Consumers Council of Canada (CCC) INTERROGATORY #4 List 2

Interrogatory

Ref: C1/T5/S1, p. 2

Issue 1.1
Issue: Are the Affiliate Services Agreements still cost effective and efficient in delivering services? Have any changes occurred in these arrangements since the 2006 distribution rates proceeding?

Has HON undertaken any analysis in order to assess whether the services provided by Inergi continue to be priced appropriately? If not, why not? If so, please provide copies of any analyses.

Response

Hydro One Networks plans to execute the terms of the outsourcing agreement which contains a provision for benchmarking the services it receives from Inergi for in years 3, 6 and 9 of the 10 year contract. The outsourcing agreement contains provisions to benchmark all lines of business. The next benchmarking exercise will examine the pricing for year 6 of the contract which will examine Inergi prices for all services from March 1, 2008 to February 28, 2009. This study is expected to be completed in 2009.

The attached benchmarking studies were conducted in accordance with the outsourcing agreement on contract year 3 and submitted as evidence in the 2006 Dx submission.

Customer Service Benchmarking Report

A Review of the Hydro One-Inergi Customer Service Pricing

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Version: 0.1

FOREWORD

This report was completed in response to a request from Hydro One and Inergi to conduct price benchmarking of its Customer Services based on the Statement of Work (SOW) within the outsourcing arrangement. The SOW covers delivery of certain Customer Services that were outsourced to Inergi. Contractual obligations allow that the prices be benchmarked periodically to validate their adherence to market prices.

This report presents the results of the benchmarking requested within these contract provisions. The project consisted of identification of utilities with similar Customer Services in the North America, consolidation of data from PA's annual customer service survey and analysis of the results. Normalization was applied to make like-for-like comparisons. The participant data were used to develop the Fair Market Value range and average price to which Hydro One prices were compared. Ultimately, the Customer Service financial arrangements were benchmarked and evaluated.

PA is a multi-disciplinary consultancy operating primarily in North America and in Europe both in private markets and government space. PA Consulting is a sixty year old, employee-owned, global consultancy and our position in the consulting market is based on independent advice.

Our competence to provide benchmarking evaluation is based on the following:

- Multi-level expertise in the development, negotiation and evaluation of outsourcing arrangements between clients and suppliers
- Extensive benchmarking experience of the utility industry in North America and Europe during the past 15 years
- Ability to organize a benchmarking survey to collect and successfully analyze appropriate data
- Experience in performing the Customer Service analyses
- Experience in the regulatory and litigation processes assisting either utilities or regulatory commissions
- Deep knowledge of the utility industry
- Practical experience in performing a wide variety of projects within the utility industry

Specific references can be provided on request.

LIMITATIONS

Disclaimer

While every effort has been made to ensure that the data enclosed in this report is correct and accurate, PA Consulting is not responsible for any omissions and inaccuracies. Proper care must be undertaken when interpreting and using any of the data as well as findings included in this report.

Caveats

The data provided in this report has been obtained based on responses from surveyed companies providing certain type of Customer Services in North America. The surveyed companies do not constitute a statistically (in a strict sense of the word) valid sample based on size, type, and company location.

However, the data is deemed useful and representative of Customer Service offerings received by clients in North America due to the design of the data input form, the number of data points and auxiliary reports and comparisons to PA Consulting group experience. The data is most useful to provide ranges of values rather than be a guide for exact values.

All findings were based on the data available at the time of analysis.

All pricing is in Canadian dollars. Any data from U.S. participants was converted using a factor of $1 CDN equals $0.8065 US based on *2005 Q2 Corporate Exchange Rates* as published by PA's Corporate Tax and Treasury department.

Confidentiality

PA Consulting Group served as an impartial third party for the purpose of assimilating and collating the data. All results are presented anonymously to preserve the confidentiality of the participants. ALL PARTICIPANT DATA WAS HELD IN STRICT CONFIDENCE AND AT NO TIME WAS THE IDENTITY OR DATA OF ONE PARTICIPANT SHARED WITH ANOTHER, INCLUDING HYDRO ONE AND INERGI DATA.

Legal Advice

While PA Consulting Group is well qualified to comment on typical Customer Service arrangements and make observations on issues of benchmarking from the perspective of what is currently in use in the industry, PA Consulting Group is not qualified to render legal advice. For any legal questions, the readers are encouraged to engage appropriate counsel to review any contractual issues.

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1. EXECUTIVE SUMMARY

Introduction

PA Consulting ("PA") was asked to perform a Customer Service Benchmarking Survey Project ("Project") by Hydro One ("Client"), a regulated utility operating transmission and distribution networks in Canada and by Inergi ("Supplier"), the service provider engaged in delivering such services to Hydro One under the outsourcing agreement. The Client outsourced selected Customer Services under a 10-year agreement. Inergi, in turn, subcontracted much of the customer service support to Vertex, Inc but it is still the provider of record under terms of the outsourcing agreement. The contract allows parties to benchmark charges at the three, six and nine year points in the agreement. The benchmarked pricing is intended to be an estimate of the Fair Market Value ("FMV") range charged for such services. PA was asked to design and conduct the benchmarking to determine the Supplier pricing in relation to the 50th percentile of the estimated FMV range.

The Client and the Supplier established contractual conditions to conduct this benchmarking and subjected this process to several conditions. The scope of services provided by the Supplier to the Client included the following domains:

- Call Handling and Correspondence
- Billing (including business billing)
- Collections
- Data Services
- Business Customer Centre ("BCC") Call Handling and Correspondence
- Application Support

These domains were benchmarked against six utilities participating in PA Benchmarking™, 2005.

Project Approach

The approach was to extract comparable data from the annual PA Benchmarking™ of Customer Service for Utilities conducted by PA Consulting Group, Inc. This survey has been conducted for over 15 years and it is well known within the utility industry. Not all of the participants, however, operate with the same environmental conditions and constraints as the Client and Suppler. To achieve a more targeted comparison with like for like conditions, a subset of six of the utilities participating in the 2005 survey were identified and their data used for this analysis.

A best effort was made to select utilities that had characteristics most similar to those of the Client – among them, number of customers, type of services and unionization that were the closest match to the Client's. Two data points were from Canada (including the Client) and five from the U.S. All participants had unionized workforce. Data was collected from participants using a standard form and standard protocol that has been in place for the past 15 years; an additional small questionnaire was sent to selected participants to capture additional data. All data were normalized to the Client's environment.

In this report we defined the 50th percentile of the FMV as the average of those data points collected in the marketplace.

Findings

There were three consecutive steps in the data analysis process for the Client and each participant:

- Development of unit costs and normalized unit costs within each service domain
- Development of the annual costs for each service domain
- Development of the overall annual costs for all service domains

Results from the last step are summarized below.

Table 1. 1 Overview of the Total Price Breakdown and FMV

Service Domain	Hydro One Costs	FMV 50th Percentile
TOTAL	**$36,564,609**	**$36,253,810**

Overall, the annual prices paid by the Client were close to C$36.56M and they were 0.86% above the 50th percentile.

Normalization of the participant prices was completed, to the extent possible. Factors that were known or could be estimated were taken into account; factors that were unquantifiable were not. Both types of factors are explained later in the report.

2. INTRODUCTION

Overview

This project was undertaken during the period of April-August 2005 on behalf of Hydro One and Inergi to benchmark the Customer Service contract against other contracts in the marketplace. Specifically, the Client wished for a comparison of its Customer Service contract prices against the Fair Market Value ("FMV") of such services provided in the marketplace.

To make equitable comparisons, it was necessary to normalize benchmarked costs for services observed in the market place through the use of factors to create acceptable proxies for FMV. Normalization was also needed to account for quantifiable factors that affect FMV and these are discussed in detail later in this report.

The development of the overall FMV range for Customer Service services and comparison to the Client's prices involved several tasks, which are listed below:

- Development of the project approach -- PA proposed a benchmarking project that would rely on obtaining data from utilities participating in the annual PA Benchmarking™ survey.
- Selection of participants out of the potential participant pool -- the participating companies were solicited based on their relative comparable status in identified criteria
- Identification of Customer Services provided by the Supplier to the Client – this served to define services, their groupings and scope
- Design of the data input form to collect supplemental data – while the standard PA Benchmarking™ forms were used for most questions, a short questionnaire with additional questions was developed to solicit answers on questions not in the benchmarking survey
- Normalization of the participant data -- since each participant might have had different Customer Service structure, the raw participant data had to be normalized over a number of different factors to arrive at comparable pricing
- Participant data analysis -- after participant data was compiled and normalized, the analysis phase began; service domain values for each participant were subjected to analysis
- Report preparation -- this report is a structured representation of key activities that took place in the course of the project

3. METHODOLOGY

3.1 DATA GATHERING

This section describes the overall approach to the data gathering and includes a discussion of the following details of the process:

- Establishment of the baseline
- Participant qualification
- Participant response
- Documents analyzed

3.1.1 Establishment of the Baseline

The Customer Service components were categorized and prices were grouped as presented in the table below. All domains were benchmarked against the participant data. The benchmarking covered a broad range of Customer Services delivered to the Client in domains summarized in the table below[1]:

Table 3.1 Overview of Customer Services Provided to the Client

Domain	Description / Definitions	Representative Units of Measure
Call handling and correspondence	Customer call handling, all call types, including corporate switchboard, maintain operational IVR configuration	Cost per customer
Billing (includes business)	Issue bills, including bill print, insert delivery; managing exceptions, bill accuracy	Cost per customer
Collections	Manage the collection of outstanding customer debts and negotiate and collect deposits	Cost per customer
Data services	Work order closure and timesheet data input	Cost per timesheet; Cost per service order completion
BCC call handling and back office	Inbound calls, billing exceptions and manual bills	Cost per customer
Application support	System and business analysis to support applications	Cost per customer

[1] The data provided by the Client and Supplier

The data collected from participants, through the PA consulting Customer Service benchmarking, was segmented and detailed enough to match, for the most part, to service domains provided to the Client.

The Client's service delivery characteristics were used to develop the baseline for equitable comparison of services received by participants. The scope of each service domain was evaluated and participant service domains were adjusted for volume and normalized. The establishment of baseline conditions and other normalizations enabled pricing comparisons between participants, which are discussed later in the report.

3.1.2 Participant Qualification

Six participants were chosen from the pool of about 30 who participated in the 2005 PA Benchmarking™ survey (reporting 2004 calendar year operating data). All utilities were in jurisdictions that have similar regulatory philosophy to that of the Client, while at the same time ensuring needed diversity. The participating utilities were solicited based on their following characteristics:

- Number of customers – comparable to the Client's circumstances
- Union representation – targeting of utilities with union representation in their work force
- Service domains – targeting utilities that included domains of interest to the Client
- Regulatory and fiscal regimes – similar to Client's
- Commodity types – targeting utilities with similar fuel types

An overview of survey participants is provided in the table below

Table 3.2 Overview of Survey Participants

#	Utility Type	# of Customers (million)	Geography
1	Electric	3.65	Suburban / rural
2	Electric	0.732	Urban / suburban
3	Electric	1.12	Suburban
4	Electric	1.45	Suburban / rural
5	Electric / 20% dual fuel	1.59	Suburban
6	Electric / 20% dual fuel	1.99	Suburban

The Client receives Customer Services through an outsourcing arrangement. While there were a few specific areas, which the other participants outsourced, their Customer Services were predominantly delivered internally. This raises comparability issues since these two different entities are governed by different rules and motivations. To minimize this impact, utilities were selected that were the closest in their characteristics to the Client. Additionally, reported utility costs were adjusted to reflect Suppliers' stand alone support structure by adding appropriate overhead costs.

Confidentiality was a necessary condition for securing the participation of other companies so their identities were kept secret. The raw data was normalized using a number of factors that to provide comparability.

3.1.3 Documents Analyzed

PA used the following documents in preparation of this report:

- Filled out PA Benchmarking™ survey forms
- Selected portions of the contract between the Client and the Supplier (relevant to this project scope)
- Supplemental data input forms filled out and provided by the survey participants and the Client
- PA confidential data and experience related to Customer Services

3.2 DATA ANALYSIS

This section describes the overall approach to the data gathering and includes the discussion of the following details of the process:

- Fair Market Value discussion
- Normalization
- Application analysis
- Unit price comparison

3.2.1 Fair Market Value Discussion

The FMV is a useful concept and it is meant to identify price ranges at which willing buyers and seller enter into commercial relationships. FMV can have different meaning to different people and it can also vary depending on a number of factors. Usually, FMV is not represented by a single discrete price point for services or goods, but rather is represented by a range of values.

There are different definitions of FMV, but they essentially amount to stating the prices *that an interested but not desperate buyer would be willing to pay and an interested but not desperate seller would be willing to accept on the open market assuming a reasonable negotiating period of time* [2].

In order to develop or deconstruct FMV, it is first necessary to compare prices over the same type and quantities of services to perform like-for-like comparisons. Contracts covering delivery of Customer Services have similarities and differences; the differences make it necessary to perform adjustments or normalizations.

For the purposes of this project, the FMV range was defined as that which represented all transactions that was used consistently for all participant data.

The adjustment of physical quantities in each of participant's arrangements to the same baseline allowed for the development of comparable financial values. The normalization process involved multiple factors to adjust for discrete characteristics of each contract. Factors affecting FMV fell into both quantifiable and intangible categories.

The following approach was used to ultimately compare participant data points:

- Development of unit prices for each service domain
- Development of FMV for each service domain; including average FMV with a range of values
- Development of overall FMV for the whole contract

3.2.2 Normalization

Normalization of the data was essential to enable like-for-like comparisons. Due to differences in contracts between participants, reporting of raw volume and price data would be improper for comparing participant operations. The raw data was appropriately adjusted to account for differences in both contractual arrangements between participants and their suppliers and objective factors such as exchange rates.

Quantifiable adjustment factors were applied to the raw data:

- Location cost index (place all costs in the same market location using a cost index)
- Service quantities (adjustment for the amount of services delivered)
- Exchange rates (presentation in the same currency)
- Pension (treatment of benefit payments)
- Overhead adjustment (to adjust utility costs to reflect stand alone charges)
- Unionization (% of unionized workforce)
- Workweek duration (35 hours versus participant workweek)

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[2] No single, scientific FMV definition was identified during background search in this project; many organizations use a similar one or a variation that is without a distinction.

Each of these adjustments is discussed below in more detail to provide their context and definitions were applicable:

- Cost Index [3]
  - There are differences in relative costs of doing business in each of the participant cities; the Client's city was set at 100 and using established comparative cost index appropriate adjustments were made to all other locations. The KPMG survey is explicitly a measure of the "relative costs of doing business" for each service, which is distinct from a price index such as CPI.
- Exchange Rates[4]
  - Any data from U.S. participants was converted using a factor of $1 CDN equals $0.8065 US based on *2005 Q2 Corporate Exchange Rates* as published by PA's Corporate Tax and Treasury department
- Service Quantities[5]
  - Participants were receiving different volumes of services compared to the Client (e.g., number of bills during a calendar year, number of calls per customer, etc.). To make appropriate comparisons (as if participants were receiving the same volumes of services as the Client), appropriate adjustments were made.
- Pension (treatment of payments)[6]
  - Pension costs are part of the labour costs paid by the Client. This separate pension payment was spread to component charges. All participant costs were set at a fully loaded basis.
- Overhead adjustment (to adjust utility costs to reflect stand alone charges)[7]
  - While pension and benefits were included in the utility costs, they did not encompass corporate overhead costs. PA collected overall overhead costs for all participants, subtracted pension and benefits and adjusted their costs by the remaining fraction of the overhead costs.
- Unionization
  - All utilities in the survey were unionized.
- Workweek duration[8]

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[3] *KPMG Alternative Study 2004*, services / operations; this cost index was normalized to 100 for Toronto.

[4] *2005 Q2 Corporate Exchange Rates* as published by PA's Corporate Tax and Treasury department.

[5] Based on data reported in the PA benchmarking surveys.

[6] Based on the review of the Client agreement and participant data.

[7] Cost adjustments were based on data reported in the PA benchmarking.

[8] Based on the participants' data.

- The Client's agreement covering this outsourcing arrangement mandates a 35-hour workweek. Other participants' data was adjusted to reflect that workweek duration.

These normalizations allowed for a comparison of the data between participants. Normalizations were made to each service domain using the above quantifiable factors.

In addition to the above factors, there are certain unquantifiable factors-- those that could not be obtained, were not obtainable due to confidentiality clauses, or were difficult to estimate. These factors are listed in the two table below; first that discusses unquantifiable factors related to Customer Services idiosyncrasies; second that presents unquantifiable factors that affect prices of any outsourcing contract.

Table 3.3 Specific Unquantifiable Factors

Service Domain	Issue	Discussion
Call handling and correspondence	Impact of other utility departments on the Call Center workload	The amount of the Call Center work depends on the quality of processes in other departments; poor procedures elsewhere generate additional work in a Call Center
Billing	Number of estimated bills and types of billing exceptions	The amount of billing related work will vary depending on estimated billing and re-work required and whether a utility has AMR
Collections	Credit and Collections procedures that affect office C&C costs	Customer conditioning and approach to customer disconnecting in the field will affect C&C office costs; strict field procedures will generate lower Collections costs
Business call handling and back office	Types of business customers and business issues	Complexity of problems that are handled and types of customers handled by such call center
Data services	Timesheet and work order types	Number of timesheets that are automated and manual; number of exceptions; types of work orders and closure procedures
Application support	Application types deployed by participants	Application types will affect the amount of labour necessary to maintain applications

Table 3.4 General Unquantifiable Factors

Factor Type	Discussion
Service levels	There is a strong positive correlation between service levels and price of services. In some cases reported costs were provided without specific actual service levels achieved, making it difficult to judge how comparable the costs were.
Application diversity, complexity and volume	Differing applications require various amounts of labour because of their complexity, age, and a host of other factors. There can be large variability between clients and from year to year due to a number of factors that were not captured in this study. These factors include the exact set of applications under management, their versions, levels of customization, level of documentation, level of competence of staff, etc.

Table 3.4 General Unquantifiable Factors	
Factor Type	**Discussion**
Detailed operational knowledge	The more information available, the more precise level of knowledge about operations. By necessity, there was a reliance on the participant information provided in the survey.
Exact scope of services delivered	There are varying amounts of detailed knowledge about what each participant includes in the scope of services; the differences can result in varying price structures.
Manual versus automatic administration of operations	Manual operations are expected to be more expensive on a recurring basis; automatic require larger up-front investment; participants are on different equipment cycles
Overall contract size (Customer Service plus other areas)	Customer Service alone is likely to have different prices than Customer Service plus other areas contracted to a supplier

For each of the unquantifiable factors listed in the table above, there is a potential for price impact. Taken together, these impacts could be significant, or cancel each other out, depending on specific arrangements between a client and a supplier. The precise impact of each factor within participants' prices was not easily quantifiable and therefore there was uncertainty regarding the FMV range.

3.2.3 Unit Price Comparison

The subject agreement between the Client and the Supplier is not based on unit prices across all service domains. Indeed, the contract is essentially set for a lump sum amount for a defined scope of work. This total amount is scheduled to decrease from year to year with partial offsetting factors due to cost of living adjustments and additions to the scope.

Direct price comparisons are not meaningful due to the different scale of each agreement. In order to make comparisons between this outsourcing agreement and those of other participants, it was necessary to determine the effective unit prices for each of the domains as intermediate steps. The component contract amounts and associated volumes were assigned to each of the service domains. The prices for each service were fully loaded and an effective unit price developed.

These surrogate prices based on the assigned costs are representative of the services being provided and are a fair basis for comparison among the participants. All normalization and other adjustments were made on this effective unit price basis.

4. RESULTS

Findings

There were three consecutive steps in the data analysis process for the Client and each participant:

- Development of unit costs and normalized unit costs within each service domain
- Development of the annual costs for each service domain
- Development of the overall annual costs for all service domains

Results from the last step are summarized below.

Table 1. 1 Overview of the Total Price Breakdown and FMV		
Service Domain	**Hydro One Costs**	**FMV 50th Percentile**
TOTAL	**$36,564,609**	**$36,253,810**

Overall, the annual prices paid by the Client were close to C$36.56M and they were 0.86% above the 50th percentile.

Normalization of the participant prices was completed, to the extent possible. Factors that were known or could be estimated were taken into account; factors that were unquantifiable were not. Both types of factors are explained in the report.

Appendix B

Exhibit C1 Tab 3 Schedule 1

IT Benchmarking Report

A Review of the Hydro One-Inergi Information Technology Pricing

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FOREWORD

This report was completed in response to a request from Hydro One and Inergi to conduct price benchmarking of its Information Technology Statement of Work (SOW) within the outsourcing arrangement. The SOW covers the operations and support of the IT infrastructure, end user services and ongoing sustainment of existing applications that were outsourced to Inergi. Contractual obligations allow that the prices be benchmarked periodically to validate their adherence to market prices.

This report presents the results of a customized benchmarking. The project consisted of development of data input instrument and soliciting participation of entities with similar arrangements in the North America, and consolidation and analysis of the results. Additionally, existing ancillary data, both government and private were used to normalize participant data and to make like-for-like comparisons. The participant data was used to develop the Fair Market Value range and average price to which Hydro One prices were compared. Ultimately, the IT outsourcing financial arrangements were benchmarked and evaluated.

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Our competence to provide benchmarking evaluation is based on the following:

- Multi-level expertise in the development, negotiation and evaluation of outsourcing arrangements between clients and suppliers
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- Ability to organize a benchmarking survey to collect and successfully analyze appropriate data
- Experience in performing the Information Technology audits
- Experience in the regulatory and litigation processes assisting either utilities or regulatory commissions
- Deep knowledge of the utility industry and the Information Technology space
- Practical experience in performing a wide variety of projects both within the utility industry and IT
- Multi-disciplinary team of seasoned consultants who participated in the development of this report

Specific references can be provided on request.

LIMITATIONS

Disclaimer

While every effort has been made to ensure that the data enclosed in this report is correct and accurate, PA Consulting is not responsible for any omissions and inaccuracies. Proper care must be undertaken when interpreting and using any of the data as well as findings included in this report.

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1. EXECUTIVE SUMMARY

Introduction

PA Consulting ("PA") was asked to perform an Information Technology ("IT") Benchmarking Survey Project ("Project") by Hydro One ("Client"), a regulated utility operating transmission and distribution networks in Canada and by Inergi ("Supplier"), the service provider engaged in delivering IT services to Hydro One under the outsourcing agreement. The Client outsourced selected IT services for a 10-year agreement. The contract allows parties to benchmark charges at the three, six and nine year points in the agreement. The benchmarked pricing is intended to be an estimate of the Fair Market Value ("FMV") range charged for such services. PA was asked to design and conduct the benchmarking to determine the Supplier pricing in relation to the 50th percentile of the estimated FMV range.

The Client and the Supplier established contractual conditions to conduct this benchmarking and subjected this process to several conditions. The scope of services provided by the Supplier to the Client included the following domains:

- Application Support and Maintenance
- Infrastructure including the following services: Mainframe, Unix and Wintel Servers, Storage, and Database
- End User Services including the following services: Personal Computer support (PCs): Installs, Moves, Adds and Changes (IMACs); and Help Desk
- Cross-Functional services and charges including the following: 3rd party contract management, managed contracts, assumed contracts, and fixed labour
- Projects

The first three domains were benchmarked; the last two were deemed too specific to each company to be comparable and were not benchmarked.

Project Approach

The approach to benchmarking was to create a customized data input form and use it to gather data from a set of qualified participants.

To identify participants, PA conducted a survey of known IT outsourcing arrangements. A best effort was made to select participants that had characteristics of their outsourcing that were the closest match to the Client's. Ultimately, there were ten participants in the benchmarking sample including the Client. Four data points were from Canada and six from the U.S.; altogether two were unionized. Data was collected from participants using a structured form and follow up interviews. All data were normalized to the Client's environment.

Requested data were defined within each form so that participants had clarity regarding the meaning of each data point. In addition, PA Consulting held a dialogue with each of the participants to get more in-depth understanding of their data and to ensure consistency.

PA then compiled results while maintaining the anonymity of all the participants. The data was used to determine the FMV for an IT outsourcing of the same size and scope as the Client's. In this report the 50th percentile of the FMV was defined as the average of those data points collected in the marketplace.

The participant prices were normalized to the Client environment to the extent that the factors were known or could be estimated. There were some additional intangible factors that affected and influenced uncertainty about price ranges. These latter factors and their potential impacts on prices were discussed, but no adjustments were made using them.

Findings

There were three distinct steps in the data analysis process for the Client and each participant:

- Development of normalized monthly unit prices within each service domain
- Development of the annual FMV price range for each service domain
- Development of the overall annual FMV range for all service domains

Results from the last step are summarized below.

Table 3.1 Overview of IT Services Provided to the Client			
Domain	**Service**	**Fair Market Value (C$)**	
IT Outsourcing Services	**Annual Price to Hydro One (C$)**	**Range (+/- 1S.D.)**	**50% Percentile**
Total	**$50,855,770**	**$44,417,865 to $56,264,242**	**$50,341,054**

The Client base figure is fully loaded and includes the base fees (year 4 of the contract with agreed changes as of April 1, 2005), the associated pension and benefits costs, the monthly volume adjustments (ARCs/RRCs), COLA adjustments, and costs for those incremental applications still in interim sustainment

Regarding the Client –Supplier contract benchmarking distribution:

- The benchmarked services represented 58.3% value of the Client's contract
- Not benchmarked pass through of contract costs represented 28.9% of the contract.
- Other not benchmarked services represented 12.8% value of the contract.

Overall, the annual prices paid by the Client were close to C$50.86M and they were C$0.51M above the 50th percentile.

2. INTRODUCTION

Overview

This project was undertaken during the period of April-July 2005 on behalf of Hydro One and Inergi to benchmark the IT outsourcing contract against other contracts in the marketplace. Specifically, the Client wished for a comparison of its IT outsourcing contract prices against the Fair Market Value ("FMV") of such services provided in the marketplace.

To make equitable comparisons, it was necessary to normalize prices for services observed in the market place as acceptable proxies for FMV through the use of factors. It was also to account for material differences in the IT outsourcing contracts. There are both quantifiable and intangible factors that affect FMV and these are discussed in detail later in this report.

The development of the overall FMV range for IT outsourcing services and comparison to the Client's prices involved several tasks, which are listed below:

- Development of the project approach -- PA proposed a targeted benchmarking project that would rely on identifying and soliciting participation from entities with IT outsourcing arrangements already in the marketplace

- Identification of participants out of the potential participant pool -- the participating companies were solicited based on their relative comparable status in identified criteria

- Identification of IT services provided by the Supplier to the Client – this served to define services, their groupings and scope

- Development of the data input form to collect data -- it reflected the Client's current operations and was to adequately capture each participant outsourcing arrangements, while keeping the data general to accommodate the greatest number of participants

- Development of the normalization approach -- since each participants had different contract arrangements, the raw participant data has to be normalized over a number of different factors to arrive at comparable pricing

- Participant data analysis -- after participant data was compiled and normalized, the analysis phase began; service domain values for each participant were subjected to analysis

- Report development -- this report is a structured representation of key activities that took place in the course of the project

3. METHODOLOGY

3.1 DATA GATHERING

This section describes the overall approach to the data gathering and includes a discussion of the following details of the process:

- Establishment of the baseline
- Participant qualification
- Data form design
- Participant response
- Documents analyzed

3.1.1 Establishment of the Baseline

The IT service components were categorized and prices were grouped as presented in the table below. First three domains were benchmarked; the last two were deemed too specific to each participant to be comparable and were not benchmarked. The benchmarking covered a broad range of IT services delivered to the Client in domains summarized in the table below[1]:

Table 3.1 Overview of IT Services Provided to the Client

Domain	Service	Description / Definitions	Representative Units of Measure	Approach to Benchmarking	Scope / Discussion
Application Maintenance and Support	Application Maintenance and Support	Ongoing support and maintenance of installed applications.	Total $	Compared to market salary data and IT surveys	Ongoing sustainment and maintenance of business applications, excluding new development.
Infrastructure Management	Mainframe Operations	Batch and on line processing	Millions of Instructions per Second (MIPS)	Compared to participant data	Ongoing management and operation of the infrastructure services indicated.
	UNIX Server Operations	Unix servers	Server instances		
	Wintel Server Operations	Wintel servers	Server instances		
	Database Management	Mainframe and non-mainframe database support (quantity)	Number of production and development databases		
	Storage	SAN disk storage (GB)	Gigabytes (GB)		
	Tape Operations	Tape storage and manual tape mounts	Manual tape transactions (mounts)		

[1] The data provided by the Client and Supplier

Table 3.1 Overview of IT Services Provided to the Client					
Domain	**Service**	**Description / Definitions**	**Representative Units of Measure**	**Approach to Benchmarking**	**Scope / Discussion**
End-user Services	PC Support	Desktop and laptop support (quantity)	Physical devices (PCs) supported	Compared to participant data	Daily support and management of the end user services indicated.
	IMAC (combined with PC support in findings)	Service tickets (quantity)	Service tickets processed		
	Help Desk	Help desk support (quantity)	Contacts to the Help Desk		
Cross-Functional	Third party contract management	Management of vendors and 3rd party contracts	N/A	Not benchmarked	These charges are pass-through of hardware and software contract costs, dedicated resources. These were outside the scope of services that were benchmarked
	Managed contracts	Pass through of contract costs	N/A		
	Assumed contracts	Pass through of contract costs	N/A		
	Fixed Labour	Dedicated labour for special requests	N/A		
Projects	Projects	Project work on an as requested basis.	N/A	Not benchmarked	Each project is unique and the project mix varies from year to year making these charges not comparable

The Client's conditions of service delivery were used to develop the baseline for equitable comparison of services received by participants. Those service delivery conditions affected ultimate contract prices; the same was true for other contracts as each was different. For example, space and facilities were provided to the Supplier at no price. When other suppliers had to make payments for the same, their circumstances were adjusted to match this contract (i.e., such prices were excluded from considerations). The establishment of baseline conditions and other normalizations enabled pricing comparisons between participants, which are discussed later in the report.

3.1.2 Participant Qualification

An original pool of over 250 potential recent outsourcing arrangements[2] was screened to identify potential candidates for the benchmarking. The participating companies were solicited based on their following characteristics:

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[2] *Customer Needs and Strategies, IDC's Top 100 Outsourcing Deals of 2002, IDC's Top 100 Outsourcing Deals of 2003*, internal research and contacts, ongoing monitoring of outsourcing news and announcements by PA.

- Service domains – targeting contract arrangements that included domains of interest to the Client
- Industry – Outsourcing engagements in regulated and unregulated industries
- Size – comparable to the Client's circumstances
- Union representation – targeting of industries with union representation in their work force

PA identified approximately twenty-five arrangements as meeting the initial considerations. Ultimately, there were eleven participants in the sample with a variety of arrangements and scopes of service.

The outsourcing arrangements of the participants included the top suppliers or their unionized subsidiaries. In all there were six different suppliers. Where the supplier workforce was unionized, they established subsidiaries around the collective bargaining unit. This diversity of suppliers ensures there was a fair representation of a variety of deal structures and delivery models in determining the market value. There was difficulty locating unionized participants due to their limited number.

Confidentiality was a necessary condition for securing the participation of other companies; their identities were kept secret. The raw data was normalized to a number of factors that provided comparability. The table below details the industries of the eleven participants in the study.

Table3.2 Project Participants by Industry

Industry	Number (Total=10)
Retail	1
Financial Services	2
Government	2
Utility	4
High Technology	1

In general participants bundled services in a manner similar to the Client; the only difference was that end user services (PC support, IMAC and Help desk) were sometimes bundled together. No participant had the same portfolio of service domains as the Client. Typically, participants' service domain represented smaller or larger subset of the Client outsourcing portfolio.

3.1.3 Data Form Design

Each participant filled out the data input form consisting of the following sections:

- Cover – front page
- Introduction – detailed explanations of the purpose of the data form
- General Information – questions about the Client and Supplier
- Volume – questions regarding consumed units of services or quantities

- Charges – questions regarding prices of the above services or quantities
- Price Composition – questions regarding on-shore and off-shore labour components
- Asset Ownership – questions regarding percentages of ownership by each asset
- Performance – questions regarding service levels
- Scope Map – questions regarding the split of tasks between a client and a supplier

Key points about selected sections to indicate data collection intricacies and reasons for approaches to data collection:

- Volume
    - Service quantities across domains were collected in basic units (servers – number of instances, IMACs – number of service tickets, help desk – number of contacts, etc.) selected to capture representative differences such as availability, service levels, equipment locations
    - Application Support and Maintenance was requested in terms of FTE per month to obtain the broadest possible common denominator
    - Projects data was collected to capture effort associated with any non-recurring work
    - Administration and Other Support volumes were collected to capture effort associated with administration of third party, software license, asset and account management
- Charges
    - Charges associated with the above services or quantities were collected on a fully loaded, current year (2005) basis.
    - Charges were presented in terms of monthly fees per service in each domain
- Price Composition
    - A percentage breakdown of charges into on-shore, off-shore labour and non-labour components was collected to appropriately normalize the data
- Asset Ownership
    - The percentages of ownership by each asset type was also collected to insure all appropriately adjust value of the contract
- Performance
    - Representative performance targets for each service were requested to enable normalization on quality of service.
- Scope Map
    - Identification of types of tasks within each service domain and whether completed by the Client or the Supplier

3.1.4 Documents Analyzed

PA used the following documents in preparation of this report:

- Selected portions of the agreement between the Client and the Supplier (relevant to this project scope)

- IT budget spreadsheet provided by the Client
- Data input forms filled out and provided by the survey participants and the Client
- PA confidential data representing data related to IT outsourced arrangements
- External data sources (government reports, industry reports, and published articles)

3.2 DATA ANALYSIS

This section describes the overall approach to the data gathering and includes the discussion of the following details of the process:

- Fair Market Value discussion
- Normalization
- Application analysis
- Unit price comparison

3.2.1 Fair Market Value Discussion

The FMV is a useful concept and it is meant to identify price ranges at which willing buyers and seller enter into commercial relationships. FMV can have different meaning to different people and it can also vary depending on a number of factors. Usually, FMV is not represented by a single discrete price point for services or goods, but rather is represented by a range of values.

There are different definitions of FMV, but they essentially amount to stating the prices that an interested but not desperate buyer would be willing to pay and an interested but not desperate seller would be willing to accept on the open market assuming a reasonable negotiating period of time [3].

In order to develop or deconstruct FMV, it is first necessary to compare prices over the same type and quantities of services to perform like-for-like comparisons. Contracts covering delivery of IT services have similarities and differences; the differences make it necessary to perform adjustments or normalizations.

For the purposes of this project, the FMV range was defined as that which represented all transactions that was used consistently for all participant data.

The adjustment of physical quantities in each of participant's arrangements to the same baseline allowed for the development of comparable financial values. The normalization process involved multiple factors to adjust for discrete characteristics of each contract. Factors affecting FMV fell into both quantifiable and intangible categories.

The following approach was used to ultimately compare participant data points:

- Development of unit prices for each service domain
- Development of FMV for each service domain; including average FMV with a range of values

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[3] No single, scientific FMV definition was identified during background search in this project; many organizations use a similar one or a variation that is without a distinction.

- Development of overall FMV for the whole contract

3.2.2 Normalization

Normalization of the data was an essential task to enable like-for-like comparisons. Due to differences in contracts between participants, reporting of raw volume and price data would be improper for comparing participant operations. For data comparability to exist, it is necessary that the raw data be appropriately adjusted to account for differences in both contractual arrangements between participants and their suppliers and objective factors such as exchange rates.

Quantifiable adjustment factors were applied to the raw data:

- Location cost index (place all costs in the same market location using a cost index)
- Exchange rates (presentation in the same currency)
- Geographic diversity (the relative spread of services between central, local and remote locations)
- Offshore component (% of labour provided offshore)
- Pension (treatment of benefit payments)
- Scope (composition of HW and labour)
- Scale (number of servers)
- Service levels (availability, time to respond, etc.)
- Unionization (% of unionized workforce)
- Workweek duration (35 hours versus 40 hour workweek)

Each of these adjustments is discussed below in more detail to provide their context and definitions were applicable:

- Cost Index [4]
    - There are differences in relative costs of doing business in each of the participant cities; the Client's city was set at 100 and using established comparative cost index appropriate adjustments were made to all other locations. The KPMG survey is explicitly a measure of the "relative costs of doing business" for each service, which is distinct from a price index such as CPI.
- Exchange Rates[5]
    - Any data from U.S. participants was converted using a factor of $1 CDN equals $0.8065 US based on *2005 Q2 Corporate Exchange Rates* as published by PA's Corporate Tax and Treasury department
- Geographic Diversity [6]

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[4] *KPMG Alternative Study 2004*, Industry: software design, Operation: advanced software; this cost index was normalized to 100 for Toronto.

[5] *2005 Q2 Corporate Exchange Rates* as published by PA's Corporate Tax and Treasury department.

  - The costs of providing a service in a centralized data center or office facility is usually less than local or remote sites due to the availability of on-site resources and higher utilization due to the density of units. In remote locations, support may involve additional costs associated with travel and lost time getting to and from the support location. Since each participant has a different mix of these geographies, an adjustment was made to reflect the same mix at that of the Client.

- Offshore Component[7]
  - Any service that was provided by offshore labour was adjusted to the basis that all labour was on-shore. The cost of the off shore labour averaged 25% below the domestic markets.
- Pension (treatment of payments)[8]
  - Pension costs are part of the labour costs paid by the Client. This separate pension payment was spread to component charges. All participant costs were set at a fully loaded basis.
- Service Levels (availability, time to respond, etc.)[9]
  - Services delivered at different service levels would entail different unit prices; experiential data was used to make adjustments to the Client service levels.
- Scope[10]
  - Both mainframe and server prices can be composed of hardware and labour prices, depending on who owns the hardware
- Scale[11]
  - The scale discussion relates to economies of scale based on the number of units – operations with fewer units will be more expensive on a per unit basis than operations with a larger number of units. Different adjustments were made to various towers reflecting the expected economies in that service.
- Unionization[12],[13],[14]

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[6] Cost adjustments were based on the Clients contractual ARC/RRC differentials and PA internal experience.

[7] Cost adjustments were based on the PA internal experience.

[8] Based on the review of the Client agreement and participant data.

[9] Cost adjustments were based on the PA internal experience.

[10] Based on the Client and participant agreement details.

[11] Cost adjustments were based on the PA internal experience.

[12] The U.S. government web site (Bureau of Labor Statistics) was used to estimate direct wage differential between union and non-union jobs, http://www.bls.gov/news.release/union2.t04.htm.

[13] For the development of a differential between union and non-union benefits (health care and pension) a document “Economic Bytes: Union wage premium continues 15 year decline” from Employment Policy

- Both U.S. and Canadian reports and sources were used to make comparisons between union and non-union labour. Overall a 14% adjustment was made to account to the difference between direct wages, health care and pension.

- Workweek duration[15]
  - The union agreement covering this outsourcing arrangement mandates a 35-hour workweek. Other participants were adjusted to a 35-hour workweek basis (by 12.5%).

These normalizations allowed for a comparison of the data between participants. Normalizations were made to each service using the above quantifiable factors where relevant and available.

In addition to the above factors, there are certain intangible factors-- those that could not be obtained, were not obtainable due to confidentiality clauses, or were difficult to estimate. These factors were listed in the table below.

Table 3.3 Intangible Factors

Factor Type	Discussion
Actual versus contracted service levels	There is a strong positive correlation between service levels and price of services. In some cases reported prices were provided without specific actual service levels achieved, making it difficult to judge how comparable the prices were.
Application diversity, complexity and volume	Differing applications require various amounts of labour because of their complexity, age, and a host of other factors. There will be large amounts of variability between clients and from year to year due to a number of factors that were not captured in this study. These factors included the exact set of applications under management, their versions, levels of customization, level of documentation, level of competence of staff, etc.
Detailed operational knowledge	There is a trade-off between the study response rate and the depth of information requested. Gaining detailed operational information was beyond the scope of this study.
Exact scope of services delivered	There are varying amounts of knowledge about each participant's scope of services and the resulting impact on their price structure
Economic and business cycles and conditions at contract finalization	Economic and business cycles may have an impact on pricing of contracts. The individual business conditions of participants at the time of contracting may also have an impact on pricing and terms, and that was not captured in this study. In weak markets, vendors often lower their prices to get the deal while in a tight market they strive for higher margins.
Job type mix, non-compensation prices,	The combination of these characteristics affects ultimate

Foundation was used. Additionally, writings by the following academic authors were consulted: Barry Hirsch, Richard Vedder, Leo Troy (the U.S. experts on labor and union) and the National Right to Work Organization.

[14] Tony Fang and Anil Verma, "Union Wage Premium," Statistics Canada - Catalogue no. 75-001-XPE, Winter 2002 PERSPECTIVES / 17

[15] Based on the participants' data.

Table 3.3 Intangible Factors	
Factor Type	**Discussion**
supplier margins, prices at remote locations	prices and this information is difficult to obtain for each participant
Manual versus automatic administration of operations	Manual operations are expected to be more expensive on a recurring basis; automatic require larger up-front investment; participants are on different equipment cycles
Overall contract size (IT plus other areas)	IT outsourcing alone is likely to have different prices than IT outsourcing plus other areas contracted to a supplier
Penalties and gain-sharing	Total contract prices are affected by these two components and these details are often not available
Ability to leverage/share assets across multiple clients	Typically, an ability to spread services over several clients from a common location would tend to reduce unit costs

For each of the intangible factors listed in the table above, there is a potential for price impact. Taken together, these impacts could be significant, or cancel each other out, depending on specific arrangements between a client and a supplier. The precise impact of each factor within participants' prices was not easily quantifiable and therefore there was uncertainty regarding the FMV range.

3.2.3 Application Sustainment Analysis

Unlike the benchmarking of infrastructure or end user services, the benchmarking of applications sustainment proved to be more complicated and the same approach could not be used. Participants either did not or could not provide the necessary information; there was no clear and objective method to do so.

PA benchmarked applications using two approaches. The two approaches helped to answer the FMV questions from two angles. Overall, PA finds that Client spends more on application sustainment than similar organizations. However, the effective labour rate charged by Supplier for application sustainment is a fair market value. The higher spending is accounted for by the Client's volume resulting from its extensive use of IT and the unique demands of its open market software and is not the result of Supplier's rate.

The first analysis takes both rate and volume into consideration by comparing Supplier price vs. spend on application sustainment of other electric utilities. PA used published data[16] to determine that a sample of North American electric utilities spends approximately 9% of IT operating budget on application sustainment while Client spends approximately 13% of IT operating budget on sustainment with Supplier. This can be due to various reasons: a) open market applications that other participants may not have, b) extensive use of technology etc. PA also found that Client's Open Market software accounts for the 4% difference between Client's spend and that of the sample of North American electric utilities; this software is a unique requirement in Client's application environment.

The second analysis investigated labour rates for performing application sustainment against a normalized Toronto market price to determine if rates were responsible for the greater expenditure.

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[16] Based on a combination of public and private sources.

The data were normalized to Supplier pricing to adjust for unionized wages, benefits, and a shorter workweek. The finding is that Supplier's labour rate is only slightly different than an adjusted market labour rate for Toronto and essentially Fair Market Value.

The third analysis investigated the possibility that unique circumstances of the Client's business are driving greater volumes of applications sustainment. PA found that while the Client spends more on IT as a percent of revenue it spends much less per employee on IT than similar organizations. This finding suggests that Client is driving more efficiency through technology than similar organizations.

3.2.4 Unit Price Comparison

The subject agreement between the Client and the Supplier is not based on unit prices across all service domains, unlike most of the participants. Indeed, the contract is essentially set for a lump sum amount for a defined scope of work. This total amount is scheduled to decrease from year to year with partial offsetting factors due to cost of living adjustments and additions to the scope.

In order to make comparisons between this outsourcing agreement and those of other participants, it was necessary to determine the effective unit prices for each of the domains. The component contract amounts and associated volumes were assigned to each of the service domains. For the Client, this was also established by the contractual terms for scope adjustments using additional resource costs (ARCs) and reduced resource credits (RRCs). The prices for each service were fully loaded and an effective unit price developed.

These surrogate prices based on the assigned costs are representative of the services being provided and are a fair basis for comparison among the participants. All normalization and other adjustments were made on this effective unit price basis.

4. RESULTS

There were three distinct steps in the data analysis process for the Client and each participant:

- Development of normalized monthly unit prices within each service domain
- Development of the annual FMV price range for each service domain
- Development of the overall annual FMV range for all service domains

Results from the last step are summarized below.

Table 3.1 Overview of IT Services Provided to the Client			
Domain	**Service**	**Fair Market Value (C$)**	
IT Outsourcing Services	**Annual Price to Hydro One (C$)**	**Range (+/- 1S.D.)**	**50% Percentile**
Total	**$50,855,770**	**$44,417,865 to $56,264,242**	**$50,341,054**

The Client base figure is fully loaded and includes the base fees (year 4 of the contract with agreed changes as of April 1, 2005), the associated pension and benefits costs, the monthly volume adjustments (ARCs/RRCs), COLA adjustments, and costs for those incremental applications still in interim sustainment

Regarding the Client –Supplier contract benchmarking distribution:

- The benchmarked services represented 58.3% value of the Client's contract
- Not benchmarked pass through of contract costs represented 28.9% of the contract.
- Other not benchmarked services represented 12.8% value of the contract.

Overall, the annual prices paid by the Client were close to C$50.86M and they were C$0.51M above the 50th percentile.