

SIXTH FLOOR, 900 HOWE STREET, BOX 250  
VANCOUVER, B.C. V6Z 2N3 CANADA  
web site: <http://www.bcuc.com>



**BRITISH COLUMBIA  
UTILITIES COMMISSION**

**ORDER  
NUMBER** G-132-05

TELEPHONE: (604) 660-4700  
BC TOLL FREE: 1-800-663-1385  
FACSIMILE: (604) 660-1102

**IN THE MATTER OF  
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**An Application by Terasen Gas Inc. for Approval  
of 2006 Revenue Requirements and Delivery Rates**

**BEFORE:** L.F. Kelsey, Commissioner )  
L.A. Boychuk, Commissioner ) December 9, 2005

**O R D E R**

**WHEREAS:**

- A. Commission Order No. G-51-03 approved for Terasen Gas Inc. ("Terasen Gas" or "Company") a Negotiated Settlement for 2004 to 2007. The Settlement requires Terasen Gas to hold an Annual Review each November with projections and forecasts provided to participants three weeks in advance of a proposed date to conduct the Annual Review; and
- B. On September 30, 2005, Terasen Gas proposed a regulatory timetable for its 2005 Annual Review that included a filing of Annual Review materials by October 17, 2005, an Annual Review on November 10, 2005 and an anticipated Commission Decision by December 9, 2005; and
- C. By Commission Order No. G-104-05, the Commission accepted Terasen Gas' proposal and established a Regulatory Timetable for the Annual Review and directed Terasen Gas to provide a copy of the advance Annual Review materials to Parties to the 2004-2007 Negotiated Settlement; and
- D. By letter dated October 17, 2005, Terasen Gas advised the Commission and Parties to the 2004 – 2007 Negotiated Settlement that due to updating required in the customer mix related to movements in the Rate Classes 2 and 3 and the forecast average customer use rates for core rate classes, Terasen Gas would need to file its advance Annual Review materials on October 19, 2005; and
- E. By Commission Order No. G-106-05, a revised Regulatory Timetable was established; and
- F. Terasen Gas filed the advance Annual Review materials on October 19, 2005 seeking a 2006 net revenue requirement increase of \$14.3 million after application of the Earnings Sharing Mechanism of the 2004-2007 Negotiated Settlement. On October 27, 2005, the Commission and Intervenors issued information requests to Terasen Gas related to the advance materials, with the Company responding to those information requests on November 7, 2005; and

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- G. On November 7, 2005 Terasen Gas revised the net revenue requirement increase to \$10.7 million in accordance with Commission Order No. G-98-05 that approved transactions related to the Southern Crossing Pipeline ("SCP") and the Inland Pacific Connector. Commission Order No. G-98-05 requires the debiting of an annual charge of \$3.6 million (based on monthly installments) against the Midstream Cost Reconciliation Account, with an equal and offsetting amount to be credited to the delivery margin revenue account, for a limited period as a unique and unusual transaction in the circumstances of the SCP and the termination of the BC Hydro Transportation Service Agreement ("TSA"). The debiting and crediting will commence on either November 1, 2005 or January 1, 2006, as consistent with the amount of BC Hydro/Terasen Inc. TSA revenue that Terasen Gas forecast in its Annual Review submission for 2005, and will end on the earlier of November 1, 2010 or such other date as the Commission may determine; and
- H. At the Annual Review, participants requested additional information from Terasen Gas on the implications of the Kinder Morgan, Inc. ("KMI") acquisition of Terasen Inc. on the present Negotiated Settlement, residential customer growth and use-per-customer forecast and Terasen Gas responded to these queries on November 21 and 25, 2005; and
- I. The BC Old Age Pensioners Organization et al. ("BCOAPO") and the Commercial Energy Consumers Association of British Columbia ("CEC") submitted Comments on November 25, 2005 in accordance with the Regulatory Timetable; and
- J. On December 2, 2005, Terasen Gas provided Reply Comments and applied for approval of its 2006 Revenue Requirements and delivery rates pursuant to sections 58, 60 and 61 of the Utilities Commission Act ("the Act") and the terms of the 2004 – 2007 Negotiated Settlement (the "Application"); and
- K. The Application requested approval effective January 1, 2006, to increase the delivery rates for customers, on an interim basis, by 3.9 percent pending the decision related to the Company's ROE and Capital Structure Application. The Application also requested the following approvals:
- to continue the 2005 approved return on equity of 9.03 percent and common equity component of 33 percent for the purpose of setting interim rates for 2006;
  - to increase the RSAM rider by \$0.023/GJ from the currently approved level of \$0.143/GJ to \$0.166/GJ;
  - to set an Earnings Sharing Mechanism Rider for customers served under Rate Schedules 1, 1S, 2, 2U, 3, 3U, 5, 7, 22, 22A, 22B, 23, 25, and 27 ranging from (\$0.063)/GJ to (\$0.003)/GJ;
  - to establish deferral treatment for the net book value difference of \$1.533 million resulting from the replacement on November 1, 2005 of the existing fleet service provider, from BC Hydro to PPH Arval, and to amortize over 3 years commencing January 1, 2006 this difference between BC Hydro's stated net book value and the fair market value assigned by PPH Arval; and

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L. The Commission has reviewed the Application and the Comments received.

**NOW THEREFORE** pursuant to Sections 58, 60 and 61 of the Act, the Commission orders for Terasen Gas with Reasons to follow:

1. The Commission approves Terasen Gas' 2006 Revenue Requirement Application for an increase in delivery rates on an interim basis effective January 1, 2006, subject to refund with interest at the average prime rate of Terasen Gas' principal bank.
2. Terasen Gas is to inform all affected customers of the interim rates by way of a customer notice.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 14<sup>th</sup> day of December 2005.

BY ORDER

*Original signed by:*

L.F. Kelsey  
Commissioner

Attachment

An Application by Terasen Gas Inc.  
for Approval of 2006 Revenue Requirements and Delivery Rates

**REASONS FOR DECISION**

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**1.0 BACKGROUND**

By Commission Order No. G-51-03, the Commission approved the 2004-2007 Multi-Year Performance Based Rate Settlement (“Negotiated Settlement” or “PBRA”) for Terasen Gas Inc. (“Terasen Gas” or “Company”). The Negotiated Settlement uses the 2003 Decision to establish base costs then applies specified drivers to determine allowed expenditure levels. In accordance with this Order, Terasen Gas is required to hold an Annual Review each November with projections and forecasts provided three weeks in advance.

Commission Order No. G-104-05 approved Terasen Gas’ proposed schedule of holding an Annual Review on November 10, 2005 and directed Terasen Gas to file advance material by October 17, 2005, with a copy of the material to participants in the Negotiated Settlement. Terasen Gas advised the Commission on October 17, 2005, that due to additional updates, namely the customer mix related to movements in the Rate Classes 2 and 3 and the forecast average customer use rates for core rate classes, Terasen Gas would be filing its advance Annual Review material on October 19, 2005. The Commission established a revised Regulatory Timetable by Commission Order No. G-106-05.

On October 19, 2005, Terasen Gas filed the advance material for a 2006 Revenue Requirement increase of \$14.3 million. The Commission and Intervenors issued information requests to Terasen Gas on the advance materials with the Company responding on November 7, 2005.

On November 7, 2005, Terasen Gas revised the net revenue requirement increase to \$10.7 million in accordance with Commission Order No. G-98-05 that approved transactions related to the Southern Crossing Pipeline and the Inland Pacific Connector.

At the Annual Review, the participants requested additional information from Terasen Gas regarding the implications of the Kinder Morgan, Inc. acquisition of Terasen Inc. on the present Negotiated Settlement, residential customer growth and use-per-customer forecast. Terasen Gas responded to these queries on November 21 and 25, 2005. The BC Old Age Pensioners Organization et al. (“BCOAPO”) and the Commercial Energy Consumers Association of British Columbia (“CEC”) submitted Comments on November 25, 2005 in accordance with the Regulatory Timetable.

On December 2, 2005, Terasen Gas provided Reply Comments and applied for approval of its 2006 Revenue Requirements and delivery rates pursuant to the terms of the 2004-2007 Negotiated Settlement and pursuant to Sections 58, 60, and 61 of the Utilities Commission Act. The Application also requests approval for the following:

- to continue with the 2005 approved return on equity of 9.03 percent and a common equity of 33 percent;
- to increase the RSAM Rider by \$0.023/GJ from the current approved level of \$0.143/GJ;
- to set an Earnings Sharing Mechanism Rider for customers served under Rate Schedules 1, 1S, 2, 2S, 3, 3U, 5, 7, 22, 22A, 22B, 23, 25, and 27 ranging from (\$0.063)/GJ to (\$0.003)/GJ; and

- to establish deferral treatment for the net book value difference of \$1.533 million as result of replacing the existing fleet services provider, BC Hydro to PHH Arval with amortization over three years commencing January 1, 2006.

## **2.0 ISSUES**

### **2.1 2006 Volume and Revenue Forecasts**

Revenue forecasts are developed from gas sales and transportation volume forecasts and the applicable rates for each customer class. Terasen Gas is forecasting energy sales of 178.7 PJ and revenue of \$1,616.5 million for 2006 (Exhibit B-3, Tab A4, pp. 10, 11).

Terasen Gas' energy forecasting approach or process is consistent with previous years. For the residential and commercial customer classes, Terasen Gas develops customer addition forecasts by rate class and a corresponding average use per customer. The average use per customer is multiplied by the forecast of customers in each respective class to derive energy by rate class. For the industrial sector, the use forecast is based mainly on customer survey data. The forecast for industrial customers assumes no net change in the number of customers for the test year except where written requests for change of service have been received by Terasen Gas.

Despite Terasen Gas' consistent approach, the energy forecast results have been subject to significant variances from actual in the past eight years. The two intervenors who submitted Comments expressed concerns over reliance on Terasen Gas' energy forecast.

#### Customer Additions

Terasen Gas forecasts 12,204 residential additions, 489 commercial additions and a decrease of one industrial & transportation customer for 2006. The forecast will result in a total increase of 12,692 new customers for 2006 compared to a projected 12,676 new customers for 2005 (Exhibit B-1, Tab A4, p. 5).

Terasen Gas' residential customer addition forecast is based on actual household formation, estimated market growth and historical commodity price. These variables are regressed against actual account additions to model future annual account growth by service area. The commercial customer addition forecast is modeled from variables such as actual household formation growth, commodity prices, and real BC gross domestic product growth (Exhibit B-3, Tab A4, p. 4; Exhibit B-5, BCUC IR 21.5).

During the Annual Review session, BCOAPO referred to the data showing the annual forecasting errors since 1998 in residential customer additions in the table in Response to BCOAPO IR 1(a). Terasen Gas responded that the impact on revenue requirements is immaterial.

In its Comments, BCOAPO takes the position that truing-up the numbers is not the preferred remedy to resolve forecasting errors because there is no refund of over-estimated rates. Further, BCOAPO asserts that an error would result in one year's customers subsidizing next year's or vice versa depending on the direction of the error, that erroneously high forecasts of customer additions would produce unjustified increases in rate base and earnings, and all of these call into question the whole basis of the PBRA's forecast test year rate setting. BCOAPO proceeds to show the weak correlation between housing starts and customer growth and takes the position that the huge surge in natural gas commodity prices would have a significant adverse impact on customer additions (BCOAPO Comments, pp. 2, 3).

BCOAPO submits that the forecast residential additions for 2006 should be reduced by 25 percent from 12,204 to 9,153 (BCOAPO Comments, p. 4).

CEC also refers to the table in BCOAPO IR 1(a) as an example of forecasts which have proven to be inaccurate to a significant degree. It raises concern as to whether there are opportunities for manipulation of forecasts to the advantage of the shareholder by under-forecasting additions which would result in an overachievement of additions with the resulting benefit to the shareholders under the incentive mechanism.

CEC asks the Commission to look closely at the forecast provided this year to ensure that there is a better level of accuracy (CEC Comments, p. 2).

In its Reply Comments, Terasen Gas submits that the difference in opinion between the two stakeholders signifies the challenges faced in preparing an accurate and acceptable customer addition forecast. Terasen Gas submits that its 2006 customer additions forecast, which is consistent with expected additions for 2005, is a more appropriate forecast than BCOAPO's. Terasen Gas takes the position that its 2006 customer addition forecast provides a reasonable basis for staffing and resource planning purposes and for determination of its 2006 revenue requirement. Terasen Gas accepts that high natural gas commodity prices remain a concern to Terasen Gas because it could lead to a potential reduction in market share of new housing starts for the Utility; however, in the near term it believes that the impact on customer additions for 2006 should be insignificant (Reply Comment, p. 2).

Terasen Gas rejects the inference that it is manipulating its customer additions forecast to the advantage of its shareholder. Terasen Gas provides an illustration of over-forecasting 1,000 customers and under-forecasting 1,000 customers to show that the earning variance of a forecasting error is *de minimus* (Reply Comments, pp. 3, 4).

The Commission notes that some of the socioeconomic variables that are integral to the customer additions forecast, such as annual percentage changes of natural gas commodity prices, BC housing starts, and estimated market shares for Terasen Gas, are variables that have either fluctuated widely in recent years or for which the data is unavailable to Terasen Gas.

Despite the important role of estimating market shares in the overall forecasting methodology, Terasen Gas admits that it does not collect data that allows for a distinction between single family and multiple family dwelling customer additions, but uses an estimate. Terasen Gas admits that it is not tracking specific data that allows for breakdown of the total projected net customer additions into single family and multi-family dwelling gas accounts and the resulting market shares. Despite the fact that Terasen Gas models account growth by service area, it assumes in its methodology that market shares do not differ by service area (Exhibit B-5, BCUC IR 21.3).

Terasen Gas observes that "both stakeholders [CEC and BCOAPO] have the same historical and macroeconomic information underpinning the 2006 customer addition forecast that Terasen has but yet come to opposite conclusions as to whether the proposed 2006 customer addition forecast is too high or too low" (Reply Comments, p. 2).

The Commission finds Terasen Gas' observations of the stakeholders' positions in comparison to its own to be partial and incomplete. The Commission notes that Terasen Gas has found market share to be a significant variable in its residential additions model and that market share variable incorporates Terasen Gas marketing, sales and other promotional efforts, as well as incorporating the effect of lock-offs due to the corporate credit and collections policy (Exhibit B-5, BCUC IR 21.5). There is no evidence that the stakeholders have access to Terasen Gas' corporate marketing and sales, and credit information but it is likely that through an effective internal management reporting system, Terasen Gas forecasting team would know, or ought to have known, the

effects of its marketing and sales efforts on customer additions. For example, in 2004 when the actual residential additions exceeded forecast by 2,716 (10,716 – 8,000) [Exhibit B-5, BCOAPO IR 1(a)], Terasen Gas should be in a position to analyze the reasons for the variance as to whether the under-forecast was due to (i) changes in the underlying assumptions of socioeconomic variables; (ii) changes in statistical relationships between the independent variables and customer additions; or (iii) more successful corporate promotional efforts. The stakeholders were not in the same position as Terasen Gas to analyze the forecasting errors.

The Commission notes that next year's Annual Review will be the fourth and final review under the 2004-2007 Multi-Year Performance Based Rate Settlement Agreement. The Commission expects Terasen Gas to prepare and present its customer forecast with better input data and better explanation of forecast variances.

The Commission does not find that Terasen Gas has biased the residential customer additions forecast to purposely benefit under the PBR incentive mechanism.

#### Use Per Customer and Energy Forecasts

For 2006 Terasen Gas is forecasting 100.6 GJ for Rate 1 customers; 307.6 GJ for Rate 2; 3,401.7 GJ for Rate 3; and 4,976.7 GJ for Rate 23. Firm sales forecast volumes of 4.5 PJ per annum were estimated on the basis of the most recent (July to June) metered consumption data (Exhibit B-3, pp. 8 - 10).

Except for customer class Rate 23, the forecast use per customer for each rate class all show a decline from the 2005 forecasts. According to Terasen Gas, around 170,000 GJ or 0.1 percent of annual core market can be attributed to the demand side management programs (Exhibit B-5, BCUC IR 24.3). Terasen Gas expects that the rate increases of the past six months will have an impact on customer use rates in 2006 as customers seek to mitigate the financial impacts of these increases.

BCOAPO comments that Terasen Gas' forecast of a 2.61 percent reduction for residential rate class is directionally correct. It submits a more realistic estimate should be employed and proposes a total reduction of 5 percent (BCOAPO Comments, p. 4).

In reply, Terasen Gas agrees that the spike in natural gas commodity prices will dampen the residential class use rate in 2006 but that this effect is already reflected in the forecast. BCOAPO provided no evidence to support a 5 percent reduction and Terasen Gas submits that it is reasonable and appropriate to approve the residential use rate as proposed in its Application (Reply Comments, p. 3).

The Commission notes that the projected 2005 use rate for residential Rate 1 customers is estimated to be approximately 103 GJ, similar to the original forecast. This projection is based on normalizing actual consumption to date using weather ending in 2004 plus forecast consumption for the balance of the year (Exhibit B-5, BCUC IR 25.2.2). This projected use rate reflects a 0.7 GJ increase from the normalized use rate for 2004 (Exhibit B-1, Tab A4, p. 8), thus the Commission accepts Terasen Gas' position that the dampening effects of rate increases have already been reflected in the 2006 use rate forecasts.

No intervenor has made any comments on industrial forecasts.

**The Commission accepts the 2006 volume and revenue forecasts of Terasen Gas as set forth in Exhibit B1-3.**

## **2.2 Implications of the KMI Transaction**

At the Annual Review held on November 10, 2005 intervenors raised the issue of the impact of the Kinder Morgan Inc. ("KMI") purchase of Terasen Inc. on the PBRA. In its Response to Undertakings filed on November 21, 2005 (Exhibit B-7), KMI noted that the issue of service provision to customers was addressed by KMI in its responses to information requests during the recent KMI acquisition proceeding before the Commission. KMI stated that it will continue to meet the Service Quality Indicators and Directional Indicators that Terasen Gas is required to maintain under its Negotiated Settlement and that the customers' quality of service will not be detrimentally affected as a result of the KMI acquisition of Terasen Gas. Terasen Gas also noted that the transaction does not have any effect on the PBR mechanism or the way that the Earnings Sharing Mechanism works and that, therefore, to the extent that Terasen Gas generates incentive earnings, the mechanism does not change.

**The Commission notes Terasen Gas' undertakings both in this proceeding and in the recent KMI proceeding related to the KMI acquisition of Terasen Inc. and the assurance provided by Terasen Gas that no transaction costs are or will be passed to the utility rate customers (Exhibit B-7, p. 2).**

### **2.3 Triple Point Project**

Terasen Gas' measurement technologies group has developed a method of testing high pressure meters, referred to as "Triple Point or 3P" process using Carbon Dioxide ("CO<sub>2</sub>") in a closed loop at pressure up to 16 bar. This process is a departure from the current standard measurement process using Natural Gas and Terasen Gas has filed for patents in Canada, the United States and the European Union (2004 Annual Review Material, Exhibit B-4, p. 1). By using the Triple Point Process, Terasen Gas submitted in its advance material for the 2004 Annual Review, meter testing services can be provided at a cost below that of other providers. Terasen Gas is establishing a new testing facility to test its own meters as well as for external customers (2004 Annual Review Material, Exhibit B-4, p. 1).

Terasen Gas' information response for its 2005 Annual Review indicated that they have partnered with two marketers who will sell 3P services to third parties across North America (Exhibit B-5, Q.12, p. 20). Terasen Gas indicated that Measurement Canada is working closely with the Company to recognize the 3P facility which is expected to be completed in 2006 (Exhibit B-7, Q. 12, p. 6).

Terasen Gas has booked \$939,514 and \$1,147,032 into rate base respectively for the 2004 and 2005 years. Terasen Gas forecasts an additional \$23,392 will be booked into rate base by year-end resulting in a total of \$2.1 million booked into rate base (Exhibit B-7, Q. 4, p. 6). In Comments, BCOAPO indicated that the Commission should require the assets to be "used and useful" before any associated capital costs are booked into rate base (BCOAPO Comments, p. 5). Terasen Gas' Reply submits that the use of the Triple Point assets which were commissioned in 2005, would result in anticipated Operating & Maintenance savings of \$200,000 per year and accordingly these assets are "used and "useful" and should be included in rate base (Terasen Gas' Reply Comments, p. 7). The Commission notes this accounting treatment is allowed under the terms of the current PBR Settlement Agreement.

**The Commission requires Terasen Gas to file a report with the Commission at the time that Measurement Canada approves the Triple Point assets for use which identifies the following:**



- **The two marketing partners and whether they are affiliated companies of Terasen Gas or third parties.**
- **The cost and revenue sharing arrangements between Terasen Gas and the marketing partners.**
- **The patents for this new CO<sub>2</sub> testing technology developed by Terasen Gas are owned and registered to Terasen Gas.**

#### **2.4 Return on Common Equity (“ROE”)**

By Letter No. L-104-05 dated December 2, 2005, the Commission determined that the current ROE automatic adjustment mechanism results in a return on common equity of 8.29 percent for a low-risk benchmark utility for year 2006. The rate for 2005 was 9.03 percent.

Terasen Gas has earlier applied to the Commission to hold a hearing to determine the appropriate return on equity and capital structure to be used in setting its rates commencing January 1, 2006. Terasen Gas proposes to freeze the 2005 approved ROE and Capital Structure for the purpose of setting interim rates for 2006 instead of using 8.29 percent. The Utility believes that this will offer more rate stability to customers.

The Commission is not opposed to Terasen Gas’ proposal provided that any variances, inclusive of interest, from the allowed ROE and Capital Structure from the subsequently approved rates by the Commission will be allocated to a rate base deferral account.