The Public Utilities Board

2nd Floor
280 Smith Street
Winnipeg, Manitoba
R3C 1K2

M A N I T O B A	)	Order No. 107/96
	)	
THE PUBLIC UTILITIES BOARD ACT	)	October 17, 1996

BEFORE: G. D. Forrest, Chairman
D. L. Barrett-Hrominchuk, Member
W. E. Chiswell, Member
J. Hillard, Member

AN APPLICATION BY CENTRA GAS MANITOBA INC. FOR A REVIEW AND APPROVAL OF A COST OF SERVICE METHODOLOGY AND RATE DESIGN, PURSUANT TO BOARD ORDER NO. 49/95

The Public Utilities Board

Table of Contents

1.0 APPEARANCES:

R. F. Peters	Counsel for the Public Utilities Board of Manitoba ("the Board")
J. E. Foran, Q.C.	Counsel for Centra Gas Manitoba Inc. ("Centra")
R. J. Graham	Counsel for the Consumers' Association of Canada (Manitoba Chapter) and the Manitoba Society of Seniors ("CAC/MSOS")
P. Budd	Counsel for Direct Energy Marketing Limited ("Direct")
J. Carstairs	Counsel for Municipal Gas Inc. ("Municipal")
G. Collis	Representing Simplot Canada Limited ("Simplot")

2.0 WITNESSES FOR CENTRA

J. D. Brett	Vice-President, Gas Supply and Corporate Secretary
G. W. Meyer	Manager of Rates
G. Barnlund	Manager, Industrial Large Commercial Markets
R. A. Feingold	Vice-President, R. J. Rudden Associates, Inc. ("RJRA")
J. W. Little	Managing Consultant, RJRA

3.0 WITNESS FOR DIRECT

S. L. Chown	Principal, Industrial Economics, Incorporated ("IEI")

4.0 INTERVENERS

CAC/MSOS	Represented by R. J. Graham
Direct	Represented by P. Budd
Municipal	Represented by J. Carstairs
Simplot	Represented by G. Collis

5.0 PRESENTERS

Presentation by Mr. R. Eyjolfson on behalf of:

CanAmera Foods
McCain Foods Canada
Midwest Food Products
Mohawk Oil Co.
The Seagram Company

6.0 BACKGROUND

A cost of service study is used by utilities to determine to what extent individual customer classes pay their cost of service through rates. The results of a cost of service study are used as a guide in determining fair, equitable and non discriminatory rates for utilities' customers.

Centra's current cost of service methodology was developed by Foster Associates Inc.("Foster"), using 1988 test year data. That study was approved by the Board in Orders 141/ and 142/89, dated August 8, 1989. The Foster Study utilized a fully distributed embedded cost of service model. In that study, costs were incorporated into 10 functional areas and classified as being either Commodity, Demand and/or Customer related. The diameter length method and minimum plant size were used to distinguish between customer and demand cost for distribution mains, services and meters. In the study, the demand related costs were allocated to the customer classes using the Modified Partial Plant Methodology. Customer related costs were allocated on the basis of a 30 to 1 weighting for Centra's larger customers. The study also included an "avoided cost" credit to the Interruptible Customer Class.

The current rate structure consists of a two-part rate which includes a fixed monthly charge and a variable commodity charge, except for the Interruptible Class which does not have a fixed monthly charge. Centra's customers are grouped into four classes: small general service ("SGS"), large general service ("LGS"), Interruptible, and Special Contract.

With minor modifications, Centra has used the "Foster" cost of service methodology since 1989. The natural gas industry in Manitoba has undergone significant changes since the Board last reviewed Centra's cost of service study and rate design in 1989. These changes included the introduction of downstream storage in Michigan; the inception of variable market price gas and a general trend towards greater deregulation.

Because of these changes, the Board, in Order 8/94, dated January 28, 1994, stated:

> "The Board notes that the Company will be reviewing its cost of service study in either 1994 or 1995. The Board expects that the Company will consider the comments of various intervenors when conducting such a review. The Board will further expect that the Company will file the results of this review and

> be prepared to discuss this matter at the 1995 GRA, at the latest."
>
> and
>
> ".. The Board accepts that cost causation should be the underlying principle in determining allocation of costs and accepts the Company's methodology of allocating these costs."

In Order 49/95, dated May 5, 1995, the Board again addressed the matter of cost of service and rate design, stating:

> "The Board considers the cost of service study review to be of an urgent nature and will therefore direct Centra to complete a review, using an interactive process with all stakeholders, and submit the results of such a review to the Board prior to Centra's next GRA filing. The Board will expect such a review to consider the appropriateness of all methods and systems to be employed to functionalize and classify all capital and operating costs and to allocate such costs to proper customer class definitions. The Board further expects that the primary driver will be cost causation giving due regard to Centra's current operations in the Manitoba market, direct purchase activities, storage arrangements, risk management activities, transportation tolls, weather and use patterns for each specific customer class and all other relevant issues."

In response to the Board's directive, Centra engaged the service of RJRA to conduct a review of Centra's cost allocation methodology and rate design principles. The interactive process commenced in June of 1995.

Centra invited all interested stakeholders to an initial meeting in order to review and explain RJRA's terms of reference for the study. Further meetings with stakeholders were held in 1995 and 1996. A draft report was circulated to all parties of record on April 20, 1996. Centra filed the final report on May 31, 1996. This filing constituted Centra's application. Direct also filed evidence which put forward its recommendations and Centra submitted rebuttal to Direct's evidence.

A public hearing to consider this material was held from September 16 to 19, 1996 in Winnipeg, Manitoba.

7.0 RJRA COST OF SERVICE STUDY

7.1 GENERAL

RJRA conducted a review of Centra's current cost of service methodology and concluded that it was deficient in the following five areas:

1. The account structure used in the study, that of functional area costs, did not reflect Centra's current Responsibility Centre ("RC") accounting, making it impossible to reconcile account specific costs to reported values.

2. The use of the Modified Partial Plant Methodology to allocate demand related costs did not reflect the way Centra's capacity costs were caused.

3. The customer related costs were primarily developed from a 30-to-1 customer weighting factor.

4. Unit cost by component or customer class could not be calculated from information contained in the study without the use of a separate report.

5. The existing study was inflexible, being designed in such a way that creation of additional customer classes would be especially difficult

In light of the above deficiencies, RJRA conducted a new cost of service study, based on the Board approved 1995 test year and other data. RJRA's embedded cost of service study incorporated five basic principles:

1. it should be comprehensive
2. it should explicitly address the customer classes contemplated by the study
3. cost causality should be the major factor
4. it should explicitly support the rate design
5. it should be structured to explicitly calculate revenue requirement and unit costs.

RJRA undertook the following six steps in conducting the study:

1. Identify the total revenue requirement by account code or responsibility centre.

2. Assign the revenue requirement and rate base investment to one of six discrete functions.
3. Classify the functionalized revenue requirement and investment in rate base to demand, commodity or customer components.
4. allocate the functionally classified revenue requirement and investment in rate base to the designated customer classes.
5. Compare the allocated revenue requirement to existing or proposed revenues by customer class to determine revenue to cost ratios ("R/C").
6. Determine the unit costs for each class by dividing the revenue requirement by the appropriate billing determinant.

7.2 FUNCTIONALIZATION AND CLASSIFICATION

RJRA functionalized and classified the revenue requirement and investment in rate base on an account specific or responsibility centre basis. Many of the accounts and responsibility centres were directly functionalized or classified to a single function and classification. Other costs were functionalized according to the results of external studies. The remaining costs were functionalized and classified in proportion to related costs already dealt with by one of the first two methods. Appendix "A" to this Order lists the functionalization and classification of the total revenue requirement and investment in rate base.

RJRA assigned the total cost of service to one of six functions, as follows:

1. PRODUCTION:
   All fixed and variable costs of gas supply at the Alberta border for Canadian supplies, and at City Gate for U.S. based supply, excluding unaccounted for gas ("UFG")

2. PIPELINE:
   fixed and variable costs of TCPL transportation, excluding any U.S. pipeline charges

3. STORAGE:
   Fixed and variable costs of storage service, including all U.S. pipeline charges, but excluding storage gas commodity charges.

4. TRANSMISSION:
   The capital and operating costs of Centra's high pressure transmission system, plus UFG.

5. DISTRIBUTION:
The capital and operating costs of Centra's high, medium and low pressure distribution system.

6. ONSITE:
The capital and operating costs of Centra's investment in services, meters and customer premises equipment, plus customer accounting and customer service costs.

Centra's production and storage plant consists of its propane facilities which are in the process of being decommissioned.

Distribution main are functionalized to distribution and are classified to demand and customer, using Centra's previous diameter length methodology. While RJRA preferred the use of the zero intercept method, Centra's historical records lacked sufficient details to allow this method to be used. Upon review, RJRA concluded that the existing method was reasonable and was comparable to results which RJRA's other zero intercept studies had yielded.

Service lines, regulators and meter installations and meters were functionalized to Onsite and classified as being totally customer related. Centra's previous study had classified these costs to both demand and customer, using minimum plant size methodology. RJRA were of the opinion that their recommended approach better reflected cost causality and allowed for a more accurate determination of unit costs.

RJRA also functionalized and classified General Plant in accordance with the labour costs included in the operating and maintenance accounts, as opposed to the prior method of pro-rationing these accounts in accordance with production, storage, transmission and distribution plant. RJRA contended that much of Centra's General Plant supported its employees and their work activities rather than other plant accounts.

Treatment of the working capital allowance was based on a detailed sub report; operating and maintenance costs were based on an analysis of each of Centra's 43 responsibility centres; non operating costs were generally functionalized and classified in proportion to other previously functionalized and classified plant accounts and/or rate base.

While Centra's previous study treated gas overheads as a separate functional classification, RJRA suggested that both direct and overhead costs be combined in each of the proposed functional classifications. Gas procurement and

dispatching costs are entirely assigned to the Production function.

The following table summarizes the proposed functional classification components of Centra's approved 1995 test year revenue requirement.

Functional Classification	Revenue Requirement (x $ 000)	Percent of Total
Production Demand	$ 6,341	2.37
Production Commodity	100,488	37.57
		39.94
Pipeline Demand	20,948	7.83
Pipeline Commodity	2,674	1.00
		8.83
Storage Demand	28,750	10.75
Storage Commodity	4,846	1.81
		12.56
Transmission Demand	5,560	2.08
Transmission Commodity	1,272	0.48
		2.56
Distribution Demand	27,509	10.28
Distribution Customer	8,603	3.22
		13.50
Onsite Customer	60,491	22.61
TOTAL	$267,482	100

7.3 DEMAND ALLOCATORS

In reviewing the appropriate methods to allocate Centra's demand-related costs, RJRA considered four alternatives: Peak Day, Peak and Average, Modified Partial Plant, and Adjusted Partial Plant.

The Peak Day Method allocates demand costs based on each customer classes contribution to the design day (highest daily estimated load in a maximum year - 52 degree days Celsius) and assumes that interruptible customers are not served on the design day.

The Peak and Average Method allocates demand costs based on the weighted average of each customer class contribution on the design day and on the average day. Interruptible customers are also assumed not to be served on the design day. The weighting is the system load factor for average daily demand and "one minus the load factor" for the design day demand.

The Modified Partial Plant Method allocates demand costs to each of the customer classes based on an analysis of each class' share of the load for each day of the year, and then institutes a modification to reconcile that partial plant calculated capacity to the total annual capacity, based on each class' cumulative "excess" over average daily demand. Centra's previous cost of service study also allocated a benefit to interruptible customers in recognition of the "avoided cost" these customers created for the system by virtue of their interruptibility.

The Adjusted Partial Plant Method incorporated RJRA's adjustments to the Modified Partial Plant. These adjustments eliminated the modification with respect to the "excess" over average daily demand. The other adjustment was to assume that interruptible customers would be fully or partially curtailed therefore eliminating the "avoided cost" consideration.

RJRA concluded that the Modified partial plant method was inappropriate because it did not properly reflect cost causation in that it had no correlation to the actual planning and design process and placed an excessive and ill-defined emphasis on annual consumption. Additionally it was unduly complex and difficult to explain. The Adjusted Partial Plant has similar disadvantages, and resulted in devastating results to high load factor customers.

While RJRA considered the Peak Day Method to be the most cost causal because it conformed to the planning process of the utility, the consultant recommended that the Board accept the Peak and Average Method for allocating demand related costs because it:

1. recognized system utilization as an explicit factor to be included in determining cost responsibility
2. is relatively simple and straight forward
3. is a widely accepted method of cost allocation
4. is considered cost-causal by many states and provinces
5. produces results which are close to results using the approved method

As discussed in Section 8.2 of this Order, RJRA recommended that Centra adopt seven customer classes. The following table summarizes the relative proportion of demand related costs which each of the proposed classes would have been assigned under the four alternative demand allocators considered by RJRA.

Customer Class	(Percent of Allocated Demand Costs) Peak day	Peak & Average	Adjusted P. P.	Modified P.P.
Residential	47.89	43.86	41.55	42.57
SGS	6.11	5.45	5.19	5.34
LGS	35.12	32.27	30.83	31.70
High Vol. Firm	4.80	4.68	4.43	4.35
Main Line	1.67	2.20	2.13	1.71
Interruptible	0.00	4.47	8.92	9.16
Spec. Contract	4.41	7.08	6.95	5.08
TOTAL	100	100	100	100

7.4 ALLOCATION

As discussed in Section 8.2, RJRA proposed several changes to Centra's customer class definition, including the institution of a Main Line Customer Class. These customers would be served by using readily identifiable transmission and distribution mains which are assigned directly to that class. Therefore Main Line customers were assigned a pro-rata share of the demand related transmission and large distribution mains, but not the smaller distribution mains. Accordingly, the larger sized distribution mains were assigned to the Transmission function. Centra's class specific demand levels were adjusted by removing the Main Line customer's demand, using a base and thermal calculation to estimate average and peak day demands.

Service and meter plant investment was directly calculated for individual customers, where such data was available and the remainder was assigned to specific customer classes, with services being mapped by size for each class.

Unaccounted for gas was allocated to the various customer classes based on a 1991 analysis of these costs which used loss factors based on the size of the customer consumptions. Of the 1995 UFG amount of 1.25% of throughput, 0.7% of the large users volumes and 1.44% of the small users volumes were estimated as being appropriate.

RJRA utilized nine external allocation factors for responsibility centre costs: Meter Provisioning, Meter Reading, Residential and Small Commercial Marketing, Industrial Marketing, Business Development, Customer Inquiry, Customer Service, Credit and Collection, and Uncollectible Expense. Each of the six rate classes had different customer weights assigned, based on the analysis of the responsibility centre accounts.

A summary of the approved 1995 test year revenue requirement allocated to each of the existing and proposed customer classes is shown on the following tables. For the existing classes, the 1995 approved column shows the revenues recovered from the classes by the existing rates, after applying revenue to cost ratios.

	($000)				
Customer Class (Existing)	Peak Day	Peak and Average	Adjust. P.P.	Mod. P.P.	1995 Approved
Residential	149,044	146,789	144,749	144,914	N/A
SGS	16,372	15,951	15,721	15,847	164,343
LGS	89,159	87,932	86,430	86,268	84,586
Interruptible	12,550	26,306	20,085	20,059	17,898
Special Contract	358	505	498	395	625
TOTAL	267,483	267,483	267,483	267,483	267,452

Customer Class (Proposed)	Peak Day	Peak and Average	Adjust. P.P.	Mod. P.P.
Residential	149,109	146,953	144,940	145,081
SGS	16,380	15,963	15,745	15,871
LGS	75,838	74,320	73,119	73,336
High Volume Firm	10,493	10,509	10,317	10,155
Main Line	2,792	3,038	3,013	2,821
Interruptible	12,514	16,198	19,853	19,825
Special Contract	357	502	496	393
TOTAL	267,483	267,483	267,483	267,482

7.5 UNBUNDLED UNIT COSTS

As part of their study, RJRA Explicitly calculated the unbundled unit costs for each functional classification and then allocated these unbundled unit costs to each of the prospective customer classes. The unbundled unit costs were derived by dividing the revenue requirement for each functional classification by the appropriate billing determinant, as shown below.

Functional Classification	**Billing determinant**
Production Demand	Design Day Demand - Sales Only
Production Commodity	Annual Consumption - Sales Only
Pipeline Demand	Design Day Demand - Sales Only
Pipeline Commodity	Annual Consumption - Sales Only
Storage Demand	Design Day Demand - Sales Only

Storage Commodity	Annual Consumption - Sales Only
Transmission Demand	Design Day Demand - Sales and T - Service
Transmission Commodity	Annual consumption - Sales and T -Service
Distribution Demand	Design Day Demand - Sales and T- Service, excluding Main Line
Distribution Customer	Number of Bills - Sales and T - Service, excluding Main Line
Onsite Customer	Number of Bills - Sales and T - Service

8.0 RJRA RATE DESIGN

8.1 GENERAL

RJRA's rate design proposals are based on the principles that rates should be cost-based, equitable and competitive. RJRA strongly supports cost based rates, provided that customer impacts, gradualism and market conditions are also considered. RJRA suggested that cost based rates are enhanced by unbundling between upstream services (supply, transportation and storage) and the downstream transmission and delivery service, by ensuring that customers pay only for that portion of the system that they use, and by recognizing geographic cost differences where necessary.

RJRA recommended that fair and equitable rates be established by ensuring that similar customer groups pay the same rate for the same service. RJRA suggested that rate equity could be incorporated by:

1. Separating residential users from nonresidential small general service customers, as they may not exhibit the same use patterns or be similarly situated on the system.
2. Having the same rate for delivery services for both sales customers and T -Service customers.
3. Allowing the revenue to cost ratios to move outside the accepted range only in unusual circumstances.

4. Distinguishing between the SGS and LGS customers on the basis of annual volume, and allowing the customer the option of selecting either rate class.

RJRA also considered the issue of competitive and geographic rates in their design. RJRA was of the opinion that competitive rates were essential so that Centra could retain its customer base, maximize system throughput and give Manitobans a choice of energy suppliers. The competitive aspect related to both alternate energy sources and natural gas rates in other provinces. RJRA were of the opinion that competitive rates could be factored into the rate design by:

1. Recognizing customer attitudes and preference in respect of residential customer (fixed) charges.
2. Offering three part rates (Demand, Commodity and Customer) to large volume customers.
3. Explicitly measuring rates against competing fuels and provinces.
4. Introducing special summer rates, primarily residential and SGS rates.
5. Encouraging special contracts to build load and retain very large volume customers.

RJRA recommended that franchise considerations could be incorporated into the rate design without contravening the principle of cost-based rates by considering all franchise opportunities and request for aggregating multiple delivery points on one bill (conjunctive billing), by having the ability to negotiate franchise specific rates so as to recover all costs of service over a specified time, and by offering and encouraging a remunerative conjunctive billing service as a customer service.

8.2 CUSTOMER CLASSES

RJRA considers that the principles of rate design and the potential for significant cost distinctions should be the cornerstone for determining and defining customer classes. Such an analysis led RJRA to identify and recommend the adoption of six separate classes for the cost of service study. RJRA recommended that the existing SGS Class be separated into a Residential Class and a non residential SGS Class as these two groups might not exhibit the same load characteristics or be similarly situated on the system. Additionally RJRA suggested that the existing LGS 4 Class would continue as the LGS Class, but the current LGS 1, 2 & 3 Class would become the High Volume Firm Class. The new LGS Class would consist of both Sales and T-Service Customers.

RJRA also recommended the creation of a Main Line Customer Class which would include specially situated users with unique service requirements. Such customers would require the following three eligibility criteria:

1. must be directly served off the TCPL, Minell, or Centra Transmission pipelines, or directly off a town border or primary station by dedicated Centra system facilities,
2. facilities must be operated at a pressure not less than medium operating pressure, and
3. must consume a minimum annual volume of 24,000 Mcf.

The existing Interruptible Class would remain unchanged except existing sales and T -Service customers in this class would be eligible for the Main Line Customer Class. RJRA also recommended the retention of the Special Contract Customer Class, although this customer would be eligible for inclusion as a Main Line Customer and was treated as such for the purposes of this study.

The rate design structure and rates which flowed out of the cost allocation study are based on the 1995 test year approved data and are included for illustrative purposes only. RJRA applied a revenue to cost ratio of 1.00 to each rate class, which would result in each customer class paying its allocated costs through rates.

RJRA suggested, however, that applying a band of 10% to the revenue requirements allocated by the recommended Peak and Average method would produce class revenues which would capture most of the variations in the cost study results contained in the report.

8.3 FIRM SERVICE TARIFF STRUCTURE

RJRA recommended a two part tariff consisting of a fixed customer charge and a volumetric charge for the Residential and SGS Classes. The commodity charge would be unbundled for explicit upstream charges (Production and Pipeline), and downstream charges (Storage, Transmission ,Distribution and Onsite). The downstream charge would be further separated into a storage charge component.

While the fixed monthly customer charge would be designed to capture all downstream customer related costs, RJRA recommended that the tradition of low monthly charges for these classes be continued, resulting in a significant under recovery of these costs. The existing fixed monthly charge of $10 would be retained and the volumetric charge would then recover all downstream costs and the remaining upstream

costs. RJRA submitted that this rate structure would not result in any significant rate impact to customers within this class.

RJRA recommended that consumers be given the option of electing to be either a SGS or a LGS customer. The larger fixed monthly charge and a lesser volumetric charge proposed for the LGS Class, relative to the SGS Class, would dictate the consumption level at which a move from one class to the other would make economic sense. Should a consumer not choose a class, that consumer would be considered to be in the SGS Class.

RJRA recommended a voluntary three part tariff for larger Firm Service customers. RJRA Submitted that the voluntary aspect of the three part tariff would allow customers to make a choice based on their own perceptions of what is in their best interests. Under this structure a fixed monthly charge would recover all of the customer related downstream costs. All demand costs would be recovered by an equal monthly unbundled demand charge based on the highest winter month demand with that level of demand being charged for the following 12 months (i.e. 100% ratchet); and an unbundled volumetric charge to recover all of the upstream and downstream commodity related costs. Downstream charges would again be further separated between storage and delivery costs to ensure that firm sales and firm T- Service customers pay the same rate for downstream delivery service.

The institution of this structure would, in general, result in a high load factor and/or high volume customer receiving lower rates, relative to that customer's position under the former two part tariff.

RJRA conceded that some customer impacts could be significant under this scenario. In general terms, the following indicate the relative positions of a three part versus two part tariff.

1. For an LGS 4 customer, the two part LGS tariff with a $70 fixed monthly charge becomes more economical than the two part SGS tariff with a $10 fixed monthly charge at an annual consumption of about 15,000 cubic meters.

2. For a larger existing LGS customer, the three part tariff becomes more economical than the two part tariff at a load factor of approximately 36%.

3. For Firm T-Service customers with average class load factor, the three part tariff with a fixed monthly charge of $436 becomes more economical than the two part tariff with no customer charge at an annual consumption of approximately 200,000 cubic meters.

4. For a Firm T-Service customers the three part tariff becomes more economical that the two part tariff at a load factor of approximately 37%.

8.4 INTERRUPTIBLE SERVICE TARIFF STRUCTURE

RJRA recommended a three part tariff for the Interruptible Class. This would be a change from the existing structure in that currently this class has no fixed monthly charge in their rates. The structure would be identical to the three part tariff proposed for the larger volume Firm Service Customers and would ensure that both the Interruptible Sales and Interruptible T-Service customers pay the same rate for downstream delivery services. While the cost of service study allocates less revenue to the Interruptible Class than did the previous study, the introduction of a fixed monthly charge ($931, based on 1995 data) introduces different cost between high and low volume customers within the class, and the three part tariff introduces significant differences between low and high load factor customers.

In general, an interruptible customer with a class average load factor will benefit from his tariff at an annual consumption in excess of 900,000 cubic meters, while a customer consuming an annual class average volume will benefit from this tariff at a load factor in excess of 35%.

RJRA submitted that the reason for having an interruptible class is so that Centra is able to offer its firm customers a better overall rate, because of the interruptibility provision. Thus, Centra should be able to interrupt these customers whenever it is beneficial to the firm customers. RJRA recommended that the penalty provision for failure to comply with a request for curtailment be increased to include at leat the cost of replacement gas, plus a return to firm service rates for a period of one year.

RJRA recommended that Centra consider the implementation of seasonal rates, including summer rates for the Residential and SGS Classes at some future time. RJRA included a discussion paper on this topic, but made no specific recommendations that these rates be implemented by Centra at this time.

9.0 CENTRA'S POSITION ON RJRA RECOMMENDATIONS

Centra agreed with RJRA's recommendations except for the recommendation to separate the residential class and the non- residential SGS class. Centra is of the opinion that the eligibility criteria to define a "residential consumer" would be difficult and the subject of much argument, that each existing SGS customer account would require analysis to assess eligibility creating administrative problems; and the criteria would lead to consumer confusion and customer complaints.

Centra submitted that the results of the RJRA rate design, based on the new cost allocation study, revealed only a minor difference in proposed rates and that the disadvantages of separation far outweighed the potential advantages. However, Centra stated that the cost allocation study would continue to track and allocate costs separately for these two classes.

Centra further suggested, and RJRA agreed, that the three part rate be offered only to the existing LGS 1, 2, & 3 Classes at this time. These customers are relatively few in number, are more sophisticated and many already have demand metering capability. The experience gained with the new three part tariff would be valuable in streamlining the offering, as it was Centra's intent to offer it to the smaller volume customer over time. Additional costs would be required to implement the three part tariff. Restricting the tariff to the largest volume customer at this time would limit the expenditures which would be required immediately. Centra also requested that the three part tariff be mandatory, as it was more cost reflective than the two part rate.

Centra suggested procedures for determining the billing demand, opting for the use of the actual peak demand rather than the design peak demand as actual peaks are measurable and controllable by the customer. It is Centra's opinion that these benefits outweigh the technical superiority of using the calculated theoretical design peak.

Centra also proposed to restrict the future eligibility criteria for Interruptible customers to those whose annual requirements were in excess of 680,000 cubic meters per year, currently those customers in Interruptible Classes 1, 2 and 3. Existing customers in Interruptible Class 4 would be "grandfathered" and their status would be reviewed upon expiration of their interruptible service contracts.

10.0 DIRECT ENERGY MARKETING LIMITED SUBMISSION

Direct's evidence urged the Board to reject certain of the RJRA/Centra study recommendations and adopt those advanced by Direct. Direct submitted that cost causality should be the sole principle underlying a cost allocation study, not merely the primary one. Direct further submitted that the recommendations flowing from RJRA's cost allocation study did not adequately reflect cost causation and suggested that Direct's method was the only one advanced at this hearing that properly reflected cost causality. Direct's analysis and recommendations for allocating costs were developed to help ensure that rates for competitive services would not exceed incremental costs and would be below stand- alone costs.

Direct disagreed with two major areas of the RJRA study:

1. the lack of proper identification and differentiation of costs, and development of appropriate fees for the supply of the gas commodity and related services for both system customers and direct purchase customers; and
2. use of the peak and average allocator for demand related costs.

Direct submitted that Centra had undertaken to supply the Board with the results of its review and analysis of the different costs imposed on Centra by system customers and direct purchase customers for gas acquisition and related services, but had so far failed to do so. Direct suggested that the two types of customers clearly imposed different costs on Centra and should therefore be charged different fees for those services. Direct offered the opinion that costs for competitive services, such as gas supply, should cover the long run incremental costs of providing that service. For system customers, the incremental cost of that service included the commodity costs, gas acquisition, risk management and marketing costs, as well as an allowance for uncollectible gas supply revenues.

Direct purchase customers, on the other hand, paid for their own commodity and undertook their own risk management activities. Additionally, Direct contended that the risk of default for uncollectible gas supply revenues is transferred to the direct purchase supplier and that the benefits of Centra's marketing activities flow to the system customers and not to the direct purchase customers. Direct urged the Board to order Centra to develop separate gas charges and institute appropriate fees for the two customer types.

Direct contended that to properly reflect costs, several allocators were required for demand related costs and all demand related costs could not be allocated to customer classes using only the peak day method. The peak day method, while not recommended as being the appropriate demand allocator for Centra by RJRA, was put forward as being the purest cost causal method. Direct contended that different allocators were required for demand related costs in recognition of different cost causing characteristics for various components of demand costs.

Specifically, Direct recommends that the Board accept the following allocators for various demand costs:

1. Pipeline transportation demand should be allocated based on all of the calculated 100% purchase load factor costs, with the balance being allocated on the basis of each customer class' average winter day consumption excess over its average daily consumption.

2. Storage should be separated into a space component and a deliverability component and the storage space costs should be allocated based on each customer class' excess of average winter consumption over average annual consumption.

3. Storage deliverability costs should be allocated on the basis of each class' excess of design peak demand over average daily demand.

4. Transmission and distribution demand costs should be allocated on the basis of peak demand.

5. Interruptible customers should be allocated their share of demand related costs for pipeline transmission, storage space and distribution, but not for demand related transmission or storage deliverability costs.

Direct submitted that pipeline transmission is to supply gas to market, while the purpose of storage is to shift supplies from one period to another to better match demands for the system. If a utility could operate at a 100% load factor for all customer classes, the total costs could be allocated based on annual volumes. Storage costs are incurred, firstly, to store gas throughout the year to supplement winter supply requirements, and secondly to deliver gas from storage to meet demand for a few days of the winter period.

Direct also contended that the LDC transmission and distribution system must be designed to meet peak demands. As interruptible customers can be curtailed on a peak day, the transmission system requires peak day capacity only to accommodate firm customer's demands. However, the distribution system is likely adequate to serve interruptibles on a peak day; a customer cannot be curtailed in one area to serve a customer in another area of the system. Consequently Direct recommended that interruptible customer be assigned a portion of distribution demand costs, but not any transmission demand costs.

Direct suggested that interruptible customers impose storage space costs on the system, but, because they are curtailed during peak times, do not impose any storage deliverability cost. Interruptible curtailment serves as a substitute for additional storage, and the Direct Method would give the interruptible customers a credit for this benefit equal to the capacity costs avoided by interruption.

11.0 OTHER INTERVENERS' POSITIONS

11.1 CAC/MSOS

CAC/MSOS submitted that the underlying purpose of a cost allocation study is to provide the Board a guideline to use in attempting to arrive at fair and reasonable rates. They submitted the cost caused rates do not equate to fair and reasonable rates and that the Board should not consider fairness and equity in a purely economic sense. CAC/MSOS suggested that the Direct proposal would not allocate all required demand related costs to the interruptible class, that they did receive service, and did use the total system on non-peak days and that in many years are never curtailed.

CAC/MSOS went on to state that cost causality should be the primary driver of rates, but not the only driver. Non cost causal factors should be considered and should be considered in the cost allocation stage rather than at the rate design stage. Cost allocation is not a precise science in any event and judgements at each phase could significantly impact the end result. They submitted that a Board decision incorporating non cost causal factor in the cost allocation would enable all interested parties to know the rules of the game. The Board would essentially be taking into account non-cost causal factors, would consider fairness and equity and would give consideration to the actual use of the system by the various customer classes.

CAC/MSOS was of the opinion that an attempt to institute non cost casual factors at the rate design stage would not be pragmatic and would lead to considerable controversy if a

revenue to cost ratio of unity were not applied to all customer classes.

CAC/MSOS therefore requested that the Board approve Centra's proposed cost allocation methodology, including the use of the peak and average method to determine the demand allocator. CAC/MSOS argued that the method proposed by Centra was cost causal, was relatively simple and allowed the notion of fairness and equity by recognizing system use.

CAC/MSOS also supported Centra's rate design proposals. They suggested that the residential and nonresidential SGS classes be treated separately in the cost allocation, but have the same rates. They concurred that seasonal and franchise rates should not be implemented at this time, and that Main Line customer eligibility criteria be strictly enforced and not be subject to a discretionary exercise by Centra.

CAC/MSOS supported the continuation of the $10.00 fixed monthly charge for the SGS class and acknowledged Centra's desire to increase this charge to the point where it recovered allocated costs. They indicated that they might take issue with the amount of allocated costs and subsequent unrecovered amounts and urged that any move to increase the charge be gradual.

CAC/MSOS supported the three part rate for larger volume customers and the intent to tighten the eligibility criteria for new interruptible customers.

11.2 MUNICIPAL

Municipal recommended that the Board accept Direct's proposals. This would result in Centra Manitoba having the same cost allocation methodology as did its sister company, Centra Gas Ontario, and would allow Manitoba's rates to be competitive with those in Ontario. The adoption of this methodology would not, in Municipal's opinion, create any significant rate shock for Manitoba consumers.

11.3 SIMPLOT

In its written final submission, dated September 20, 1996, Simplot contended that the cost allocation study should reflect cost causation and nothing else. Simplot supports cost based rates but recognizes that the Board might wish to deviate from strict cost causal rates. They should have this discretion , if they are satisfied that such movement is fair and reasonable, but should consider such factors at the rate design stage, where it is clear and explicit.

Simplot suggested that the only reason RJRA recommended a method which incorporated non-cost causal factors was that RJRA were instructed to do so by Centra based on past practice in Manitoba. Simplot contended that the recommended Centra method gave illogical and inefficient results, such as allocating higher costs to higher load factor customers.

Simplot recommended that the Board accept either Peak Day method, or Direct's proposal, with a further investigation of the refinements contained in Direct's method by Centra, Direct and RJRA.

Simplot also requested the Board to defer the matter of a three part rate for Centra until the 1997 GRA to allow Simplot to explore the implications of moving to such a tariff.

12.0 CENTRA'S REBUTTAL AND SUMMARY

Centra's rebuttal contended that Direct's evidence contained a number of inaccuracies and deficiencies. It failed to recognize that the rate setting process in Manitoba had historically considered non-cost issues at the cost allocation stage. Centra also contended that Direct had misapplied the concepts of long run incremental costs and stand alone costs with the concepts of a fully distributed embedded cost of service study.

Centra also submitted that there were no significant differences in the costs imposed by direct purchase customers and system supply customers in either procurement and risk management, marketing or uncollectible account activities. Procurement and risk management requires approximately two person years and the total amount of funds associated with these activities is insignificant within the context of a $267 million annual revenue requirement, especially when consideration is given to the fact that direct purchase customers impose other costs on the system that are not charged to direct purchase customers or their agents.

Centra contended that its marketing efforts are geared to increasing system throughput for all gas, not only system gas. The only payment an ABM has agreed to refund to Centra with respect to an unpaid bill is the ABM's payment amount owing the ABM's customer and therefore the benefit attributed to the issue of uncollectible accounts is not significant.

Centra further submitted that Direct's proposed method of allocating demand related costs is based on oversimplified, unrealistic and erroneous examples. Additionally, Direct's treatment of cost allocation to interruptible customers was not reflective of cost incurred by Centra to serve those customers. Centra submitted, that the peak day method was as cost causal as Direct's method, more properly reflected Centra's Manitoba circumstance, and was simpler.

In summary Centra contended that the allocators proposed by Direct were inappropriate and not cost causal because:

1. Excess pipeline costs were allocated using the wrong allocator.

2. Storage space-related and deliverability costs were improperly separated.

3. Production related costs were allocated using a non-cost causal method.

4. Design day demand for the interruptible class is incorrect.

5. Pipeline and storage costs are improperly allocated to the interruptible class.

6. Distribution capacity costs are incorrectly allocated to the interruptible class.

Centra suggested that if the above corrections were incorporated into Direct's evidence, the results of Direct's study would be fairly close to Centra's Peak day method, but more closely resemble Centra's recommended Peak and Average Method. Centra therefore concluded that Direct's method could not be justified on a strictly cost-causal basis and that if rates were to be set on a strictly cost-casual basis the Peak Day Method would be the appropriated method to use. A table summarizing Centra's suggested amendments to Direct's evidence is included as Appendix B to this Order.

With respect to Simplot's submission, Centra suggested that the purpose of this proceeding was not to "take a fresh look at what is the best approach to cost allocation" as stated by Simplot, but rather to review and change its rate design. Centra also contended that the Board had directed Centra to undertake this review so that " the primary driver will be cost causation giving due regard to Centra's current operations in the Manitoba market. Centra refuted the allegation that RJRA's recommendations were as a result of explicit Centra instructions. Centra also contended that Simplot has misinterpreted RJRA's position on cost causal rates and pointed to the testimony of its witness who stated

that the utilization of the peak and average methodology will give the Board an objective basis for implementing a cost allocation and rate design methodology which reflects the usage of the system rather than requiring the Board to deal subjectively with fairness issues on a case by case basis.

In summary, Centra requested that the Board approve the RJRA method of allocating costs, including the peak and average demand allocator and the rate design as amended by Centra. Centra contended that this approach would allow the Board to utilize a method which would be a guide to ensuring that the resultant rates would be cost based, fair and equitable, competitive and would reflect opportunities to serve new franchise areas.

13.0 BOARD FINDINGS

13.1 COST ALLOCATION METHODOLOGY

The Board, in Order 49/95, directed Centra to review all aspects of its cost of service methodology. Cost allocation studies are not a precise science and contain elements of judgement at most phases. Cost allocation methodologies are numerous, and experts often have differing opinions as to the appropriate manner of allocating costs of service. It is the Board's responsibility to weigh these differing views and to support a methodology which gives the best guideline for determining just and reasonable rates, and which is not unduly discriminatory, recognizing that subjective judgements will influence results.

This public hearing was to allow debate of these opinions and to arrive at a methodology which best reflects the Manitoba circumstance. This proceeding was not to set rates reflecting the cost allocation methodology results but to approve principles to be included in both the methodology and the rate design structure. The Board's expectation is that the principles herein approved will be adaptable to industry changes and that the results produced should be acceptable for some time into the future.

The Board agrees with the parties that the use of the Modified Partial Plant Method to allocate demand related costs is no longer appropriate. The Board also agrees that the cost of service methodology best suited for a natural gas distribution company should be determined based upon the circumstances of that utility. Those circumstances must reflect the manner in which the system is designed as well as the manner in which it is operated. Giving some weight to the manner of system operation better reflects the cost responsibility than does a methodology which considers only

design parameters. For example, a system may be designed to interrupt particular customers on a peak day so that firm customers can continue to receive service. Should the peak not be met, however, those interruptible customer continue to receive service.

Even though a design contemplates curtailment of interruptible customers, it cannot preclude a movement of customers from firm to interruptible service, or vice versa. The Board is of the view that Centra's proposal for the use of demand related cost allocators based on the Peak and Average Methodology best reflects the appropriate treatment for all Manitoba natural gas consumers, that it reflects current market conditions and is adaptable to change. While it is difficult to determine the longevity of any methodology, the Board is satisfied that the peak and average method for allocating demand related costs will remain relevant for some period of time.

There was general agreement among all parties that Centra's method of functionalizing and classifying cost, including investment in Rate Base, was appropriate. Accordingly, the Board will approve Centra's request in this respect.

13.2 GAS SUPPLY COSTS

The Board will direct Centra to address the matter of differences in gas supply costs, if any, imposed on Centra by its system supply customers and its direct purchase customers. The Board appreciates that this matter will be somewhat dependent on the Board's decision with respect to the merchant function role of Centra. The Board will expect that Centra will investigate this issue in light of that decision and will expect a report within a reasonable time after issuance of that order. The Board does not expect that Centra will be in a position to fully respond to this directive at the 1997 GRA hearing to be held in November of this year.

13.3 RATE DESIGN PRINCIPLES

There was general agreement with Centra's proposals with respect to rated design. The rates included in this application were based on 1995 test year Board approved revenue requirements and were merely for illustrative purposes. Specific rates flowing from this methodology will be reviewed at the upcoming 1997 GRA.

The proposed three part tariff as proposed by Centra is sound in theory and appears to have merit. The Board is concerned, however, about potential adverse impacts on the

affected customers within the applicable classes. The Board is especially concerned about impacts with respect to the 100% ratcheting effects of the demand charges. The Board will therefore not approve the three part tariff as proposed by Centra at this time. The Board will require Centra to communicate its proposals to all customers who might be effected. The communications should define customer specific impacts and should also inform these customers that it is the Board's intention to further canvass this issue at the upcoming GRA hearing in November of this year. These customers should be informed that the Board wishes to hear any concerns which customers may have in this matter at the GRA hearing.

The Board will approve, in principle, Centra's proposed rate classes: SGS, LGS, High Volume Firm, Main Line, Interruptible and Special Contract. The Board will expect Centra to further discuss the Special Contract Rate, and that this matter will be resolved at the 1997 GRA.

The Board will expect the cost allocation to separately track costs and rates for the residential and nonresidential SGS customers, but will not expect rates to be different for these customer classes. The Board will also require Centra to file a plan indicating Centra's proposals with respect to the fixed monthly charge for the existing SGS customer class in due course. The Board will also expect Centra to discuss in detail the "almost" Main Line customers, together with the impact should these customers, in fact, become Main Line customers. The Board will also expect some rationale for selecting the minimum volume eligibility criteria of 680,000 cubic meters at its next GRA. The Board will also expect any special contracts to be submitted to the Board for approval.

The Board directs Centra to provide detailed information with respect to those interruptible customers who will be required to accept firm service at the expiration of their interruptible contracts. This information should discuss the potential impacts not only on those customers but also the effects of such a move on other system customers.

The Board expects to receive more information in respect of seasonal rates, extended offering of the three part tariff to lower volume customers and franchise specific or geographic rates well in advance of Centra taking any action in these matters.

The Board also directs Centra to show, as a separate cost on its customer bills, the cost component related to the TCPL tolls, which tolls are approved by the National Energy Board and are outside the jurisdiction of this Board.

The Board further directs Centra to provide the results of a detailed review of both inter and intra customer class impact, together with proposals to mitigate any severe impacts, in its updated filing for the 1997 GRA.

14.0 IT IS THEREFORE ORDERED THAT:

1. the cost allocation methodology as proposed by Centra Gas Manitoba Inc., including the use of the peak and average allocator for demand related costs, BE AND IS HEREBY APPROVED.

2. the rate design principles as submitted by Centra Gas Manitoba Inc., except for the proposed three part tariff as herein discussed, BE AND IS HEREBY APPROVED.

3. Centra Gas Manitoba Inc. provide detailed information of inter and intra customer class impacts as a result of this decision, together with proposed mitigation measures, as part of its October, 1996 filing in conjunction with its 1997 general rate application.

4. Centra Gas Manitoba Inc. file a report detailing the matter of the eligibility criteria for Main Line customers and possible special contracts, and the eligibility criteria and grandfathering provisions for small volume interruptible customers for discussion at the 1997 GRA.

5. Centra Gas Manitoba Inc. show the transportation charge element of gas cost, required to bring natural gas from the source to the city gate as a separately identifiable component on its customer bills, effective as soon as can be reasonably done.

6. Centra Gas Manitoba Inc. file a plan indicating its proposed course of action with respect to the fixed monthly charge for the existing SGS Customer class.

7. Centra Gas Manitoba Inc. provide detail, including customer numbers and impacts for those interruptible customers who will be require to accept firm service, in conjunction with the 1997 GRA hearing.

8. Centra Gas Manitoba Inc. be prepared to discuss the matter of a new rate structure for its Special Contract at the 1997 GRA.

THE PUBLIC UTILITIES BOARD

"G. D. FORREST"
Chairman

"H. M. SINGH"
Acting Secretary

Certified a true copy of Order No. 107/96 issued by The Public Utilities Board

Acting Secretary

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
RATE BASE:			
Intangible Plant Accounts:	Intangible Plant accts. functionalized in proportion to Total Plant in Service.	Classified in proportion to plant in each function.	Allocated in proportion to plant in each functional classification.
Production Plant:	Production Plant accts. functionalized directly to production.	Classified directly to demand.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Storage Plant:			
Land	Functionalized in proportion to storage plant.	Classified in proportion to production plant.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Structures & Improvements	Functionalized in proportion to storage plant.	Classified in proportion to production plant.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Gas Holders-Storage	Functionalized directly to production.	Classified in proportion to production plant.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Gas Holders-Pipeline	Functionalized directly to production.	Classified in proportion to production plant.	Allocated in proportion to production plant.
Other Local Storage Equipment	Functionalized in proportion to storage plant.	Classified in proportion to production plant.	Allocated in proportion to production plant.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Transmission Plant:	Functionalized directly to transmission.	Classified directly to demand.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Distribution Plant:			
Land	Functionalized in proportion to total Distribution Plant.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to distribution plant or onsite plant, resp.
Land Rights	Functionalized in proportion to total Distribution Plant.	Classified in proportion to distribution plant or onsite plant, resp.	Allocated in proportion to distribution plant or onsite plant, resp.
Structures & Improvements	Functionalized directly to distribution.	Classified directly to demand.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator.
Mains	Functionalized directly to distribution.	Classified in proportion to Diameter-Mile study.	Demand component allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator. Customer component allocated in proportion to number of customers less Main Line and Special Contracts.
Measuring & Regulatory Equip.	Functionalized directly to distribution.	Classified directly to demand.	Can be allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator, excluding Spl. Contract.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Other Distribution Equipment	Functionalized in proportion to distribution plant.	Classified to transportation plant or to customer.	Allocated in proportion to transportation plant or number of customers.
Service Lines	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to Service Investment by rate class.
Regulators & Meters Installations	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to onsite plant.
Meters	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to Meter Investments by rate class.
General Plant:	All General Plant accts. functionalized in proportion to Labor.	All General Plant accts. classified in proportion to Labor.	All General Plant accts. classified in proportion to Labor.
Accumulated Depreciation:	Subschedule.	Subschedule.	Subschedule.
Other Rate Base Items:			
Contribution in Aid of Construction	External allocator created from Contribution in Aid of Construction accounting schedule.	Classified in proportion to transmission plant or distribution plant, resp.	Allocated in proportion to transmission plant or distribution plant, resp.
Net Working Capital	Working Capital Subreport.	Working Capital Subreport.	Working Capital Subreport.
Materials	Functionalized in proportion to the following: Total Trans. Plant +Total Dist. Plant - Dist. Regulators & Meters - Dist. Meters.	Classified in proportion to transmission plant, distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant, distribution plant or onsite plant, resp.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Propane	Functionalized directly to production.	Classified in proportion to production plant.	Allocated in proportion to production plant.
Gas Storage	Functionalized directly to storage.	Classified directly to energy.	Allocated proportion to sales.
Security Deposits	Functionalized directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to onsite plant.
Disallowed Assets - Distribution Mains	Functionalized directly to distribution.	Classified in proportion to Diameter-Mile Study.	Demand component allocated in proportion to peak day allocator or partial plant allocator or peak & average allocator. Customer component allocated in proportion to number of customers less Main Line and Special Contracts.
Disallowed Assets - Services	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to Service Investments by rate class.
Finance Contracts	Functionalized directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to onsite plant.
EXPENSES:			
Cost of Gas:	Detailed costs available to functionalize to production, pipeline and storage. US pipelines are storage-related. UFG functionalized to Transmission because it represens a downstream cost.	Fixed Costs are classified directly to demand while both Variable and Commodity Costs are directly Functionalized to energy.	Fixed costs can be allocated in proportion to peak day allocator or partial plant allocator. Variable and Commodity costs are allocated in proportion to sales. UFG allocated in proportion to estimated UFG by class.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Engineering & Construction:			
Administration	Functionalized costs in proportion to a weighted average of transmission and distribution Mains and distribution Service Line plant in service.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Engineering	Functionalized costs in proportion to a weighted average of transmission and distribution Mains and distribution Service Line plant in service.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Construction	Functionalized costs in proportion to a weighted average of transmission and distribution Mains and distribution Service Line plant in service.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Gas Distribution Operations	Directly Functionalized costs to distribution.	Classified in proportion to distribution plant.	Allocated in proportion to distribution plant.
Gas Distribution Maintenance	Functionalized in proportion to a weighted average of transmission and distribution Mains and distribution Service Line plant in service.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Meter Provisioning	Directly Functionalized costs to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to Meter Provision costs by rate class.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Quality Assurance	Functionalized costs in proportion to a weighted average of transmission and distribution Mains and distribution Service Line plant in service.	Classified in proportion to transmission plant or distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Customer Service:			
Customer Service: Winnipeg Area	Functionalized 50% to distribution and 50% to onsite.	Classified in proportion to distribution plant or onsite plant, resp.	Allocated in proportion to distribution plant or onsite plant, resp.
Customer Service: Western Area	Functionalized 50% to distribution and 50% to onsite.	Classified in proportion to distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Customer Service: Eastern Area	Functionalized 50% to distribution and 50% to onsite.	Classified in proportion to distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Customer Information System	Functionalized 50% to distribution and 50% to onsite.	Classified in proportion to distribution plant or onsite plant, resp.	Allocated in proportion to transmission plant or distribution plant or onsite plant, resp.
Finance:			
Controller	Functionalized in proportion to Total Plant in Service, O&M Expenses and Labor.	Classified in proportion to Total Plant in Service, O&M Expenses and Labor.	Allocated in proportion to Total Plant in Service, O&M Expenses and Labor.
Regulatory & Strategic Planning	Currently Functionalized in proportion to Total Plant in Service.	Classified in proportion to plant in each function.	Allocated in proportion to plant in each functional classification.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Customer Accounting Services:			
Credit & Collection	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to Credit & Collection costs by rate class.
Uncollectibles	Functionalized costs directly to onsite.	Classified directly to customer.	Allocated in proportion to total dollar write-offs by rate class.
Meter Reading/System Support	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to number of Meter Readings by rate class.
Customer Inquiry	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to number of Customer Inquiry's by rate class.
Marketing & Sales:			
Residential and Small Commercial	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to Residential and Small Commercial marketing activities.
Communications	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to total marketing and sales.
Industrial and Large Commercial	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to Industrial and Large Commercial marketing activities.
Administration and New Markets	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to total marketing and sales.
Business Development	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to Business Development activities.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY			
	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
NGV	Functionalized costs directly to onsite.	Classified in proportion to onsite plant.	Allocated in proportion to total marketing and sales.
Human Resources:			
Human Resources	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Training	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Information Services:			
Administration	Functionalized costs in proprtion to Total Plant in Service.	Classified in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.	Allocated in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.
Systems	Functionalized costs in proprtion to Total Plant in Service.	Classified in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.	Allocated in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.
Data Systems	Functionalized costs in proprtion to Total Plant in Service.	Classified in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.	Allocated in proportion to production, pipeline, storage, transmission, distribution or onsite plant, resp.
Support Services:			

CENTRA GAS MANITOBA - COST OF SERVICE STUDY			
	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Office Services	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Records & Risk	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Purchasing	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Transportation	Functionalized costs in proportion to Labor subschedule.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to Labor subschedule.
Gas Supply & Legal:			
Corporate Secretary and Gas Supply	Functionalized costs directly to production.	Classified directly to demand.	Allocated in proportion to production plant.
Gas Forecasts	Functionalized costs directly to production.	Classified directly to demand.	Allocated in proportion to production plant.
Executive:	Functionalized costs in proportion to Total Plant in Service.	Classified costs in proportion to Labor subschedule.	Allocated in proportion to labor subreport.
Adjustment to Income:			
Expenses Capitalized	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY			
	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Expenses Deferred	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Inter-Company Recoveries	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Direct Capital	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Bad Debt Expense	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Business Growth	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Transportation Depreciation	Functionalized in proportion to adjustments to income subschedule.	Classified in proportion to adjustments to income subschedule.	Allocated in proportion to adjustments to income subschedule.
Depreciation & Amortization:			
Depreciation Expense	Functionalized in proportion to depreciation expense subschedule.	Classified in proportion to depreciation expense subschedule.	Allocated in proportion to depreciation expense subschedule.
Amortization	Functionalized directly to production.	Classified in proportion to production plant.	Allocated in proportion to production plant.
Depreciation Charged to Operations	Functionalized directly to production.	Classified in proportion to production plant.	Allocated in proportion to production plant.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY

	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Depreciation on Disallowed Assets	Functionalized directly to production.	Classified in proportion to production plant.	Allocated in proportion to production plant.
Amortization of Cust. Contrib.	Functionalized in proportion to transmission plant.	Classified in proportion to transmission plant.	Allocated in proportion to transmission plant.
Taxes:			
Taxes Other Than Income Tax	Functionalized in proportion to Total Plant in Service.	Classified in proportion to plant in each function.	Allocated in proportion to plant in each functional classification.
Revenue Taxes	Functionalized in proportion to Revenue Requirements.	Classified costs in proportion to Revenue Requirements.	Allocated in proportion to Revenue from rates.
Federal Income Taxes	Functionalized in proportion to Rate Base.	Classified in proportion to Rate Base.	Allocated in proportion to Rate Base.
Sales & Transportation Revenue Accounts	Functionalized in proportion to Revenue Requirements	Classified costs in proportion to Revenue Requirements.	Allocated in proportion to Revenue from rates.

CENTRA GAS MANITOBA - COST OF SERVICE STUDY			
	(1) FUNCTIONALIZATION STUDIES:	(2) CLASSIFICATION STUDIES:	(3) ALLOCATION STUDIES:
Other Revenue:			
Rental Income	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to number of residential and SGS customers.
Late Payment Charge	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to number of residential and SGS customers.
Finance Contracts	Functionalized in proportion to transmission O&M expenses.	Classified in proportion to transmission O&M expenses.	Allocated in proportion to transmission O&M expenses.
Broker Revenue	Functionalized in proportion to transmission O&M expenses.	Classified in proportion to transmission O&M expenses.	Allocated in proportion to transmission O&M expenses.
NGV Revenue/Remove Impact of ERP	Functionalized directly to onsite.	Classified directly to customer.	Allocated in proportion to number of residential and SGS customers.
Other	Functionalized in proportion to transmission O&M expenses.	Classified in proportion to transmission O&M expenses.	Allocated in proportion to transmission O&M expenses.

APPENDIX "B"

Table J
Summary of Allocated Costs
Centra Method vs. Corrected Recommended Method

Customer Class	Centra Peak Day Method	Schedule B Results	Schedule A Results	Chown Method (Table B)	Centra Preferred Method
Residential	151,403,279	150,472,752	150,463,343	149,488,537	149,240,102
Small GS	16,543,470	16,466,243	16,471,406	16,341,708	16,134,172
Large GS	75,997,373	75,384,467	75,384,154	74,989,448	74,603,129
High Volume	10,511,350	10,353,012	10,342,621	10,269,617	10,550,939
Main Line	2,794,878	2,694,718	2,694,097	2,740,347	3,044,816
Interruptible	12,523,474	14,391,663	14,419,236	16,025,203	16,153,610
Spl Contracts	358,195	357,162	357,162	357,162	505,251
Total	270,132,017	270,132,017	270,132,018	270,132,018	270,132,019