

## EXECUTIVE SUMMARY

This Decision of the British Columbia Utilities Commission deals with Phase 2 of the hearing concerning the BC Gas Utility Ltd. ("BC Gas") Revenue Requirements Application for 1994 and 1995. Phase 1 of the hearing commenced May 2, 1994, and dealt with several elements of a requested rate increase to captive customers. The Commission, by Order No. G-29-94, rescheduled the examination of certain other issues, such as the Integrated Resource Plan ("IRP"), revenue forecasts, and revenue stabilization, as separate phases of the hearing. The Commission issued a Phase 1 Decision on June 16, 1994 which contained the Commission's findings on the Phase 1 issues, including acceptance of a negotiated settlement on capital additions and operating and maintenance expenditures.

Phase 2 of the hearing commenced on June 6, 1994 and dealt with the BC Gas sales and revenue forecasts, a proposal for a Rate Stabilization Adjustment Mechanism, and an evaluation of full decoupling mechanisms. Phase 3 of the hearing examined the BC Gas IRP, Demand-Side Management proposals, and main extension policy.

In this, the Phase 2 Decision, the Commission confirmed the following:

1. The Revenue Stabilization Adjustment Mechanism ("RSAM") proposed by BC Gas is accepted with the exception of the 5 percent 'deadband'. BC Gas is directed to implement the RSAM with no deadband (in other words, a 'zero percent' deadband). In order to mitigate year-to-year rate fluctuations for consumers, the Utility is to file, by October 31, 1994, a proposal for amortizing the deferral account balances of both the RSAM and the Gas Cost Reconciliation Account over a three-year period.
2. BC Gas is directed to develop a proposal for Demand-Side Management ("DSM") incentive mechanisms appropriate for BC Gas, in time for consultation and review by intervenors and other stakeholders prior to filing with the Commission by December 31, 1994.
3. Although the Commission's direction to BC Gas to implement an RSAM with a zero deadband reduces much of the contentiousness surrounding the short-term sales forecasts, the Commission gave careful consideration to the forecasting methodology and to the price elasticity estimates included in the sales and revenue forecasts. The Commission concluded that it could not accept the price elasticity estimates of BC Gas and directed the Utility to exclude those adjustments from the forecasts included in the current Application.

4. During the hearing, a working committee report and recommendations on certain controversial accounting issues was submitted. As the guidelines applied to, and were agreed to, by other gas utilities, and as BC Gas agreed with the guidelines and no intervenor raised any issue with them during the hearing, the Commission as a whole approved the recommendations and guidelines separately prior to this Decision. BC Gas is directed, however, to conduct a study on overhead capitalization methodologies and to file a report with the Commission before September 30, 1995.

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## **1.0 BACKGROUND**

### **1.1 BC Gas Utility Ltd.**

BC Gas Utility Ltd. ("BC Gas", "the Utility", the "Company" or "the Applicant") is a natural gas distribution utility providing gas sales or transportation service to over 666,000 residential, commercial and industrial customers in British Columbia. BC Gas Utility Ltd. was formed in July 1993, when the gas utility assets were separated from the non-regulated business ("NRB") assets of BC Gas Inc. which had encompassed both regulated utility assets and NRB assets. Subsequent to this change, BC Gas Inc. became the legal name of the holding company which holds 100 percent of both utility and non-utility assets. For a more complete summary of the corporate structure of BC Gas and its history, the reader is directed to the Decision concerning Phase 1 of the BC Gas 1994/95 Revenue Requirements Hearing.

### **1.2 Application**

On November 22, 1993, BC Gas filed a 1994 and 1995 Revenue Requirements Application ("the Application") which sought interim and permanent rates for 1994 and 1995, pursuant to Sections 64, 67 and 106 of the Utilities Commission Act ("the Act") for all divisions except Fort Nelson. The Application also sought a 3.63 percent increase on captive rates in 1994 and a further 5.73 percent increase on captive rates for 1995, based in part on forecast total sales and transportation service volumes of 226,892 TJ for 1994 and 227,695 TJ for 1995. This portion of the Application was dealt with by the Phase 1 Revenue Requirements Decision of June 16, 1994.

In the Application, the Utility also requested approval of a revenue stabilization adjustment mechanism ("RSAM") effective January 1, 1994, which would stabilize the Company's margin from variances between the actual and forecast use-per-account for residential and commercial customers during the months of November to March. This part of the Application became the subject of Phase 2 of the 1994/95 Revenue Requirement hearing to which this Decision pertains.

## **2.0 REVENUE STABILIZATION ADJUSTMENT MECHANISM ("RSAM")**

### **2.1 Background**

Prior to its April 15, 1994 Phase B Rate Design Application, BC Gas had applied for approval of a Weather Stabilization Adjustment Mechanism ("WSAM") which was intended to mitigate the impact of abnormal weather on the Utility's revenues. BC Gas subsequently asked to withdraw the WSAM. The Commission approved the request by Order No. G-33-93, and directed the Utility to bring forward a modified WSAM or other mechanism in the Phase B Rate Design Hearing. During the Phase B hearing,

BC Gas raised a motion to withdraw decoupling and WSAM as issues in the hearing. The Commission accepted the motion but, in its Phase B Rate Design Decision, directed the Company to implement, at a minimum, a WSAM effective January 1, 1994, and to bring forward a full decoupling proposal in time for its next revenue requirements hearing. Consequently, the issues of revenue stabilization and revenue decoupling were dealt with during Phase 2 of the 1994/95 Revenue Requirements hearing.

## **2.2 The BC Gas RSAM Proposal and Decoupling Position**

The current BC Gas RSAM proposal follows the Utility's previous WSAM proposal and the Commission's directive in the Phase B Decision that BC Gas implement some form of WSAM by January 1, 1994. BC Gas filed its RSAM proposal with its Revenue Requirements Application. The Utility chose not to file a decoupling proposal, but instead offered an evaluation of full decoupling.

The BC Gas proposed RSAM would stabilize the Company's revenues by placing in a deferral account any variance in winter revenues from the residential and commercial customers that was above or below forecast by more than 5 percent. Debate centered around the desirability of this 5 percent 'deadband'. Although utilities have traditionally absorbed the risk associated with abnormal weather patterns, the BC Gas RSAM proposal in this hearing was linked to the increased revenue volatility resulting from seasonal rates. BC Gas indicated during the hearing that the 5 percent deadband was intended to return the utility to normal levels of risk for a gas utility.

Several alternatives to the RSAM proposed by BC Gas were discussed in evidence and in testimony during the hearing. These alternatives to the RSAM as applied for included:

- no stabilization mechanism (the status quo),
- RSAM with a modified deadband (0 to 4 percent),
- full decoupling.

### **2.2.1 The RSAM Deadband**

Considerable discussion took place around the desirability and appropriate size of a deadband on the RSAM mechanism. The Company's position was that the volatility of seasonal rates required a revenue stabilization mechanism, but that no RSAM would be preferable to an RSAM with a modified deadband, i.e. anything other than plus or minus five percent (T7: 734-735).

Key issues related to the deadband proposal were the relationship between the width of the deadband, the resulting size of deferral accounts and the potential impact on the year-to-year volatility of rates. A

5 percent deadband would tend to lead to fewer and smaller deferral account accruals and, therefore, the Company argued, would have a smaller impact on rates. Some parties questioned whether deferral account balances would not tend to reach zero over time, as weather variations would tend to vary both above and below normal.

A second issue related to the deadband proposal was whether or not the absence of a deadband would compensate for any intentional or accidental bias in the Utility's revenue forecasting. No party to the hearing suggested or offered any evidence to suggest that intentional 'gaming' of the revenue forecasts had occurred or was currently taking place. However, considerable discussion took place as to whether eliminating any revenue impact from incorrect use-per-account forecasts was sufficient reason of itself to eliminate the deadband.

Mr. Wallace for Celgar Pulp Company, Cominco Ltd. and Weyerhaeuser Canada Ltd. ("Celgar et al.") submitted in argument that the need for, or desirability of, the 5 percent deadband had not been established, and recommended acceptance of the BC Gas RSAM proposal, but with a zero deadband. Mr. Rawlyk for Energy Resources Management ("ERM") also submitted in argument that a 5 percent deadband added "an unnecessary level of complexity" and recommended that an RSAM with a zero deadband be approved, possibly phased-in, beginning with a 5 percent deadband and reducing to a zero deadband after one or two years.

### 2.2.2 Full Decoupling

In its Phase B Decision (p. 68), the Commission directed BC Gas to file a proposal on the merits of full decoupling for consideration at its next revenue requirements hearing. In its 1994/95 Revenue Requirement Application, BC Gas filed a position on full decoupling which concluded that full decoupling was inappropriate for BC Gas at this time and that the RSAM was preferable to full decoupling. The Consumers' Association of Canada (B.C.) et al ("CAC(BC) et al.") submitted in argument that the Utility had failed to comply with a clear Commission directive in the Phase B Decision to come forward with a full decoupling proposal, and that the Commission should direct the Utility to comply by coming forward with an actual proposal for full decoupling (T15: 1819-20).

The B.C. Energy Coalition ("Energy Coalition") presented a substantial amount of evidence during the hearing in support of decoupling, and submitted that "...a simple decoupling mechanism is the most practical approach for beginning the alignment of shareholder and customer interests" (T15: 1795). During the hearing, the Energy Coalition presented an initial proposal for a decoupling mechanism (Exhibit 68) that included a modification to the existing Gas Cost Reconciliation Account ("GCRA") mechanism, fixed/variable cost-based rates for industrial customers, a revenue per customer decoupling

mechanism with a 5 percent weather deadband, and incentives tied to utility performance. However, the Energy Coalition indicated that this was not intended as a definitive decoupling mechanism for BC Gas, but that the Commission should "...establish fundamental guiding principles for a decoupling mechanism, and direct the Company to present a detailed proposal consistent with those guidelines" (T15: 1796-97), and that intervenors and stakeholders should be invited to participate in the development of the proposal (T9: 1076, T15: 1797, 1803).

### **2.3 Commission Determination**

In its application, testimony and final argument, BC Gas maintained that full decoupling of sales from profits is not an *essential* precondition for ensuring that the utility pursues only those sales that are in the best interests of customers and society. The Commission agrees with this assessment. However, a key objective of the Commission is to minimize the need for detailed regulatory control of the utility by ensuring that, wherever possible, the incentives of regulation are aligned with the public interest.

Integrated resource planning shifts the focus of utility regulation from minimizing the cost of commodity provision to minimizing the cost of energy services. The Commission agrees with the Energy Coalition that decoupling distribution utilities' sales from short-run profits should be seen as a regulatory improvement in terms of better aligning regulatory incentives with the public interest. However, the Commission is not convinced that the decoupling proposal of the Energy Coalition is warranted. Instead, the Commission finds itself in agreement with Mr. Wallace (T15: 1809) who suggested that the general objective of decoupling can be largely achieved with the elimination of the 5 percent deadband in the BC Gas RSAM proposal.

In the Commission's view, the RSAM with a zero deadband should have the following beneficial effects.

- The incentive for the Company to pursue short-run sales in the winter period would be eliminated, thereby eliminating the potential conflict between the demand-side pursuit of economically efficient energy services, including fuel-switching and short-run profit maximization for the gas utility.
- An incentive would remain to pursue short-run sales in the summer period, with potential benefits to load factor for the entire system, for core customers in particular.
- Sales forecast risks to utility shareholders would be substantially reduced for sales to the weather sensitive residential and commercial customers throughout the winter period, which represents the major revenue volatility of the Utility.

- Because marginal cost pricing initiatives, such as seasonal rates, would no longer be associated with increased risks for shareholders, utility management would be less reticent to support such improvements.
- The contentiousness associated with regulatory review of short-run energy demand forecasting would be largely eliminated.
- The incentive for the Utility to operate as efficiently as possible at all times would not be diminished relative to the existing regulatory structure.
- The regulatory complexity of implementing the RSAM with zero deadband seems small relative to alternatives that have been discussed (notably ERAM type mechanisms, the previous weather stabilization mechanism of BC Gas and the proposal of the Energy Coalition).

BC Gas expressed a concern that the RSAM with zero deadband could lead to greater year-to-year variability in rates, because the revenue surpluses or shortfalls in any given year would be much higher than with a 5 percent deadband. To probe this issue, BC Gas was asked in the hearing to test alternative time periods for amortization of RSAM surpluses or deficits (T9: 1030-1032). The BC Gas response filed by letter of June 24, 1994 presented one, two and three-year amortization periods with deadbands of 0 percent, 3 percent and 5 percent (the responses for one and three-year periods are attached as Appendix A). The evidence filed by the Utility shows that a three-year amortization period with a 0 percent deadband would not lead to greater variability of rates than would occur under BC Gas' RSAM proposal of a one-year amortization with a 5 percent deadband. BC Gas did not expressly argue against a three-year amortization period, but in testimony and final argument, it did express concern with the use of long amortization periods, noting that the recovery of significant deferral account balances has been a problem in other jurisdictions.

**The Commission accepts the BC Gas RSAM proposal, effective January 1, 1994, but with the following modifications. The RSAM will not have a deadband (in other words, it will have a zero deadband). A deferral account balance will accumulate the annual RSAM debits and credits, and one-third of the net balance will be allocated to recovery in applicable rates in the following year so as to minimize the year-to-year variability in rates. BC Gas should come forward, no later than September 15, 1994 with a specific proposal recommending parallel mechanisms to be used for the three-year amortization of both the GCRA and RSAM accounts. This will be circulated to interested parties, and submitted to the Commission for approval by October 31, 1994.**



BC Gas is reminded that the Commission's June 10, 1994 Decision in the matter of Return on Common Equity determined that the BC Gas rate of return on equity should be reduced by ten basis points if RSAM (0 percent) was determined in this Decision to be appropriate.

As noted by several intervenors, the issue of decoupling is frequently linked to the provision of appropriate utility incentives for a range of desirable utility services. This Commission intends to approach the development of specific incentive mechanisms with great caution. Any mechanism must be evaluated not just in terms of the potential benefits, but also in terms of the potential costs associated with the difficulty of attaining effective regulatory oversight. Nonetheless, experience in other jurisdictions as well as testimony and argument with respect to RSAM suggest that an incentive mechanism for demand-side management may be desirable for BC Gas. Witnesses for both BC Gas and the Energy Coalition recommended consideration of such mechanisms (Exhibit 3, Tab 2, Page 17 and 18 and Exhibit 57, Page 22).

**The Commission directs BC Gas to develop a proposal for demand-side management incentive mechanisms appropriate for BC Gas. The Commission believes consultations with intervenors and other stakeholders are desirable, and suggests the use of the stakeholder collaborative that has already been established for the IRP to review the alternatives before filing the BC Gas proposal with the Commission by December 31, 1994.**

### **3.0 SALES VOLUME AND REVENUE FORECASTS**

BC Gas applied for rates based on total forecast gas sales and transportation volumes of 226,892.4 TJ and 227,694.6 TJ for 1994 and 1995, respectively. This was the sum of the demands for different customer classes and was arrived at through several combined methodologies. The Phase 2 hearing provided an opportunity for Commission review of the adequacy of the BC Gas forecasts.

#### **3.1 Industrial Volumes and New Customer Additions**

Seasonal and industrial sales and transportation volumes were forecast using a 'bottom-up' approach, by canvassing large volume customers. BC Gas stated during the hearing that the margins on industrial sales were significantly reduced from the past as a result of the increasing transfer of demand charges from industrial to residential/commercial customer classes (T7: 729). The Company also indicated that because of the rate structure of the industrial customers (Exhibit 2, Tab 3), volumetric changes by these customers do not have a large impact on the Company's revenues.

Customer additions on the Lower Mainland, Inland and Columbia systems were forecast to be approximately 21,000 new residential and 2,000 new commercial accounts for each of 1994 and 1995 (Exhibit 1A, Tab 6, Page 1-06-1-018).

No concern was expressed by any intervenor or Commission staff about either forecast of the interruptible sales volumes or new customer additions.

### **3.2 The Residential and Commercial Sales Volume Forecasts**

A key item of debate relating to the residential and commercial sales forecast was the issue of the price elasticity adjustment to the forecast. BC Gas had developed a 'trend' forecast based on historical use versus normal weather over past years and then adjusted that forecast for various non-weather impacts.

The concern for forecasting accuracy is tied to the question of decoupling, as noted in the previous section. If BC Gas' sales revenues are largely decoupled from profits, short-run forecasting error has little effect on the relative gains and losses between shareholders and customers. The Commission Decision to institute an RSAM with a zero deadband thus reduces the importance of forecasting accuracy. Nonetheless, the forecasting method of BC Gas was reviewed in some detail in the hearing, and some challenging questions emerged.

The methodology for developing the 'trend' forecast was explained by Mr. Sanderson (T8: 898-899). The basis of the trend forecast is a regression of 12 months of monthly billed consumption plotted against monthly temperatures, which is used to determine the empirical relationship between consumption and temperature. The 'best fit' curve obtained by that regression is then combined with the ten year normal temperature to calculate the normal use for each month in the 12 months of the forecast. This normal use for each of those 12 months is then summed to provide an annual forecast.

A number of adjustments were made to the trend forecast to account for items such as appliance efficiency legislation, load building programs, Demand-Side Management ("DSM"), price elasticity, and the Utility's Measurement Equity Program. (The Measurement Equity Program refers to the Utility's ongoing change from meters that do not adjust the volume of gas sold to account for the temperature at the time of measurement, to meters that do make that adjustment.) Debate in the hearing concerning adjustments to the trend forecast focused almost exclusively on the price elasticity adjustment, and the econometric methodology used to estimate the magnitude of that adjustment. BC Gas submitted that the methodology was sound and that the estimate should be accepted by the Commission, while others submitted that the estimate was imprecise, or that the evidence supporting the need for a price elasticity adjustment was inconclusive (T15: 1824).

There is little doubt that customers are in some way responsive to price change (price elasticity). The challenge is to attain sound empirical estimates of that response. For this purpose, the regression analysis techniques applied by BC Gas are consistent with some current aggregate applications of econometrics to natural gas demand forecasting. However, scrutiny of the results and methodology seriously undermined the claim that the empirical estimates could be considered sound for the purposes to which they were applied.

The full response to a change in the price of natural gas relative to other energy forms can involve several levels of decisions:

- (i) Potential new gas customers may alter their decision about whether or not to acquire natural gas service; this is manifested by a change in the future number of accounts. The commercial market and apartment/townhouse market are most sensitive to this potential. Electricity is the most likely alternative to natural gas in this case, although for single family residences in certain locations, oil, propane or wood may also be alternatives.
- (ii) Current gas customers may switch away from natural gas; this response, unlikely at today's prices, also results in a change in the future number of accounts.
- (iii) Current customers may marginally substitute between other energy forms and natural gas; this will affect use-per-account. Examples of such decisions are natural gas versus propane for barbecues, natural gas versus wood for fireplaces, natural gas versus electricity for supplemental space heating, and natural gas versus electricity for certain appliances.
- (iv) Current customers may marginally substitute between capital and natural gas; this will affect use-per-account. An example is to weatherize or better insulate a house heated by natural gas, or to replace existing natural gas furnaces and appliances with more efficient ones.
- (v) Current customers may change their use of existing natural gas equipment; this will affect use-per-account. An example is a decision to lower the thermostat setting in a house heated by natural gas, or on a natural gas domestic water heater.

The time required for each of these responses to manifest itself varies. Response (v) is assumed to occur completely in the short-term. The other four responses are assumed to take much longer, depending on the rate of appliance and heating equipment turnover and of new building construction. For a two-year

demand forecast — the issue in this case — the objective is to estimate the full magnitude of Response (v) and the short-term component (i.e. the partial adjustment) of the other four responses.

This is presumably what is estimated by the BC Gas model. However, there appears to be a methodological inconsistency. BC Gas has separated its forecast into two components; changes in number of accounts and changes in use-per-account. The elasticities from the residential and commercial econometric models are used to adjust downward the use-per-account forecast. Yet these elasticities appear to have been calculated from data that includes all historical natural gas consumption, without normalizing for changes in the number of accounts. If this is true, the elasticities were estimated from all five components of the response to a price change, but are then assumed to represent sound estimates for only the aggregation of Responses (iii), (iv) and (v).

This inconsistency appears to have occurred, based on the information provided by BC Gas; but it could be that the Commission has misunderstood the BC Gas methodology because of incomplete information. If this inconsistency has occurred, it could be resolved by assembling time series data of use-per-account and using these to estimate a use-per-account price elasticity that is separate from the forecast of the number of accounts, effectively disaggregating the estimation and forecasting of Responses (i) and (ii) from Responses (iii), (iv) and (v).

The second challenge to the BC Gas methodology is not as easy to correct. Under cross-examination, Mr. Gillies of BC Gas agreed that electricity is currently the major alternative to natural gas in the residential and commercial sectors (T8: 898). This holds for price Responses (i), (ii) and (iii) (however negligible (ii) is likely to be). Unfortunately, the electricity variable was not found to be statistically significant and was therefore omitted from the model, both for the total energy demand specification and for the relative energy shares specification. This occurred in both the residential and commercial sector models (T8: 901, T9: 1016-1022).

A fundamental problem arises from the exclusion of electricity. This exclusion may bias the estimated values of the other explanatory variables as well as increasing their statistical significance. Mr. Gillies was asked to report the results when electricity is included (T9: 1021-1022); the response was received in the June 24, 1994 letter from BC Gas. As expected, the inclusion of electricity changed the coefficients for other variables. In the residential model, the natural gas versus oil price ratio, which appears to be the most important coefficient for the elasticity determination with BC Gas's chosen specification, falls from a value of  $-.046$  to  $-.013$ , a decrease of over 70 percent.

The exclusion of electricity seems justified in terms of the standard social science approach to empirical analysis. Econometricians seek to avoid committing a Type I Error, the error of incorrectly concluding

that a variable is significant. To this end, they use stringent statistical criteria; in a statistical sense they will omit a variable if they cannot say that they are sure the variable will be found significant in 19 out of 20 tries. Electricity failed this test and was omitted (T9: 1022-1024).

However, the greater the emphasis on avoiding a Type I Error, the greater the chance of committing a Type II Error, that is, incorrectly concluding that a variable is not significant. Statistical power is a measure that assesses the likelihood of Type II Error; high statistical power implies low risk of Type II Error (statistical power = 1 minus the probability of a Type II Error). BC Gas was asked to provide the statistical power of its analysis (T9: 1022-1023), and the Utility responded in its June 24, 1994 letter. Statistical power for the electricity variable was low, 31 percent for the commercial model. (Although BC Gas did not provide information regarding the residential model, it appears that statistical power will be lower for the electricity variable in the residential model.) This means that the BC Gas specification had a 69 percent chance of committing a Type II Error, that is, of incorrectly omitting the electricity variable in the commercial model. This is a serious concern, given the BC Gas admission that electricity is an important determinant in the aggregate consumer response to a change in the price of natural gas.

### **3.3 Commission Determination**

The Commission's decision on the RSAM proposal reduces the contentiousness surrounding short-term demand forecasting. Inaccurate forecasts will no longer result in a significant win-lose trade-off between customers and shareholders. However, sound forecasting is still desirable in order to minimize the risks of significant RSAM account balances that will in turn increase year-to-year rate variability.

BC Gas forecasts short-term natural gas demand based on a forecast of total accounts and a forecast of use-per-account. This latter is corrected for weather, technological trends, efficiency standards and other relevant factors. Ideally, one of the factors would be price, especially during times of significant price change for natural gas or a competing energy form.

**However, based on the evidence in this hearing, the Commission cannot at this time accept as sound the price elasticity estimates used to adjust the use-per-account forecast of BC Gas. For the two year forecast period covered by this application, BC Gas shall use the use-per-account forecasts without adjustment for price effects.**

**In future applications, BC Gas may wish to again attempt to estimate the short-term effect of price changes on natural gas demand. However, the econometric expertise at BC Gas may be more prudently applied if such analysis were to focus at the use-per-account and end-use level. It**

**is the Commission's understanding that this is an area of greatly expanded interest in the application of econometrics to natural gas, one that can support the important research objective of better detecting the effect of demand-side management programs on natural gas consumption.**

#### **4.0 ACCOUNTING ISSUES**

During the workshops and the alternative dispute resolution process preceding the Phase 1 hearing, certain controversial accounting issues were identified. Due to the highly technical nature of these issues, the Commission approved the proposal of BC Gas that they be dealt with by way of a working committee which would report to the Commission on or before June 6, 1994, the commencement of the Phase 2 hearing.

Exhibit 35 containing the recommendations and guidelines of the working committee, and Exhibit 35A setting out BC Gas' agreement with the guidelines, were filed in the Phase 2 hearing. No intervenor raised any issue in the hearing regarding the report or the guidelines. This Commission panel is cognizant that these same guidelines were also agreed upon by other gas utilities which are under the Commission's jurisdiction, and have been approved separately by the Commission as a whole.

**The Commission therefore does not consider a second approval is required, other than to confirm that the net of tax AFUDC rate is effective January 1, 1994, and to direct BC Gas to conduct a study on the Utility's overheads capitalized. In particular, the Commission is interested in the relative overhead capitalization methodologies related to out-sourced activities versus in-house executed projects. The Utility is directed to consult with Commission staff to establish a suitable reporting format, and file a report with the Commission before September 30, 1995 as part of the 1996 revenue requirements application.**

DATED at the City of Vancouver, in the Province of British Columbia this 4<sup>th</sup> day of August, 1994.

*Original signed by M.K. Jaccard*

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Dr. M.K. Jaccard  
Chairperson

*Original signed by F.C. Leighton*

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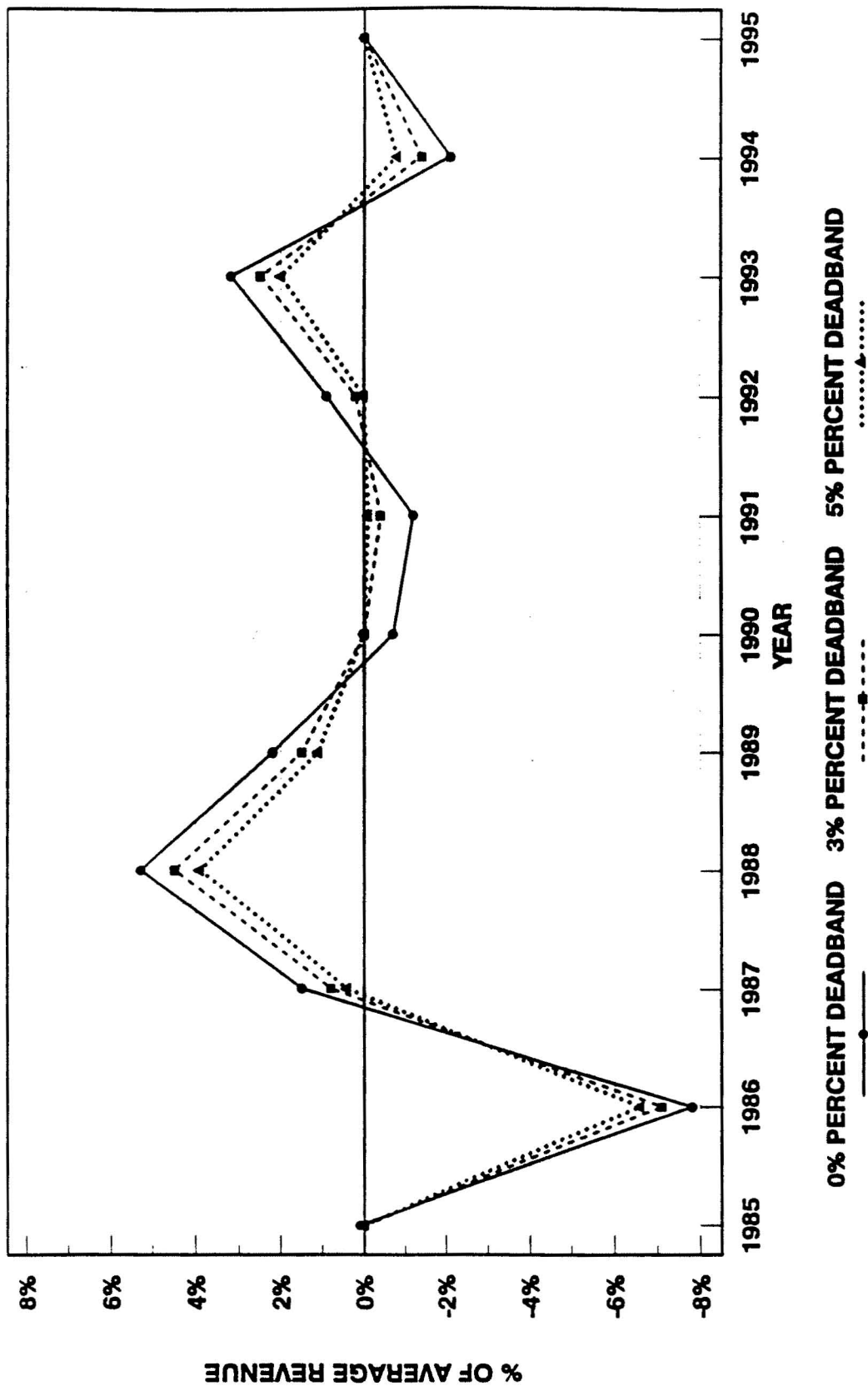
F.C. Leighton  
Commissioner



**BC Gas**

**BC GAS UTILITY LTD.**

**RSAM & GCRA - RESIDENTIAL RATE VARIABILITY  
ONE YEAR RSAM AMORTIZATION**

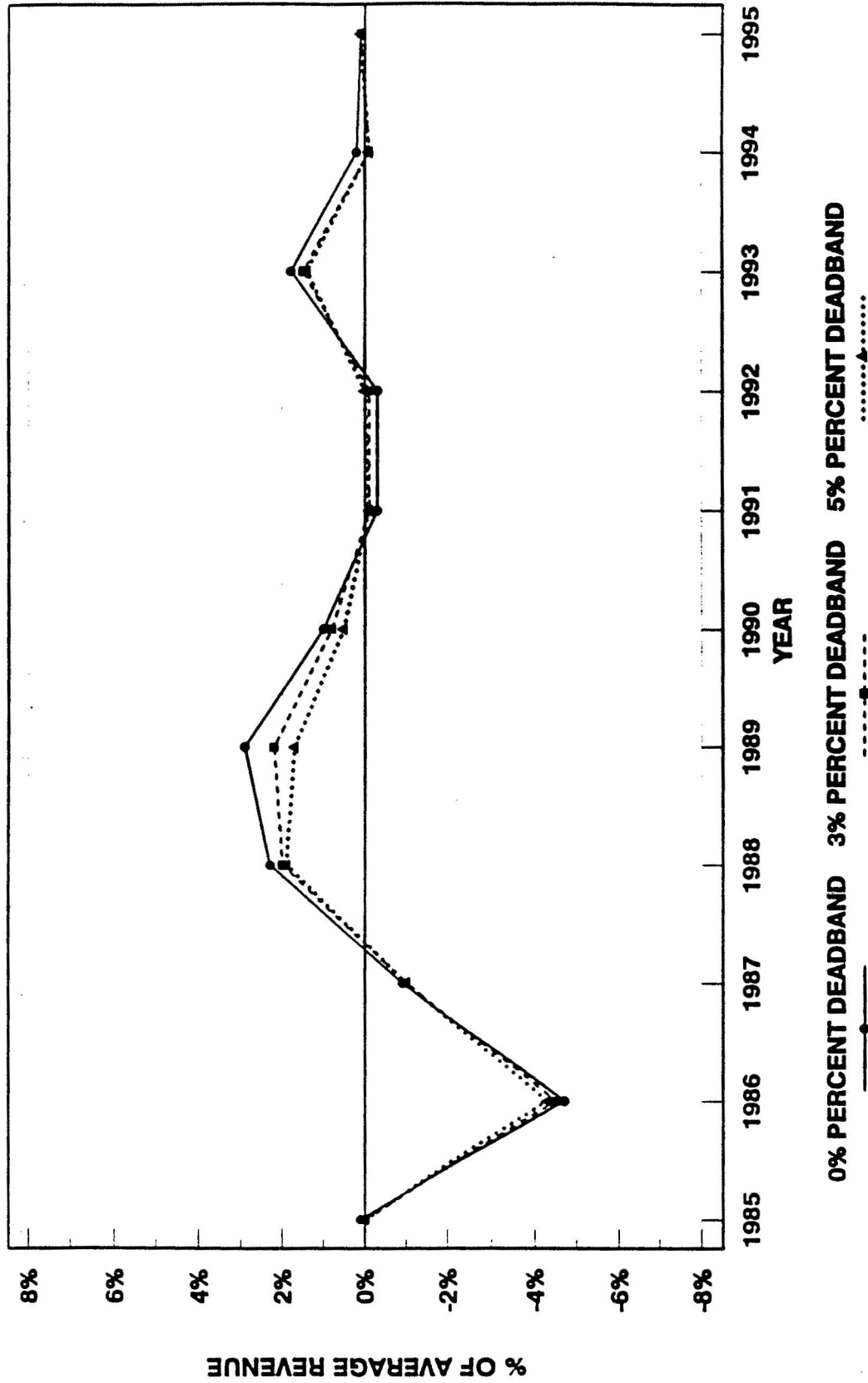


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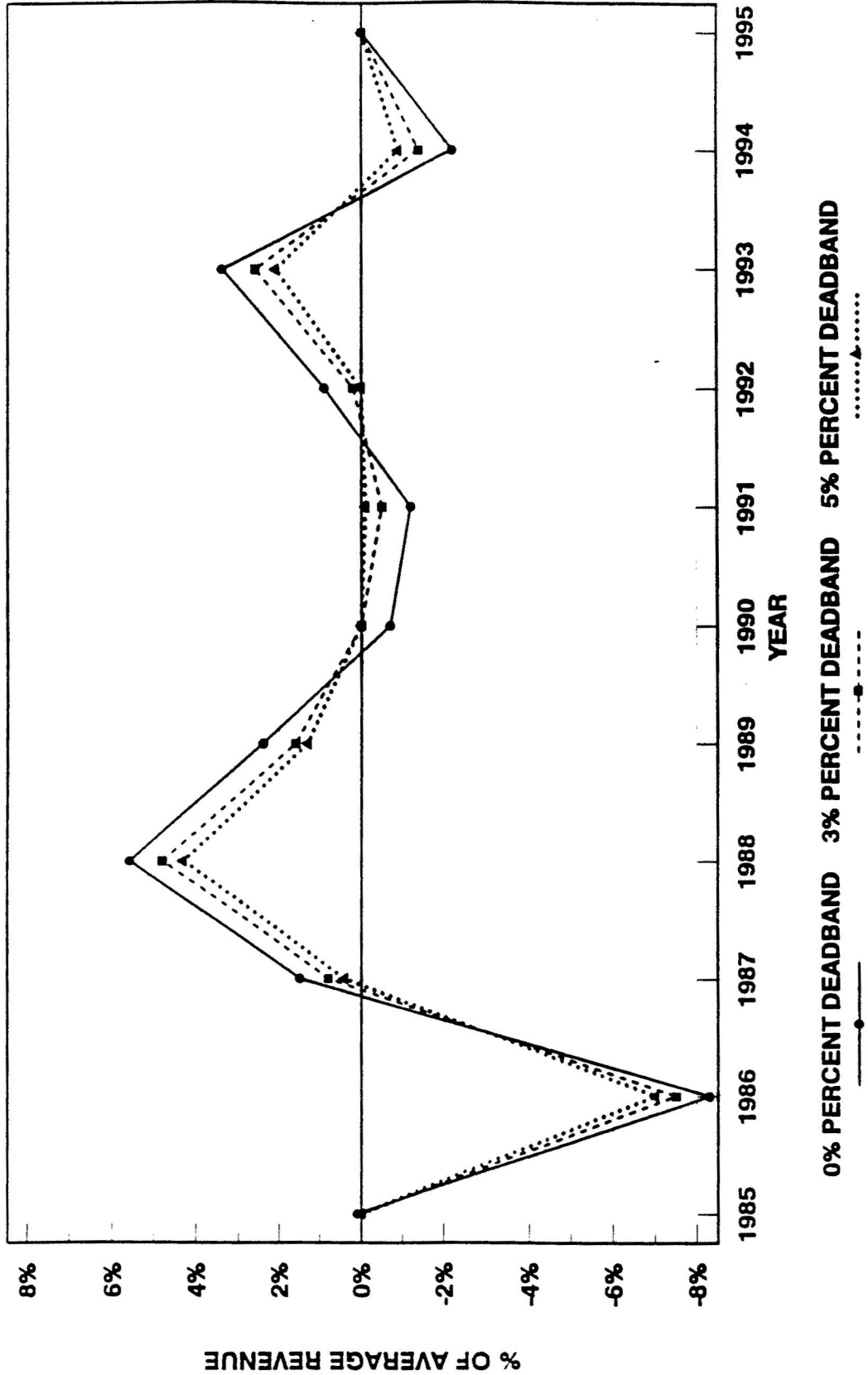
**BC GAS UTILITY LTD.**  
**RSAM & GCRA - RESIDENTIAL RATE VARIABILITY**  
**THREE YEAR RSAM AMORTIZATION**



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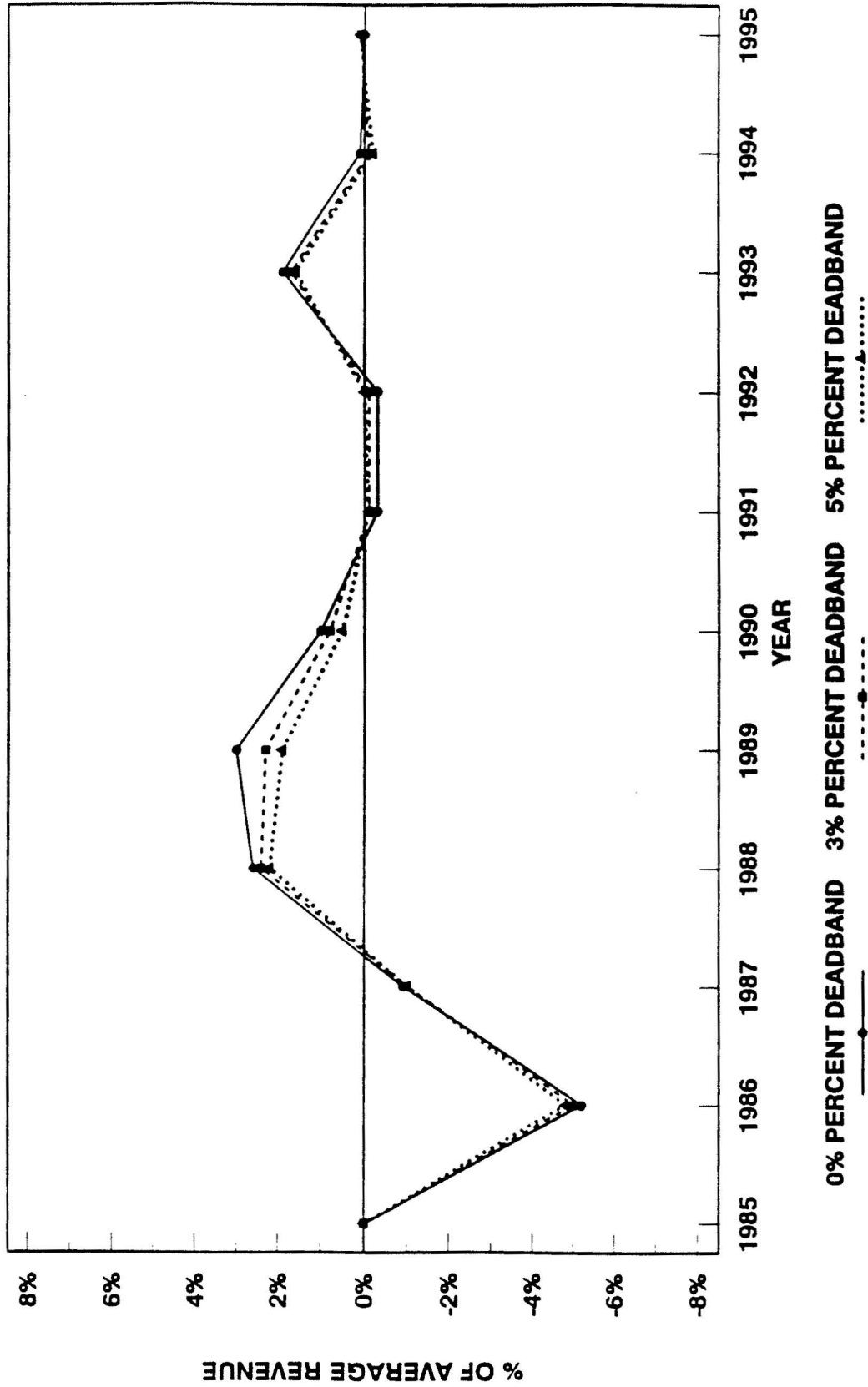
**BC GAS UTILITY LTD.**  
**RSAM & GCRA - COMMERCIAL RATE VARIABILITY**  
**ONE YEAR RSAM AMORTIZATION**



0% PERCENT DEADBAND    3% PERCENT DEADBAND    5% PERCENT DEADBAND



**BC GAS UTILITY LTD.**  
**RSAM & GCRA - COMMERCIAL RATE VARIABILITY**  
**THREE YEAR RSAM AMORTIZATION**



APPEARANCES

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P. KACIR	Crestbrook Forest Industries Ltd.; Consumers' Packaging; Elkview Coal Corporation; Hiram Walker & Sons Ltd.; and Fording Coal Ltd.
J.G. SMITH	The Agriculture Committee of the Chilliwack Chamber of Commerce
H. LEDDERHOF	Ecology Circle
MS. P.E. SCHMID	William Storage Company
MS. C. REARDON	Westcoast Environmental Law Society
<hr/>	
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ALLWEST COURT REPORTERS LTD.	Court Reporters & Hearing Officer

**LIST OF EXHIBITS**

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