendor and all questions as to compensation, shall be submitted in writing to CHEC Project Manager for determination.

All such determinations and other instructions of CHEC will be final unless the Bidder shall file with CHEC a written protest, stating clearly, and in detail the basis thereof, within fifteen (15) calendar days after CHEC notifies the Bidder of any such determination or instruction. CHEC will issue a decision upon each such protest within fifteen (15) calendar days and its decision will be final. Work will not be undertaken until a written final decision is rendered.

7.3 Changes in the Work

CHEC, without invalidating the Contract, may direct the Vendor to perform extra work or make changes in the work, provided that all changes or additions form an inseparable part of the work contracted for. Vendor shall make such changes or additions only after receipt of written instructions to do so from CHEC. If such changes or additions cause an increase or decrease in the cost of the Contract, or in the time required to complete the Contract, an equitable adjustment shall be made and the Contract shall be modified accordingly by a Change Order in writing.

When a change is ordered, a change order shall be executed by CHEC and the Vendor before any change order work is performed. Any increase or decrease in the contract price and the time required for the completion of the contract work due to a change order shall be specifically set out in the change order. All terms and conditions contained in the Contract Documents shall be applicable to change order work. The amount of any increase or decrease shall be added to or subtracted from the contract price as appropriate.

7.4 Delays & Extension of Time

If the Vendor is delayed at any time in the progress of the work by any act or neglect of CHEC, or any cause beyond the Vendor's reasonable control, he shall file with CHEC a notification that an extension of the Contract period is required.

CHEC Project Manager shall review said notice and to the extent that the Vendor can reasonably demonstrate to CHEC Project Manager that it shall be delayed in its fulfillment of these terms and conditions and other obligations of this transaction due to a cause beyond its control, a reasonable extension period shall be granted.

7.5 Termination of Right to Proceed

CHEC may, in writing, terminate this Contract in whole or in part at any time, either for CHEC's convenience or for the default of the Vendor. Upon such termination, all data, plans, specifications, reports, estimates, summaries, completed work and work in process, and such other information and materials as may have been accumulated by the

Vendor in performing this Contract shall, in the manner and to the extent determined by CHEC, become the property of CHEC. If the termination is for the convenience of CHEC, an equitable adjustment for the Vendor's direct costs and profit for work actually performed shall be made by mutual agreement between the Vendor and CHEC. No amount shall be allowed for anticipated profit on unperformed services.

Default occurs if the Vendor (1) abandons the Work called for hereunder, (2) files a voluntary petition in bankruptcy or fails to obtain dismissal of an involuntary petition in bankruptcy within sixty (60) days after the filing thereof or has a Receiver/Trustee appointed, (3) becomes insolvent, (4) assigns this Contract or sublets any part of the Work hereunder without prior written permission of CHEC, (5) repudiates the Contract, (6) allows liens to be filed against property of CHEC, (7) disregards laws, ordinances, rules and regulations related to the Contract and the Work or disregards instructions of CHEC. Any expense incurred because of cost of completion by CHEC is chargeable to and shall be paid by the Vendor. The total liability to the Vendor shall be limited to the Contract value less the value of any equipment, material or completed services retained by CHEC.

7.6 Right to Operate Unsatisfactory Equipment

If the operation or use of the materials or equipment after delivery and/or installation does not reasonably comply with the technical requirements set out in the Contract Documents to CHEC, CHEC shall have the right to operate and use such materials or equipment until such deficiency can be reasonably corrected provided that the period of such operation or use pending correction shall not impede or delay the ability of the Vendor to perform corrections. Such operation and use shall not constitute an acceptance of any part of the work, nor shall it relieve Vendor of any requirements of the Contract, nor shall it act as a waiver by CHEC of any requirement of the Contract.

7.7 Work Protection

Work protection from electrical hazards, where required, shall be applied for prior to beginning work and shall be consistent with the Electric & Utilities Safety Association's Protection Code, and upon review and acceptance by Bidder, utility requirements. Protections shall be surrendered at the end of each working day. In general, daily requests shall be available during utility normal working hours only.

Signalling and traffic protection shall be done according to the Occupational Health and Safety Act, the Highway Traffic Act, and utility requirements.

Only competent personnel shall work within the ten feet limit of approach for apparatus energized over 750 volts. The utility Manager of Engineering and Maintenance shall have the sole discretion to determine such competence, but Bidder will assume full liability in respect of any such personnel, even if approved of by the utility. Equipment, tools, and protective clothing shall be in accordance with the Electric Utilities Safety Association, the Occupational Health and Safety Act, and other authorities having jurisdiction.

7.8 Site Housekeeping

During the performance of the work, Bidder shall ensure that the work site is kept as neat and orderly as possible, in keeping with the nature of the work in progress. When work is interrupted for any length of time, or at the completion of the work, all waste material shall be removed and tools, equipment and surplus material shall be removed or stored or secured in a neat and safe fashion.

7.9 Casualty Insurance

Before commencing work under this contract the Vendor at his own expense shall submit Certificates of Insurance, providing evidence acceptable to CHEC indicating that the Vendor has obtained and will maintain insurance for the duration of the contract. The following requirements apply to all Certificates of Insurance:

- i. The insurance shall be written by an insurer acceptable to CHEC,
- ii. The insurance shall be primary to any coverage carried by CHEC.
- iii. The Vendor further agrees to provide CHEC with an executed Certificate of Insurance before commencement of work, and with written copies of the insurance policies at any time upon the written request of CHEC.
- iv. The Certificate of Insurance shall be an original copy signed by an authorized representative of the insurance carrier(s). (Note – faxed copies may be accepted initially to be followed up by originals in a reasonable length of time.)
- v. The Certificate of Insurance shall provide that no less than 30 days advance notice will be given in writing to CHEC prior to cancellation, termination or alteration of the insurance coverage. CHEC shall be named as an additional insured on each General Liability Insurance Policy and any Excess Liability Policy or Umbrella Policy used to meet the required general liability limits.

The types of coverage and minimum limits are as follows:

- 1) GENERAL LIABILITY*
 - a) \$5,000,000 each occurrence
 - b) \$6,000,000 general aggregate
- 2) AUTOMOBILE LIABILITY*
 - a) Bodily injury \$5,000,000 per person
 - b) \$5,000,000 per accident
 - c) Property damage \$500,000 or
 - d) Combined Single Limit \$1,000,000

** A blanket, umbrella, and/or excess liability policy(s) may be utilized to increase limits to the desired level(s).*

7.10 Subcontractors

CHEC reserves the right to refuse to permit any person or organization (subcontractor) to participate in the work covered by this Contract, such refusal shall not be unreasonably imposed. No subcontract shall relieve the Vendor of any liabilities or obligations under the Contract, and the Vendor agrees that Vendor is fully responsible to CHEC for the acts and omissions of Vendor's subcontractors and of persons employed by them. Vendor shall require every subcontractor to comply with the provisions of the Contract.

7.11 Payment

Payment shall be made based upon completion of the performance milestones itemized below.

Vendor shall submit to CHEC a request for payment for each milestone that has been met. Payment for each milestone shall also be contingent on successful completion of the preceding milestones.

- 1) Fifteen percent (15%) of the contract price will be paid after the successful Acceptance Test, which requires delivery and integration of the system head-end.
- 2) Twenty five percent (25%) of the contract price will be paid after delivery of 35% of the communication infrastructure and 35% of the new meters and other customer premises equipment.
- 3) Twenty percent (20%) of the contract price will be paid upon successful installation, operation and route Acceptance of the equipment described in (2) above and delivery of an additional 30% all equipment on CHEC's system.
- 4) Twenty percent (20%) of the contract price will be paid upon successful installation, operation and route Acceptance of the equipment described in (3) above and delivery of all remaining system elements.
- 5) Twenty percent (20%) upon completion of system installation, Acceptance of all routes, and delivery of all documentation, judged by CHEC to be acceptable, in any event not longer than 90 days after complete installation.

CHEC will make payment within thirty (30) days of receipt of a request for payment, if above conditions are met.

When the Vendor has completed all work in accord with the terms of the Contract Documents, the Vendor shall submit to CHEC a request for final payment. The request for final payment shall constitute a waiver of all claims by the Vendor except for claims specifically listed in the request.

Vendor's submission of its request for final payment shall constitute its warrant that the Vendor has to the best of its knowledge fully completed all work included in the Contract and has fully paid for labour, materials, equipment, services, taxes and all other costs and expenses resulting from this Contract.

7.12 Acceptance

These terms and conditions become binding when accepted by the Vendor either by acceptance of the contract or commencement of performance. No modification hereof and no condition stated by Vendor in accepting or acknowledging this order, which is in conflict or inconsistent with, or in addition to the terms and conditions set forth herein, shall be binding upon CHEC unless accepted in writing.

7.13 Shipments

Vendor shall mail Bill of Lading and Shipping Memo to destination, and CHEC's Project Manager.

Vendor shall notify CHEC Project Manager promptly if unable to make shipment. Shipments shall be made to multiple destinations in CHEC's service territories for logistical convenience. Such shipment instructions will be stated in the purchase contract that will be developed between the selected Vendor and CHEC.

7.14 Prices

Vendor agrees that prices are firm unless otherwise noted, and Vendor warrants that said prices do not exceed the prices allowed by any applicable Federal, Provincial or Local regulation.

7.15 Compliance with Laws

Vendor warrants that in performing work under this order Vendor will comply with all applicable laws, rules and regulations of governmental authorities and agrees to indemnify and save CHEC harmless from and against any and all liabilities, claims, costs, losses, expenses, and judgments arising from or based on any actual or asserted violation by the Vendor of any such applicable laws, rules and regulations.

7.16 Patents

Vendor agrees to protect and save harmless CHEC from all costs, expenses or damages, arising out of any infringement of claim or infringement or Patents in CHEC's use of material or equipment furnished pursuant to this order.

7.17 Assignment

Vendor agrees that neither this order nor any interest herein shall be assigned or transferred by Vendor except with the prior written approval of CHEC.

7.18 Substitution

No substitution will be permitted under this order except on specific written authority of CHEC's Project Manager.